Montague Wind Power Facility Request for Amendment 4: Draft Proposed Order

To:	Oregon Energy Facility Siting Council
From:	Chase McVeigh-Walker, Siting Analyst
Date:	April 5, 2019
Re:	Draft Proposed Order on Request for Amendment 4 of the Site Certificate

Certificate Holder:	Montague Wind Power Facility, LLC, a wholly owned subsidiary of Avangrid Renewables, LLC
Approved Facility (under construction)	Montague Wind Power Facility is a wind energy facility currently under construction. Once construction is complete, the facility (referred to as Phase 1) will include 56 wind turbines, power collection system, supervisory control and data acquisition system, collector substation, 10.5 miles of 230 kilovolt (kV) transmission line, meteorological towers, access roads, public roadway modifications, and temporary laydown areas.
Proposed Amendments:	Certificate holder seeks Energy Facility Siting Council (Council) approval to expand the facility and site boundary – referred to as Phase 2. Phase 2 includes wind and solar energy facilities and related or supporting facilities, and could include any combination of the facility components presented below. Wind Energy Facility: up to 81 wind turbines with maximum wind turbine dimensions for blade tip height up to 597 feet; turbine hub height up to 351 feet; and rotor diameter up to 492 feet; up to 4 meteorological towers up to 351-feet. Solar Energy Facility: photovoltaic solar array; solar modules, tracker systems, posts, cabling, inverters, transformers, collection system, site access, service roads, and perimeter fencing occupying up to approximately 1,189 acres. Related or supporting facilities: 3 mile 230 kV transmission line segment; 100 megawatt (MW) battery storage system; collection system; collector substation; Supervisory Control and Data Acquisition (SCADA) system; meteorological towers; operations and maintenance building; transportation and access roads; construction areas. Site Boundary/Micrositing Corridor: Increase site boundary and micrositing corridor from 33,717 to 47,056 acres.
Facility Location:	Gilliam County, Oregon
Staff Recommendation:	Approval of Request for Amendment 4 of Site Certificate

Summary
To issue an amended site certificate, the Energy Facility Siting Council (EFSC or the Council) must find that a request for amendment to the site certificate demonstrates that the facility, with proposed changes, satisfies, or with conditions can satisfy, each of the applicable EFSC Siting Standards set forth in Oregon Administrative Rule (OAR) 345, Divisions 22 through 24 as well as all other Oregon statutes and administrative rules applicable to the proposed amended facility.

As staff to EFSC, the Oregon Department of Energy (ODOE or the Department) reviewed Request for Amendment 4 to the Montague Wind Power Facility site certificate, in consultation with specifically identified state and local reviewing agencies and tribal governments. Based upon its review of the amendment request, the Department recommends the Council issue an amended site certificate for the facility, with proposed changes, subject to the existing site certificate conditions as well as the new and amended conditions set forth in the following draft proposed order. The draft proposed order contains the Department's analysis of the amendment request and includes recommended new and amended site certificate conditions. The analysis and recommendations contained in this draft proposed order are not a final determination.

A public comment period is now open on the draft proposed order and complete amendment request. In addition, the Council will hold a public hearing on this draft proposed order and complete amendment request on May 16, 2019 at 5:30 PM, at the Hotel Condon, Condon, Oregon. Please note, interested persons must raise issues on the record of the public hearing, either orally at the public hearing or in writing during the comment period, in order to preserve their right to participate further in the process. The public comment period closes at the close of the public hearing on May 16, 2019. Written or oral comments must be received by the Department by the close of the public hearing. Section II, *Amendment Process*, of the draft proposed order contains additional information regarding the site certificate amendment review process. The public notice associated with the release of this draft proposed order contains additional information regarding the comment period and public hearing.

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of Request for Amendment 4 for the Montague Wind Power Facility Site Certificate	))))	DRAFT PROPOSED ORDER ON REQUEST FOR AMENDMENT 4 TO THE SITE CERTIFICATE

April 2019

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Attachment F: Draft Wildlife Monitoring and Management Plan
Attachment G: Draft Historical Resource Mitigation Plan
Attachment H: Inadvertent Discovery Plan

I. INTRODUCTION

The Oregon Department of Energy (Department or ODOE) issues this draft proposed order, in accordance with Oregon Revised Statute (ORS) 469.405(1) and Oregon Administrative Rule (OAR) 345-027-0065, based on its review of Request for Amendment 4 (amendment request or RFA4) to the Montague Wind Power Facility site certificate, as well as comments and recommendations received by specific state agencies, local governments, and tribal governments during review of the preliminary amendment request. The certificate holder is Montague Wind Power Facility, LLC (Montague or certificate holder), wholly owned by Avangrid Renewables, LLC, a subsidiary of AVANGRID and part of the IBERDROLA Group.

The certificate holder requests that the Energy Facility Siting Council (EFSC or Council) approve changes to the site certificate to construct and operate the facility, with proposed changes – referred to as Phase 2; Phase 1 is currently under construction.[1] In RFA4, Phase 2 components include a proposed site boundary expansion, wind turbines, battery storage, a solar array, and related or supporting facilities. The certificate holder seeks flexibility in the final design and layout to be selected for Phase 2. To support its request, the certificate holder evaluates three design scenarios intended to represent potential differences in impacts and identify maximum impacts under each applicable Council standard for any Phase 2 design layout selected. The three design scenarios (A, B, C) include varying energy facility components and layouts. Design Scenario A and B represent a maximum and minimum layout and impact scenario including wind turbines and battery storage; Design Scenario C represents a layout and impact scenario for the maximum potential size of the solar array and battery storage.

Based upon review of this amendment request, in conjunction with comments and recommendations received by state agencies, local governments, and tribal governments, the Department recommends that the Council approve and grant a fourth amendment to the Montague Wind Power Facility site certificate subject to the existing, and recommended new and amended conditions set forth in this draft proposed order.

I.A. Name and Address of Certificate Holder

Montague Wind Power Facility, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

Parent Company of the Certificate Holder

Avangrid Renewables, LLC,
The U.S. division of Iberdrola, S.A.
1125 NW Couch Street, Suite 700
Portland, OR 97209

[1] Phase 1 consists of 56 wind turbines, one collector substation, 10.5-miles of 230 kV transmission line, access roads, and laydown areas.

Certificate Holder Contact
Brian Walsh, Senior Developer
Avangrid Renewables, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

I.B. Description of the Facility (Phase 1)

The facility, based on final design and currently under construction, includes a wind energy generation facility with up to 56 wind turbines. Maximum wind turbine dimensions include a hub height of 328 feet (100 meters); maximum blade tip height of 492 feet (150 meters); and a minimum aboveground blade tip clearance of 45 feet (14 meters).

The facility includes the following related or supporting facilities, which are briefly described below:

- Power collection system
- Control system
- Substation and 230 kV transmission line
- Meteorological towers
- Access roads
- Public roadway modifications
- Temporary construction areas

Power Collection System

The facility includes a 34.5 kV power collection system that transports power from each wind turbine to a collector substation. To the extent practicable, the collection system would be installed underground at a depth of at least three feet. Not more than 27 miles of the collector system will be installed aboveground.

Control System

The facility includes a fiber optic communications network that links the wind turbines to a central computer at the O&M facilities. A Supervisory, Control and Data Acquisition (SCADA) system would collect operating and performance data from each wind turbine and from the facility as a whole and would allow remote operation of the wind turbines.

Substations and 230 kV Transmission Line

The facility includes one collector substation that interconnects via an aboveground, single-circuit 230 kV transmission line. An approximately 10.5 mile aboveground, single-circuit 230 kV

transmission line connects the collector substation to the 500 kV Slatt-Buckley transmission line owned by Bonneville Power Administration (BPA) at the Slatt substation.

Meteorological Towers

The facility includes two permanent meteorological towers.

Access Roads

The facility includes access roads to provide access to the turbine strings.

Public Roadway Modifications

The facility includes improvements to existing state and county public roads necessary for construction of the facility. These modifications are confined to the existing road rights-of-way and would be undertaken with the approval of the Gilliam County Road Department or the Oregon Department of Transportation, depending on the location of the improvement.

Temporary Construction Areas

Temporary laydown areas are used during construction activities to stage construction and store supplies and equipment. Construction crane paths are used to move construction cranes between turbine strings.

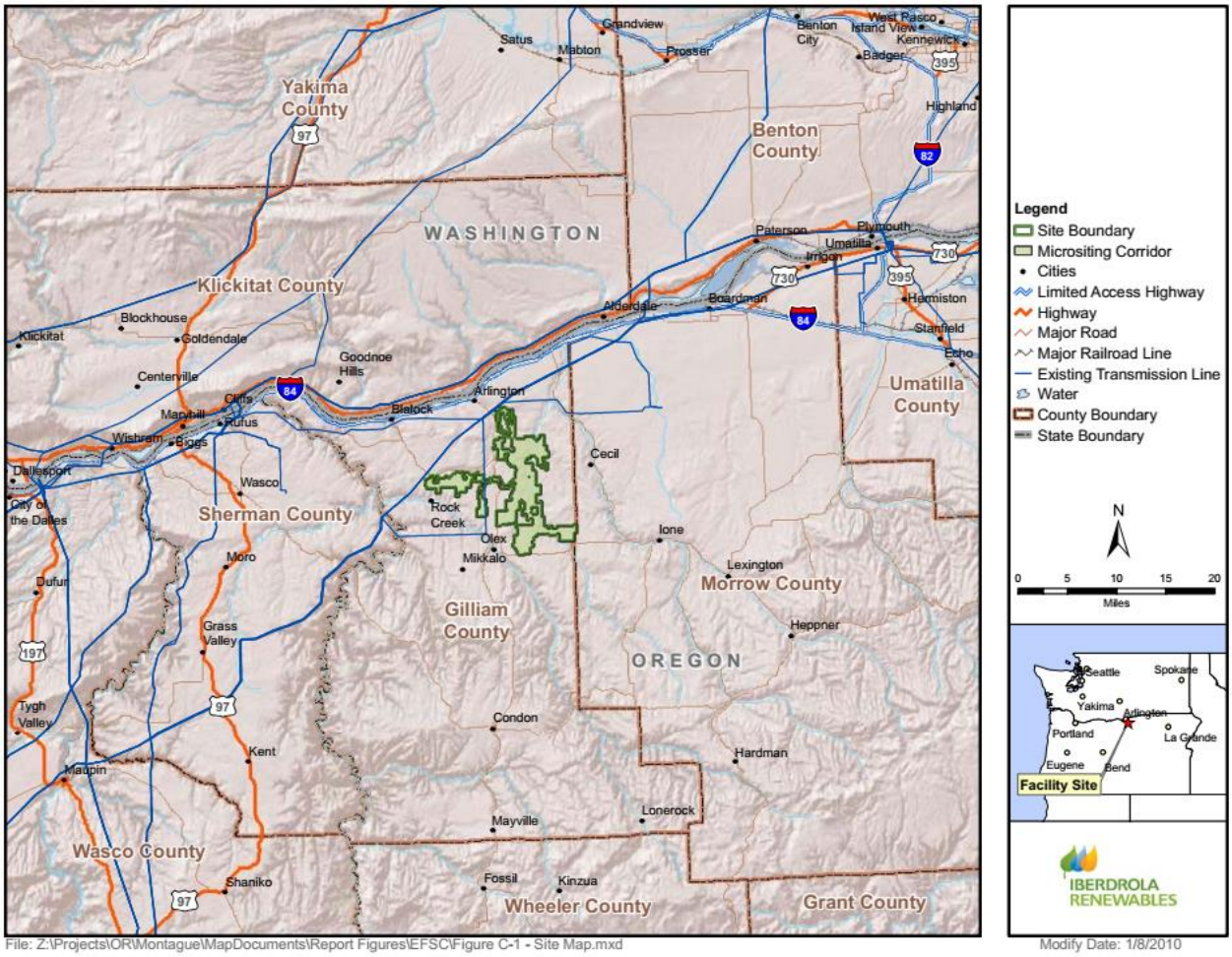
I.C. Description of Facility Location

Site Boundary

The site boundary, as approved, encompasses approximately 33,717 acres and includes the perimeter of the energy facility site and its related or supporting facilities, all temporary laydown and staging areas and all approved corridors.[2] The site boundary is located on private land south of the City of Arlington, within Gilliam County, Oregon as presented in Figure 1: *Regional Location and Site Boundary*.

[2] Pursuant to OAR 345-001-0010(55), the term "site boundary" means the perimeter of the site of a proposed energy facility and its related or supporting facilities, all temporary laydown and staging areas and all corridors proposed by the applicant. The term "energy facility site" means all land upon which an energy facility is located or proposed to be located. The term "energy facility" means only the electric power generating plant while the term "facility,"' as defined in ORS 469.300 (14) means the energy facility together with any related or supporting facilities.

Figure 1: Regional Location and Site Boundary



Micrositing Corridor

A micrositing corridor, by definition, means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.[3] Micrositing corridors are intended to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction.

Transmission Line Corridor

The transmission line corridor extends approximately 10.5 miles and is ½-mile in width from the facility's Phase 1 collector substation to Bonneville Power Administration's (BPA) Slatt substation.

[3] OAR 345-001-0010(32)

I.D. Procedural History

The Council issued the *Final Order on the Application for Site Certificate for the Montague Wind Power Facility (Final Order on the Application)* on September 10, 2010, which authorized construction and operation of a 404 MW wind energy generation facility, with up to 269 wind turbines and related or supporting facilities.

On December 28, 2012, the certificate holder submitted to the Department its Request for Amendment 1 (RFA1) for the facility. RFA1 requested extension of the construction commencement and completion deadlines by two years, reduction in the minimum aboveground blade-tip clearance, and transfer of the site certificate.[4] The Council issued a *Final Order on Amendment 1 of the Site Certificate* on June 21, 2013, which authorized an extension of the construction commencement deadline from September 14, 2013 to September 14, 2015; and, extension of the construction completion deadline from September 14, 2016 to September 14, 2018.

On March 11, 2015, the certificate holder submitted to the Department its Request for Amendment 2 (RFA2). RFA2 requested extension of the construction commencement and completion deadlines by two years. The Council issued a *Final Order on Amendment 2 of the Site Certificate* on December 4, 2015 which authorized an extension of the construction commencement deadline from September 14, 2015 to September 14, 2017; and, extension of the construction completion deadline from September 14, 2018 to September 14, 2020.

On May 4, 2017, the certificate holder submitted to the Department its Request for Amendment 3 (RFA3). RFA3 requested authorization to change a wind turbine dimension – to reduce the minimum aboveground blade-tip clearance. The Council issued a *Final Order on Amendment 3 of the Site Certificate* on July 12, 2017, which authorized the change in minimum aboveground blade-tip clearance.

On January 9, 2018, the Department received the preliminary Request for Amendment (pRFA4) to the Montague Wind Power Facility's existing site certificate.[5] The Department initiated consultation with reviewing agencies and posted an announcement on the Department's website notifying the public that pRFA4 had been submitted. Under OAR 345-027-0063(5), an RFA is complete when the Department finds that a certificate holder has submitted information adequate for the Council to make findings or impose conditions on all applicable laws and Council standards. Pursuant to OAR 345-027-0063(2), on February 20, 2018 the Department

[4] Transfer of the site certificate to Portland General Electric was not completed and Montague Wind Power Facility LLC remains the site certificate holder.

[5] The Department received pRFA4 on November 21, 2017. However, based on outstanding unpaid invoices for ongoing siting work related to the Montague Wind Power facility at the time, the Department was restricted from commencing work on pRFA4 by a "stop work order" to be lifted upon unpaid invoice resolution. On January 9, 2018, Avangrid Renewables, the parent company of Montague Wind Power Facility, LLC made full payment of fees and the Stop Work Order was lifted.

determined pRFA4 to be incomplete. The Department issued requests for additional information on March 9, May 24, June 15, July 25, August 15, September 21, and December 7, 2018.[6] The certificate holder provided revised exhibits, responses to the information requests, and additional revisions to the scope of the amendment request from April through December, 2018. After reviewing the revised exhibits, the Department determined the RFA to be complete and, on January 15, 2019, the certificate holder filed a complete RFA4. On March 25, 2019, the certificate holder submitted an amended RFA4, which was found to be complete on April 4, 2019. The certificate holder filed a complete revised RFA4 on April 5, 2019 and on the same day, the Department posted an announcement on the Department's website notifying the public that the complete RFA had been received.

II. AMENDMENT PROCESS

II.A. Requested Amendment

In RFA4, the certificate holder requests Council approval to amend its site certificate for the construction and operation of new facility components (referred to as "Phase 2"); addition of new area within the site boundary and micrositing corridor; and, new and amended site certificate conditions.

The certificate holder seeks flexibility to install any combination of the wind and solar energy facility components as long as the total maximum output of Phase 2 would not exceed 202 MW. The certificate holder states that the combined maximum output from Phase 1 and 2 would not exceed 404 MW.[7] To support the flexibility requested, the certificate holder performed comprehensive field surveys to support the requested increase in micrositing corridor and evaluates a range of potential impacts based on three design scenarios (referred to as Scenario A, B and C). Scenarios A and B represent a maximum and minimum disturbance layout, respectively, that includes wind turbines and battery storage; Scenario C represents a scenario that includes a disturbance layout for a solar photovoltaic array plus battery storage that would occupy a maximum footprint up 1,189 acres. The three design scenarios are summarized below:

<u>Proposed Design Scenario A – Wind and Battery Storage:</u>

- Up to 81 wind turbines (maximum blade tip height of 486 feet; maximum rotor diameter of 381 feet; maximum aboveground blade tip clearance of 46 feet)
- Lithium-ion or flow battery storage system (located on an approximately 6.5 acre site)
- 3-mile segment of aboveground 230 kV transmission line
- Above- and belowground collector lines, new access roads, existing road improvements, meteorological towers (approximately 351 feet in height), collector substation (located

[6] MWPAMD4. Request for Additional Information. 2018-03-09; 2018-05-24; 2018-06-15; 2018-07-25; 2018-08-15; 2018-09-21; 2018-12-07.

[7] The specific power generating capacity of an energy facility or facility components, such as an individual wind turbine, is not relevant to a Council standard.

within an approximately 4 acre site), and an O&M building (located within an approximately 10 acre site)
- Temporary laydown areas

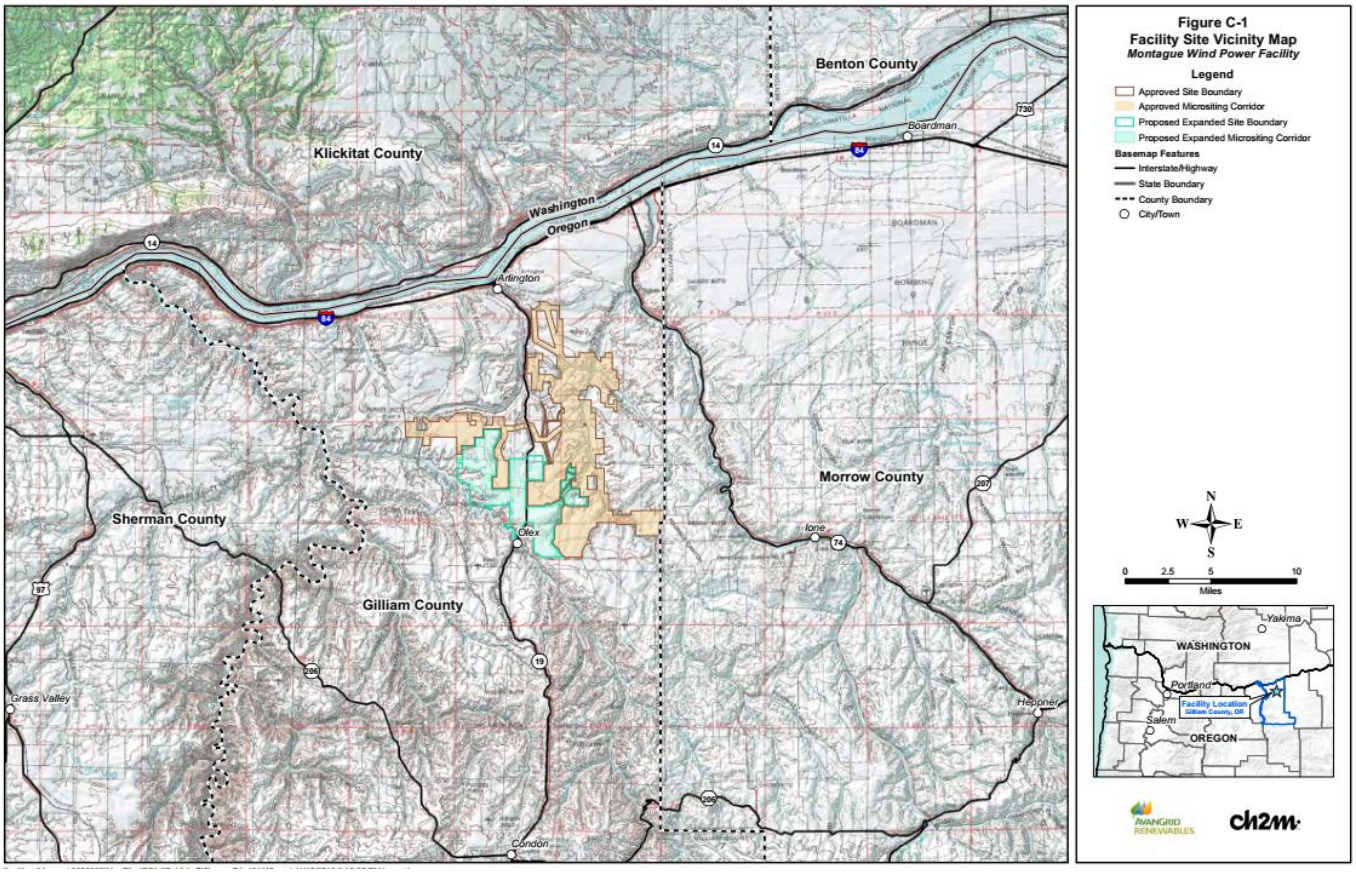
<u>Proposed Design Scenario B – Wind and Battery Storage:</u>
- Up to 48 wind turbines (maximum blade tip height of 597.1 feet; maximum rotor diameter of 492.1 feet; maximum aboveground blade tip clearance of 46 feet)
- Lithium-ion or flow battery storage system (located on an approximately 6.5 acre site)
- 3-mile segment of aboveground 230 kV transmission line
- Above- and belowground collector lines, new access roads, existing road improvements, meteorological towers (approximately 351 feet in height), collector substation (located within an approximately 4 acre site), and an O&M building (located within an approximately 10 acre site)
- Temporary laydown areas

<u>Proposed Design Scenario C - Solar Photovoltaic and Battery Storage:</u>
- Solar photovoltaic array to occupy a maximum area of approximately 1,189 acres
- Lithium-ion or flow battery storage system (located on an approximately 6.5 acre site)
- 3-mile segment of aboveground 230 kV transmission line
- Above- and belowground collector lines, new access roads, existing road improvements, meteorological towers (approximately 351 feet in height), collector substation (located within an approximately 4 acre site), and an O&M building (located within an approximately 10 acre site)
- Temporary laydown areas

Site Boundary

The certificate holder requests to add area, approximately 13,339 acres, to the previously approved site boundary, increasing the total site boundary area from 33,717 to 47,056 acres. In Figure 2: *Proposed Amended Site Boundary*, below, the area within the site boundary, as approved, is shaded “tan;” the proposed new area to be included in the site boundary is shaded “blue.” The proposed amended site boundary would include all blue and tan shaded areas. The proposed new area, encompassing approximately 13,339 acres, is adjacent to the previously approved site boundary and previously evaluated as part of a withdrawn EFSC project, the Baseline Wind Project.

Figure 2: Proposed Amended Site Boundary



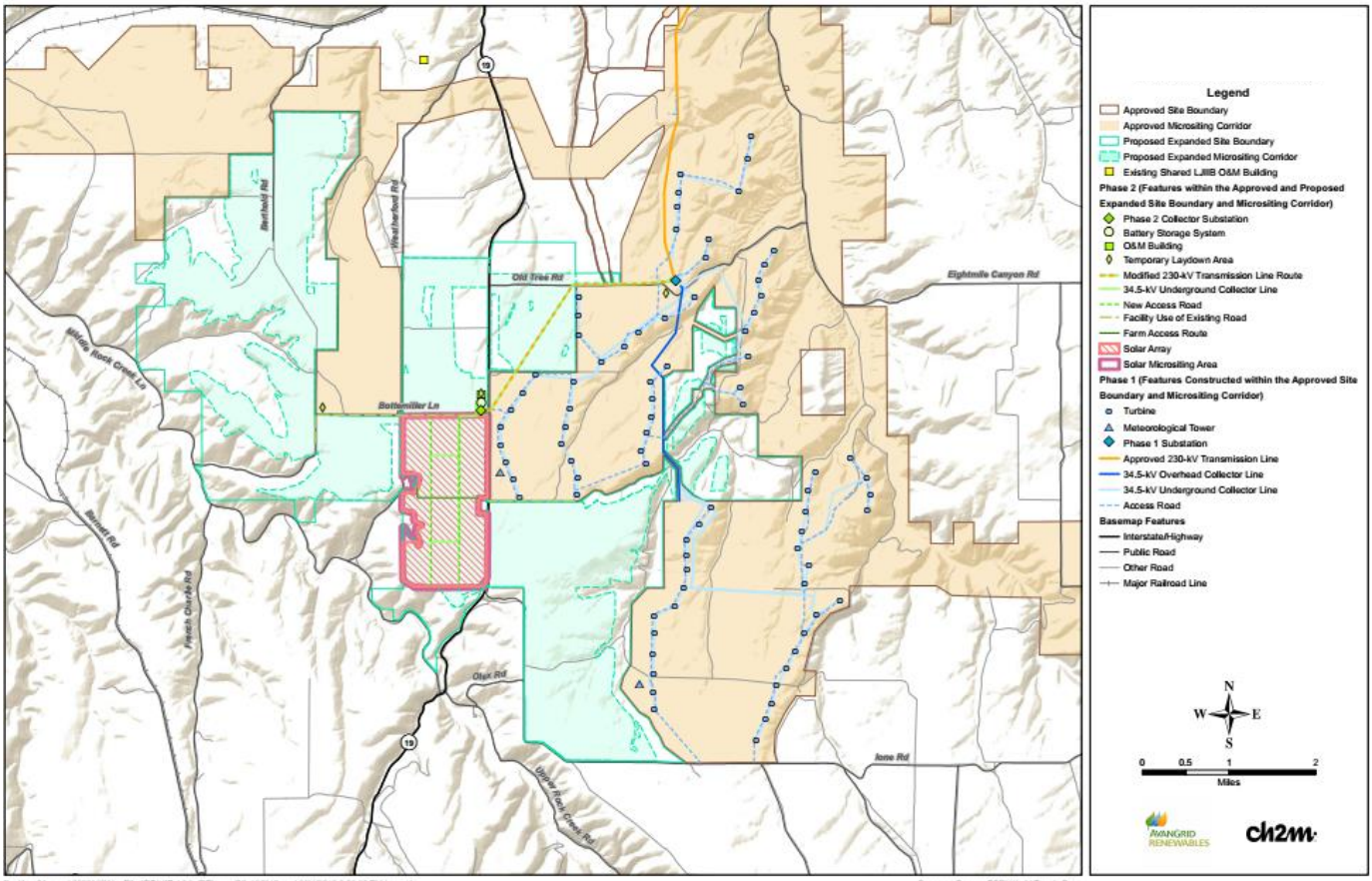
Micrositing Corridor

The site boundary, as approved, represents the micrositing corridor. For RFA4, the site boundary and micrositing corridor, as amended, differ by approximately 4,358 acres based on analysis completed (see Figure 3 below for difference between site boundary and micrositing corridor areas).

The proposed amended micrositing corridor includes a proposed solar micrositing area, evaluated for the proposed solar array and its related or supporting facilities. The proposed solar micrositing area includes approximately 1,189 acres, and encompasses an area extending approximately 3 miles south of Bottemiller Lane along Highway 19. The area within the proposed amended micrositing corridor encompasses approximately 8,981 acres.

As presented in Figure 3, *Site Boundary and Micrositing Corridor*, there are areas within the proposed amended site boundary which are not included in the proposed amended micrositing corridor. Therefore, while these areas are included in the site boundary, authorization to site facility components within these locations has not been obtained.

Figure 3: Site Boundary and Micrositing Corridor – Approved and as Proposed



II.B. Recommended Amended Site Certificate and Condition Format

The recommended amended site certificate includes existing and recommended new and amended conditions. Some of the conditions apply to the entire facility, both Phase 1 and Phase 2; some conditions apply only to Phase 1, and some conditions apply only to Phase 2. Previously imposed conditions that are not recommended to be amended through new or deleted language would apply to both Phase 1 and Phase 2.

Previously imposed conditions that are recommended to be amended, but that include differing requirements for previously approved components in Phase 1, and Phase 2, include a delineation format, where a roman numeral "i" indicates the requirements of the condition apply to Phase 1 components, including the approved related or supporting facilities; and, roman numeral "ii" indicates that requirements of the amended condition apply to proposed components of Phase 2 and its related or supporting facilities.

II.C. Amendment Review Process

Council rules describe the processes for review of requests for site certificate amendment at OAR 345-027-0051. The Type A review is the standard or "default" site certificate amendment process for changes that require an amendment; RFA4 is being reviewed under the Type A review process. The Type A review includes a public hearing on the draft proposed order and an opportunity for a contested case proceeding. Council rules authorize the Department to adjust the timelines for these specific procedural requirements, if necessary.

The certificate holder submitted a complete RFA4 on January 15, 2019, and on the same day, the Department posted the complete RFA4 on its website and posted an announcement on the project website informing the public that the complete RFA4 had been received and is available for viewing. On March 25, 2019, the certificate holder submitted an amended RFA4, which was found to be complete on April 4, 2019. The certificate holder filed a complete revised RFA4 on April 5, 2019 and on the same day the Department a posted the amended complete RFA4 on its website.

Reviewing Agency Comments on Request for Amendment 4

The Department received comments on the amendment request from the Special Advisory Group, reviewing agencies, and Tribal Governments listed below. All agency comments received are included as Attachment B of this order.

- Gilliam County Court (Special Advisory Group)
- Oregon Department of Land Conservation and Development
- Oregon Department of Fish and Wildlife
- Oregon Department of State Lands
- Oregon State Historic Preservation Office
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Transportation
- Oregon Department of Aviation
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Reservation of Oregon

Comments from these agencies are incorporated into the Department's analysis of Council standards below, as applicable.

II.D. Council Review Process

Notice of the comment period on RFA4 and draft proposed order and notice of the public hearing on the draft proposed order was issued on Friday, April 5, 2019. The notice was distributed to all persons on the Council's general mailing list, to the special mailing list established for the facility, property owners within and adjacent to the site boundary and to a

list of reviewing agencies as defined in OAR 345-001-0010(52). The Council will hold a public hearing where oral comments may be provided to Council on May 16, 2019, at 5:30 p.m., at Hotel Condon in Condon, Oregon. The written comment period is now open, and will close at the close of the public hearing on May 16, 2019. Written comments must be received by the Department by the close of the public hearing on May 16, 2019.

Following the close of the record of the public hearing and Council's review of the draft proposed order, the Department will issue a proposed order, taking into consideration Council comments, any comments received "on the record of the public hearing" (i.e., oral testimony provided at the public hearing and written comments received by the Department after the date of the notice of the public hearing and before the close of the public hearing comment period), including any comments from reviewing agencies, special advisory groups, and Tribal Governments and certificate holder. Concurrent with the issuance of the proposed order, the Department will issue a notice of contested case and a public notice of the proposed order.[8]

Only those persons who comment in person or in writing on the record of the public hearing may request a contested case proceeding on their issues raised, unless the Department did not follow the follow the requirements of OAR 345-027-0067, or unless the action recommended in the proposed order differs materially from the draft proposed order, including any recommended conditions of approval, in which case the person may raise only new issues within the jurisdiction of the Council that are related to such differences.

All rules and supporting evidence that a person may wish to cite or include in a request for a contested case proceeding must be included in comments provided on the record of the draft proposed order public hearing. See OAR 345-027-067(3)(G) "The Council will not accept or consider any further public comment on the request for amendment or on the draft proposed order after the close of the public hearing." Additionally, to raise an issue in a contested case proceeding, the issue must be within Council jurisdiction, and the person must have raised the issue on the record of the public hearing with "sufficient specificity to afford the Council, the Department, and the certificate holder an adequate opportunity to respond to the issue."[9]

The Council's final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case proceeding may request judicial review and the issues on appeal are limited to those raised by the parties to the contested case proceeding. A petition for judicial review must be filed with the Supreme Court within 60 days after the date of service of the Council's final order or within 30 days after the date of a petition for rehearing is denied or deemed denied.[10]

If no contested case is requested, the Council shall adopt, modify or reject the proposed order and issue a final order approving or denying the site certificate amendment request based upon

[8] See OAR 345-027-0071.
[9] OAR 345-027-0071(5).
[10] ORS 469.403 and OAR 345-027-0071(12).

the applicable laws and Council standards required under OAR 345-027-0075(2) and in effect on the dates described in OAR 345-027-0075(3).

II.E. Applicable Division 27 Rule Requirements

A site certificate amendment is necessary under OAR 345-027-0050(4) because the certificate holder requests to design, construct, and operate the facility in a manner different from the description in the site certificate, and the proposed changes: (1) could result in a significant adverse impact to a resource or interest protected by a Council standard that the Council has not addressed in an earlier order; (2) could impair the certificate holder's ability to comply with a site certificate condition; or (3) could require new conditions or modification to existing conditions in the site certificate, or could meet more than one of these criteria.

The Type A amendment review process (consisting of OARs 345-027-0059, -0060, -0063, -0065, -0067, -0071 and -0075) is the default amendment review process and shall apply to the Council's review of a request for amendment proposing a change described in OAR 345-027-0050(2), (3), and (4).[11]

III. REVIEW OF THE REQUESTED AMENDMENT

Under ORS 469.310, the Council is charged with ensuring that the "siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety." ORS 469.401(2) further provides that the Council must include in the amended site certificate "conditions for the protection of the public health and safety, for the time for completion of construction, and to ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503."[12] The Council implements this statutory framework by adopting findings of fact, conclusions of law, and conditions of approval concerning the ability of the certificate holder to maintain compliance with the Council's Standards for Siting Facilities at OAR Chapter 345, Divisions 22, 24, 26, and 27.

As described in Section II.A. *Requested Amendment*, the certificate holder seeks flexibility to install any combination of the wind and solar energy facility components as long as the total maximum output would not exceed 202 MW; however, the Department and Council do not regulate the electrical generation capacity or output of the facility or facility components, but rather Council rules and standards are concerned with the potential impact of a proposed facility and its components. The Department understands that the certificate holder requests flexibility in final design layout for Phase 2, including a potential final Phase 2 design layout that would differ from the three design scenarios represented in RFA4.

As presented in this draft proposed order, there are Council standards that are quantitative and rely on, for example, the location, number of, and dimension of facility components to assess

[11] OAR 345-027-0051(2).
[12] ORS 469.401(2).

potential visual, noise, health and safety, and land use impacts of facility components. There are Council standards that are qualitative and rely on best management practices and plans to evaluate and minimize impacts to, for example, soils, seismic and non-seismic hazards. To afford the requested flexibility, the Department recommends Council impose conditions, as needed, based on the methodology and maximum impact evaluated for each design scenario but not be prescriptive to a design scenario or specific proposed facility component.

This draft proposed order includes the Department's analysis of whether Phase 2 meets each applicable Council standard (with mitigation and subject to compliance with existing and recommended conditions, as applicable), based on the information in the record. Following the written comment period on the draft proposed order and Council review of the draft proposed order, the Department will issue its proposed order, which will include the Department's consideration of the comments and any additional evidence received on the record of the draft proposed order.

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

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

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

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

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

Findings of Fact

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that the facility, with proposed changes, would comply with the requirements of EFSC statutes and the siting standards adopted by the Council and that the facility, with proposed changes, would comply with all other Oregon statutes and administrative rules applicable to the issuance of an amended site certificate for the facility.[13]

The requirements of OAR 345-022-0000 are discussed in the sections that follow. The Department consulted with other state agencies, and Gilliam County Court during review of RFA4 to aid in the evaluation of whether the facility, with proposed changes, would maintain compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Department relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards.

OAR 345-022-0000(2) and (3) apply to RFAs where a certificate holder has shown that the proposed amendments cannot meet Council standards, or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of the damage to protected resources; and, for those instances, establish criteria for the Council to evaluate in making a balancing determination. The certificate holder does not assert that the facility, with proposed changes, cannot meet an applicable Council standard. Therefore, OAR 345-022-0000(2) and (3) do not apply to this review.

Certificate Expiration (OAR 345-027-0013)

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

The Council's imposition of construction deadlines in the amended site certificate should reflect a balance between the Council's concern regarding potential circumstantial changes (regulatory and environmental) and the individual circumstances of the amendment request. In addition, the Department acknowledges that there are a number of unforeseen factors that can delay a certificate holder's commencement of construction and completion, including but not limited to financial, economic, or technological changes. The Department also notes that while each amendment request is evaluated on its own facts, historic Council decisions on construction

[13] OAR 345-022-0000(2) and (3) apply to RFAs where an certificate holder has shown that the proposed amendments cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of adverse effects to protected resources; and, for those instances, establish criteria for the Council to evaluate in making a balancing determination. The certificate holder does not assert that the proposed amendments cannot meet an applicable Council standard. Therefore, OAR 345-022-0000(2) and (3) do not apply to this review.

and commencement deadlines were reviewed to inform this analysis. In most instances of decisions on applications, Council has required construction commencement and completion of wind and solar energy facilities within three and six years, respectively, after the effective date of the site certificate and in some instances the completion deadline is established based on date of construction commencement and not effective date of site certificate.

In RFA4, the certificate holder requests to extend the previously imposed construction deadline for the facility, to allow for construction of Phase 2, from September 14, 2020 to September 14, 2023. However, the previously imposed construction commencement and completion deadlines apply to Phase 1. The Department recommends Council apply construction commencement and completion deadlines specific to Phase 2, and not consider the new deadlines an extension request. As noted, Phase 1 is already under construction.

The certificate holder anticipates an 18 months construction schedule for Phase 2, however, the Department recommends Council grant construction commencement and completion deadlines based upon three and six years following the date of Council approval. This timeframe would be consistent with historic Council decisions and represents a reasonable timeframe. The Department recommends that Council amend Conditions 24 and 25 as presented in underline/strikethrough below:

Recommended Amended Condition 24:

The certificate holder shall:

i. ~~b~~Begin construction of Phase 1 of the facility by September 14, 2017. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027~~-0030~~-0085 or any successor rule in effect at the time the request for extension is submitted. [ASC; AMD2; AMD4]

ii. The certificate holder shall begin construction of Phase 2 of the facility by [SPECIFIC DATE TO BE INCLUDED IN FINAL ORDER AND SITE CERTIFICATE – 3 years from date of Council approval]. ~~Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the certificate holder~~. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0085 or any successor rule in effect at the time the request for extension is submitted. [AMD4]

Recommended Amended Condition 25:

The certificate holder shall

i. ~~c~~Complete construction of Phase 1 of the facility by September 14, 2020. 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~~-0085 or any successor rule in effect at the time the request for extension is submitted. [ASC; AMD2; AMD4]

ii. The certificate holder shall complete construction of Phase 2 of the facility by [3 years from date of construction commencement]. 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 345-027-0085 or any successor rule in effect at the time the request for extension is submitted. [AMD4]

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

OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site certificate. The Council's October 2017 rule changes moved the mandatory conditions from Division 27 to Division 25. As such, the Department recommends Council administratively amend the rule citations included in the previously imposed mandatory and site-specific conditions, as presented in Attachment A of this order.

Council previously imposed Condition 27, mirroring OAR 345-025-0006(3)(a), requiring that the certificate holder design, construct, operate and retire the facility substantially as described in the site certificate. Consistent with OAR 345-025-0006(3)(a), Condition 27 establishes dimensional specifications and individual wind turbine generating capacity for the wind turbine technologies to be selected during final design. The Department recommends Council amend Condition 27 based on specifications and dimensions of proposed facility components relied upon in the RFA4 impact assessment, as follows:

Recommended Amended Condition 27: The certificate holder shall construct a facility substantially as described in the site certificate and may select turbines of any type, subject to the following restrictions and compliance with all other site certificate conditions. 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.

i. For Phase 1 facility components:

(a) The total number of turbines ~~at the facility~~ must not exceed 81~~269~~ turbines.

~~(b) The combined peak generating capacity of the facility must not exceed 404 megawatts and the peak generating capacity of any individual turbine must not exceed 3.6 megawatts.~~

(c) The turbine hub height must not exceed 100 meters and the maximum blade tip height must not exceed 150 meters.

(d) The minimum blade tip clearance must be 14 meters above ground. [Amendment #3]

~~(e) The certificate holder shall request an amendment of the site certificate to increase the combined peak generating capacity of the facility beyond 404 megawatts, to increase the number of wind turbines to more than 269 wind turbines or to install wind turbines with a hub height greater than 100 meters, a blade tip height greater than 150 meters or a blade tip clearance less than 14 meters above ground. [Amendment #3]~~

[Final Order on ASC; AMD3]

ii. For Phase 2 facility components:

(a) Components may include any combination of wind and solar energy generation equipment, up to 81 wind turbines or the maximum layout (including number and size) of solar array components substantially as described in RFA4.

(b) The turbine hub height must not exceed 351 feet (107 meters) and the maximum blade tip height must not exceed 597 feet (182 meters). The minimum aboveground blade tip clearance must be 46 feet (14 meters). [AMD4]

Site Specific Conditions [OAR 345-025-0010]

In addition to mandatory conditions imposed on all facilities, the Council rules also include "site specific" conditions at OAR 345-025-0010 that the Council may include in the site certificate to address issues specific to certain facility types or proposed features of facilities. Since the time the Council issued the site certificate in 2010, the Council reorganized the OAR 345, Division 27 and Division 25 rules. The Department recommends that the Council make minor administrative adjustments to certain site certificate conditions to update references to Oregon Administrative Rules to reflect the relocation of the site-specific conditions from Division 27 to Division 25. These conditions are noted in strike-through/underline in Attachment A, Draft Amended Site Certificate.

Additionally, the Department recommends the Council amend Condition 18 imposed pursuant to OAR 345-025-0010(5), applicable to transmission lines:

Recommended Amended Condition 18: ~~If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.~~ The certificate holder is authorized to construct a 230 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor is ½-mile

in width and extends approximately 14 miles from the Phase 1 collector substation to Phase 2 collector substation to BPA's Slatt Substation as presented in Figure 1 of the site certificate.
[OAR 345-025-0010(5); ASC; AMD4]

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

The Council has adopted rules at OAR Chapter 345, Division 26 to ensure that construction, operation, and retirement of facilities are accomplished in a manner consistent with the protection of the public health, safety, and welfare and protection of the environment. These rules include requirements for compliance plans, inspections, reporting and notification of incidents. The certificate holder must construct the facility substantially as described in the amended site certificate [OAR 345-025-0006(3)] and the certificate holder must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.[14]

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the existing and recommended amended conditions, the Department recommends that the Council find that the facility, with proposed changes, would satisfy the requirements of OAR 345-022-0000.

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

(1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.

(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.

[14] Applicable rule requirements established in OAR Chapter 345, Division 26 include OAR 345-026-0005 to OAR 345-026-0170.

(3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.

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

Findings of Fact

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

Compliance with Council Standards and Site Certificate Conditions

The Council may consider a certificate holder's past performance, including but not limited to the quantity or severity of any regulatory citations in the construction or operation a facility, type of equipment, or process similar to the facility, in evaluating whether a proposed change may impact the certificate holder's ability to design, construct and operate a facility in compliance with Council standards and site certificate conditions.[15] To evaluate whether the facility, with proposed changes, would impact the certificate holder's ability to comply with Council standards and site certificate conditions, the Department presents an evaluation of the certificate holder's relevant experience with constructing and operating similar systems and considers whether any regulatory citations have been received for its facilities.

[15] OAR 345-021-0010(1)(d)(D)

Montague Wind Power Facility, LLC, is a project-specific LLC and therefore relies upon the organizational expertise and experience of its parent company, Avangrid Renewables (Avangrid).[16] In RFA4, the certificate holder states that Avangrid is the second largest operator of wind energy projects in the United States, and that Avangrid has not received any regulatory citations during construction or operation of a facility, type of equipment, or process similar to the proposed changes.[17] Furthermore, the certificate holder explains that Avangrid has operated renewable energy projects in Oregon since 2001, and currently owns more than 1,483 MW of utility-scale wind and solar generation in the state, including four EFSC jurisdictional wind facilities (Klamath Cogeneration Project, Klondike III Wind Project, Leaning Juniper IIA Wind Power Facility, and Leaning Juniper IIB Wind Power Facility), and Oregon's largest operating solar PV facility, the Gala Solar project in Crook County (not subject to EFSC jurisdiction). Avangrid's previous experience both in and out of Oregon includes designing, constructing, and operating wind, solar, and co-generation energy facilities, substations, both low- and high-voltage electrical lines, and is currently in the permitting phase for four battery storage projects in the United States, including the battery storage system proposed in RFA4.[18] The certificate holder explains that the design and operation of a battery storage facility is "fundamentally similar" to the aforementioned facilities and components, and compliance with Condition 34 would ensure that experienced, qualified contractors would be selected to construct and install the battery storage system. Based on review of the record for the facility, the Department confirms that, to date, no regulatory citations had been issued by the Department for any EFSC-jurisdictional Avangrid- operated facility.

The Department recommends that the Council find that the certificate holder has demonstrated an ability to design, construct, and operate the facility, with proposed changes, in compliance with Council standards and site certificate conditions for the following reasons: the certificate holder demonstrates experience constructing and operating multiple energy facilities with varying forms of energy generation, experience constructing and operating related or supporting facility components; the certificate holder has not received regulatory citations for its EFSC jurisdictional facilities; and, existing site certificate conditions require the certificate holder to select qualified contractors and contractually require compliance with site certificate conditions during facility design, construction and engineering.

Public Health and Safety

The proposed change in wind turbine size could result in health and safety risks from blade failure, structural and reliability concerns, ice throw, risks to public and private providers of air transportation and agricultural services, and risks to public providers of fire service during tower rescue events. The Department's evaluation of these risks is presented in Section III.M.,

[16] The certificate holder's parent company, Avangrid Renewables, formally Iberdrola Renewables, owns and operates more than 6,000 MW of utility-scale renewable energy production throughout the United States. Furthermore, 1,483 MW of the 6,000 MW's of renewable energy owned and operated by Avangrid is produced Oregon.

[17] MWPAMD4 Exhibit D, p.D-6 2019-04-05

[18] MWPAMD4 Montague RAI-4 Response Transmittal and Table, p.4 2018-08-23

Public Services and Section III.P.1., *Public Health and Safety Standards for Wind Facilities* of this order.

Construction and operation of the proposed battery storage systems could also result in public health and safety risks during battery and battery waste transport; and, onsite handling and storage of battery-related materials and waste. This is further discussed in Sections III.M., *Public Services* and Section III.N., *Waste Minimization* of this order.

In RFA4, the certificate holder describes that the facility, with proposed changes, would be constructed and operated in a manner that complies with Conditions 60 through 63. During construction and operation of the facility, with proposed changes, Conditions 60 through 63 require the certificate holder to develop and implement a fire safety plan in consultation with the North Gilliam County Rural Fire Protection District, provide a site plan of the facility to the North Gilliam County Rural Fire Protection District, ensure that all construction personnel and on-site employees are trained in fire prevention and response by qualified instructors or members of the local fire districts.

In addition to Conditions 60 through 63, the certificate holder states that the facility would be constructed and operated to comply with the requirements of the Department of Transportation Pipeline and Hazardous Material Administration's *49 Code of Federal Regulations (CFR) 173.185*. These regulations provide requirements for the prevention of dangerous evolution of heat; prevention of short circuits; prevention of damage to terminals; and, prevention of contact with other batteries or conductive materials. To minimize potential health and safety impacts during onsite handling and transport of battery and battery waste during facility construction and operation, the Department recommends Council impose Condition 116 as follows:

Recommended Condition 116: The certificate holder shall:

a. Prior to and during construction, as applicable, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.
b. Prior to transporting and disposing of battery and battery waste during facility operations, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.

[AMD4]

Based upon the evidence and reasoning provided in RFA4, and compliance with existing, recommended new and amended conditions, the Department recommends the Council find that the certificate holder has provided reasonable assurance that it can design, construct,

operate, and retire the facility, with proposed changes, in a manner that protects public health and safety in accordance with the Organizational Expertise standard.

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

The certificate holder's ability to restore the facility site to a useful, non-hazardous condition is evaluated in Section III.G., *Retirement and Financial Assurance* of this order, in which the Department recommends that Council find that the certificate holder would continue to be able to comply with the Retirement and Financial Assurance standard.

ISO 900 or ISO 14000 Certified Program

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

Third-Party Permits

OAR 345-022-0010(3) addresses the requirements for potential third party contractors. In RFA4, the certificate holder identifies five state permits that may be required for construction and operation of Phase 2, and would be obtained by third-party contractors, if required. The third-party permits would include a Oregon Department of Environmental Quality (DEQ) issued onsite sewage disposal construction-installation permit for the proposed O&M building; a DEQ issued general water pollution control facilities permit for wastewater and stormwater management of a temporary construct batch plant (WPCF-1000); a DEQ issued general water pollution control facilities permit for solar module washing during facility operations (WPCF-1700-B); a Oregon Water Resources Department (OWRD) issued limited water use license for construction-related water use; and a Oregon Department of Transportation (ODOT) issued oversize load movement permit/load registration for transporting large or overweight equipment to the site. While not specifically identified in RFA4, because a third-party DEQ issued WPCF-1000 permit was identified for a temporary batch plant, it is possible that additional third-party permits would be required for a temporary concrete batch plant, including a land use permit from Gilliam County and a DEQ issued Air Contaminant Discharge Permit.

With the exception of the ODOT permit, the above-described third party permits would normally be included in and governed by the site certificate. Therefore, because these permits would normally be included in and governed by the site certificate and are necessary permits for the construction and operation of the facility – and are permits for equipment and facilities that would be located within the approved site boundary, the Department recommends Council amend Condition 29 as follows:

> **Recommended Amended Condition 29:** Before beginning construction, the certificate holder shall:

i. For Phase 1, provide confirmation to the Department that the construction contractor or other third party has obtained all necessary permits or approvals and shall provide to the Department proof of agreements between the certificate holder and the third party regarding access to the resources or services secured by the permits or approvals.

ii. For Phase 2, submit to the Department and Gilliam County a list of third-party permits to be obtained or that have been obtained.

a. The certificate holder shall submit to the Department copies of all obtained third party permits.

b. Provide to the Department in semi-annual reports pursuant to OAR 345-026-0080, copies of compliance recordkeeping as required by third-party permits normally governed by the site certificate (e.g. Type I Administrative Review Conditional Use Permit for Temporary Batch Plant; Air Contaminant Discharge Permit for Batch Plant; Limited Water Use License; Water Right; Water Pollution Control Facilities Permit(s)).

Conclusions of Law

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

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

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

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

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

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

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

(c).

(2) The Council may not impose the Structural Standard in section (1) to approve or deny an application for an energy facility that would produce power from wind, solar or geothermal energy. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.
***[19]

Findings of Fact

As provided in section (1) above, the Structural Standard generally requires the Council to evaluate whether the certificate holder has adequately characterized the potential seismic, geological and soil hazards of the site, and whether the certificate holder can design, engineer and construct the facility to avoid dangers to human safety and the environment from these hazards. Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind or solar energy facility without making findings regarding compliance with the Structural Standard; however, the Council may apply the requirements of the standard to impose site certificate conditions. The analysis area for the Structural Standard is the area within the site boundary.[20]

The Department notes that rulemaking conducted since the last Council decision on the Montague Wind Power Facility established new informational requirements within OAR Chapter 345, Division 21. Specifically, OAR 345-021-0010(h)(F)(i) and OAR 345-021-0010(h)(F)(ii) require the certificate holder to discuss the facility's disaster resilience, and ability to withstand impacts that may arise from future climate conditions. Also as part of the rule change, Council amended its mandatory condition requirements at OAR 345-025-0006(12)(13) and (14). Based in the recent changes, the Department recommends that Council amend Conditions 12, 13, and 14 as follows to be consistent with the mandatory condition language:

Recommended Amended Condition 12:
The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. ~~tsunami inundation, fault displacement and subsidence.~~
[AMD4]

[19] OAR 345-022-0020(3) does not apply to this amendment because the facility, with proposed changes, would not meet the criteria for a special criteria facility as defined in ORS 469.373(1).
[20] Site boundary, as defined in OAR 345-001-0010(55), is the area within the perimeter of the facility, its related or supporting facilities, all temporary laydown and staging areas, and all micrositing corridors.

Recommended Amended Condition 13:
The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division ~~and~~ to propose and implement corrective or mitigation actions.
[AMD4]

Recommended Amended Condition 14:
The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
[AMD4]

Geological and Soil Stability

In September 2017, both the certificate holder and the certificate holder's geotechnical consultant, CH2M, of Portland, Oregon, met with the Oregon Department of Geology and Mineral Industries (DOGAMI) to discuss the geological consideration for Phase 2. During the consultation, general details of the analysis area, and the underlying geology and terrain were discussed. Discussion focused on foundation types and design criteria, as well as hazards related to ground shaking, landslide potential, and soil conditions at the site. CH2M conducted limited geological site reconnaissance of the proposed site boundary expansion and a detailed literature review of the regional geology, including an evaluation of published literature and geologic mapping.

CH2M conducted a limited geological site reconnaissance of the proposed expanded facility to observe the existing features at the site and look for evidence of past or potential geologic hazards. The site reconnaissance included evaluation of existing exposures of soil and rock (typically in road cuts, quarries, and drainages), classification of soils, and observation of typical slopes in the proposed turbine and transmission line areas.

A detailed literature review of the regional geology including the entire site boundary was also performed, including evaluation of published literature and geologic mapping.

As evaluated in the *Final Order on the ASC*, the approved facility (Phase 1) is located approximately 5 miles south of Arlington, Oregon, in Gilliam County, situated along the top plateau of the Columbia Plateau Physiographic Provence. The Columbia Plateau Physiographic

Provence consists of a large plateau underlain by a series of basalt flows.[21] The certificate holder explains that the top of plateau tends to be relatively flat to gently rolling, and that streams have dissected the plateau into steep-sided canyons. As proposed, Phase 2 would also be located atop the plateau of the Columbia Plateau Physiographic Provence, however, the proposed expansion would be concentrated along the small canyons and plateaus that border Rock Creek.[22]

Potential Seismic, Geological and Soil Hazards

OAR 345-022-0020(1)(a) requires the certificate holder to adequately characterize the seismic hazard risk of the site. In the *Final Order on the ASC*, Council evaluated three sources of potential seismic hazards; interpolate events at the interface between the Juan de Fuca and North American plates in the Cascadia Subduction Zone (CSZ), intraslab events in the CSZ, and potentially active crustal faults (crustal events) within the vicinity of the facility. In RFA4, Exhibit H, the certificate holder conducted updated mapping of active faults within the proposed amended facility site boundary, and within 50 miles of the proposed amended site boundary, and determined that the site boundary, including the proposed Phase 2 expansion, did not contain any active faults.

Based on the preliminary geotechnical studies, the certificate holder asserts that there are no potentially active faults within the proposed amended Facility site boundary. Figure H-2 of RFA4 identifies historic earthquakes and quaternary faults within approximately 50 miles of the facility site boundary, with proposed changes. The nearest late-Quaternary-age fault that presents the largest potential for seismic contribution to the Facility, as mapped in Figure H-2 is the Mill Creek fault. This is the only late-Quaternary-age fault (<15,000 years old) mapped within 50 miles of the Facility site boundary. Other middle-Quaternary-age faults (<750,000 years old) in the area include the Arlington-Shutler Butte fault and the Horse Heaven Hills fault.

As mentioned above, the facility, with proposed changes is proposed to be constructed on terrain that is primarily flat, underlain with shallow, stable bedrock. As such, the certificate holder states that the design of the facility is not expected to be prone to seismically induced landslides. Furthermore, the certificate holder explains that slopes within the site boundary are generally less than 5 percent, and that to avoid damage to turbines and transmission towers, during final design of Phase 2, turbines would not be sited along the crests of slopes. The certificate holder conducted a nonseismic hazard assessment and concluded that the facility could potentially be impacted by the following nonseismic hazards; slope instability and ensuing landslides, soil erosion, collapsed loess potential, and volcanic eruptions. However, based on geologic mapping and site reconnaissance observations, slopes within the facility site boundary are not considered to be susceptible to landslides.

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[21] MWPAPPDoc157 MWP Final Order, p. 114

[22] MWPAMD4Doc Exhibit H, p. H-3

Existing Condition 53 requires the certificate holder to design and construct the facility in accordance with the requirements of the 2007 Oregon Structural Specialty Code, and the 2006 International Building Code. As proposed, Phase 2 facility components will be designed for the Maximum Considered Earthquake (MConE) event, according to the 2012 *International Building Code* (IBC) as amended by the Oregon Structural Specialty Code. However, those codes are out of date. As described below, the Department recommends that Condition 53 be updated to reference current building codes that are in place at the time the Phase 2 facility goes to construction.

> **Recommended Amended Condition 52**:
> The certificate holder shall design and construct the facility in accordance with requirements of the current Oregon Structural Specialty Code ~~(OSSC 2007)~~ and ~~the 2006~~ International Building Code.

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

The certificate holder has presented evidence in RFA4 that it can design, engineer, and construct the Phase 2 facility to avoid dangers to human safety and the environment in accordance with the Council's Structural Standard. In addition to information provided on the record of the original final order, and pre-construction geotechnical investigation of the Phase 1 site boundary, the Department recommends amendments to Condition 52 which will require the certificate holder to conduct additional pre-construction geotechnical investigations at the Phase 2 facility site. The Phase 2 site boundary is adjacent to the Phase 1 site, currently under construction, and which has been demonstrated to comply with the Structural Standard. The certificate holder has consulted with DOGAMI as part of both pre-construction compliance for Phase 1, and as part of the application for RFA4.

The Council also previously imposed Condition 52, which requires a pre-construction geotechnical report be conducted, conforming to the most current DOGAMI guidelines for conducting such studies accounting for the possibility that DOGAMI revises or updates its guidelines prior to the construction of Phase 2. The Department also recommends that Condition 52 require the certificate holder to provide the pre-construction geotechnical report to both the Department and to DOGAMI at least 90 days prior top Construction to allow for both the Department and DOGAMI sufficient time to review and comment on the report. Furthermore, the Department recommends that Council amend the condition to include specific geotechnical work as proposed by the certificate holder.[23] As such, the Department recommends that the Council amend Condition 52 as follows:

> **Recommended Amended Condition 52**:
> Before beginning construction of:

[23] MWPAMD4 Exhibit H, p.H-6 2019-04-05

i. Phase 1 of the facility, the certificate holder shall conduct a site-specific geotechnical investigation…

[Final Order]

ii. Phase 2 of the facility, the certificate holder must: conduct a site-specific geotechnical investigation and shall report its findings to the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department. The report must be submitted to the Department and DOGAMI at least 90 days prior to beginning construction of Phase 2, unless otherwise agreed upon by the Department.

The certificate holder shall conduct the geotechnical investigation in general accordance with current DOGAMI guidelines for engineering geologic reports, and site-specific seismic hazards, and shall include at least the following activities:

a. Reviewing available data from previous geotechnical explorations in the vicinity of the approved and proposed expanded site boundary.

b. Reviewing available geologic information from published sources.

c. Subsurface explorations (including soil borings, test pits, infiltration tests, and possible geophysical testing) at locations of proposed facility components.

d. Collecting additional soil samples for classification and laboratory testing and conducting laboratory tests on selected soil samples, if necessary to comply with DOGAMI guidelines.

[AMD4]

Disaster Resilience and Climate Change Adaption

The certificate holder states in Exhibit H that the facility, with proposed changes, will be designed to meet or exceed the minimum standards required by the design code and maintain core operations without interruption from a maximum-considered earthquake. Montague represents that the facility will be designed to be resilient after a potential disaster, such as a seismic event or an event related to future climate conditions, and that the Oregon Resilience Plan will be evaluated during final design of Facility components.[24]

Furthermore, the certificate holder evaluated future climate change conditions, and indicates that future climate change conditions should not have a major impact on the geologic, geotechnical, and seismic conditions at the facility, with proposed changes. The certificate holder explains in Exhibit H of the RFA that, in general, increased rainfall intensity and long-term precipitation increases could lead to an increase in soil erosion compared to historical erosion and that existing ancient landslides could become reactivated by saturation that occurs as a result of increased annual precipitation. However, no ancient landslides were observed at the site during the preliminary geotechnical reconnaissance and studies, and in accordance with Condition 52, a pre-construction geotechnical investigation will be required prior to Phase

[24] MWPAMD4 Exhibit H, p.H-14 2019-04-05

2 construction. Future drought conditions and any associated loss of vegetation could increase the potential for dust storms; the certificate holder will be required to revegetate areas of temporary impact, in accordance with Condition 92.

Risks associated with fire and inclement weather are discussed within this order in Sections III.M Public Services and Section III.P.1 Public Health and Safety Standards for Wind Energy Facilities. The Gilliam County Fire Services indicated that it is available to respond in the event of an emergency, and Condition 60 requires the implementation of a fire safety plan.

Subject to compliance with the existing and proposed amended conditions, the Department recommends that the Council find that the certificate holder has adequately characterized the potential geologic and soil hazards within the site boundary and its vicinity that could, in the absence of a seismic event, adversely affect or be aggravated by the construction and operation of the facility, and that the certificate holder could design, engineer, and construct the facility to avoid dangers to human safety presented by the identified hazards.

Conclusions of Law

Based on the foregoing analysis, and subject to the existing conditions in the site certificate, the Department recommends that the Council find that the facility, with proposed changes, continues to comply with the Council's Structural Standard.

III.D. 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.*

Findings of Fact

The Soil Protection standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in a significant adverse impact to soils. The certificate holder's assessment of potential soil impacts and compliance with the Soil Protection standard are included in Exhibit I of RFA4. Additional information related to the proposed facility's potential effects to soils and proposed mitigation measures, as described by the certificate holder can be found in Exhibit G (Materials Analysis) and Exhibit K (Land Use) of RFA4.

The analysis area for the Soil Protection standard is the area within the site boundary. As proposed, Design Scenario A (the maximum turbine layout scenario) would have the most

temporary disturbance (499.24 acres), and Design Scenario C, the solar array scenario, would have the most permanent disturbance (1,207.6 acres).

The Council addressed the Soil Protection Standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, *Final Order on Amendment 2*, and *Final Order on Amendment 3*. In the *Final Order on the ASC*, the Council found that the design, construction, and operation of the facility (Phase 1), when taking into account mitigation, would not result in a significant adverse impact to soils. Concurrently, the Council adopted nine conditions (Conditions 38, 44, 55, 56, 80, 81, 82, 85, and 92) to control and mitigate potential adverse impacts to soils and to mitigate the risk of soil contamination during construction and operation.

<u>Existing Soil Conditions and Land Use</u>

The land within the proposed site boundary expansion has primarily been used for dryland wheat production or rangeland, with some small areas of non-disturbed land. All land within the proposed amendment is zoned as exclusive farm use. Within the proposed amendment site boundary expansion, approximately one square mile of land is irrigated, and consists of crop circles, with irrigation provided by central pivots.[25] A second, smaller area or irrigated land exists on the northern side of Old Tree Road. The proposed Phase 2 facility would avoid the irrigated farmland.

Existing soil conditions within the analysis area are described and shown in Exhibit I of RFA4. Table I-1 of Exhibit I describes the soils units, including the erosion potential, of the various soil types located within the analysis area.[26] The main soil types within Phase 2 are the (1) Ritzville Silt Loam; (2) Warden Silt Loam; and (3) Willis Silt Loam, the same soil type as in the Phase 1 site boundary. The certificate holder classified the soil types using Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database and associated soil surveys for Gilliam County. Further, the certificate holder states that the soils types within the proposed site boundary expansion have a moderate to high potential for susceptibility to water and wind erosion. Recommended mitigation measures to reduce erosion risk are described below in this this section.

Council previously imposed Conditions 44, and 92 which require the site certificate holder to control and mitigate potential adverse impacts to soils and to also mitigate any risk of soil contamination during facility construction and operation. Because the requirements of Conditions 44, and 92 would continue to apply to Phase 2, the Department recommends that Council administratively amend each of the conditions as presented in Attachment A of this order.

[25] MWPAMD4 Exhibit I, p.I-2 2019-04-05
[26] MWPAMD4 Exhibit I, p.I-3 2019-04-05

Potential Adverse Impacts to Soil

The certificate holder's assessment of how the proposed amendment may impact soils is provided in Exhibit I of RFA4. Additional information related to potential impacts to soils, as described by the certificate holder, can also be found in Exhibit G, Exhibit H, and Exhibit K.

Potential Impacts during Construction

Construction of the proposed amended facility components under any of the three design scenarios would result in permanent soil disturbance to account for the footprint of permanent facility components including the wind turbines, permanent access roads, the battery storage system area, O&M building, and if selected, the solar array. Potential adverse impacts to soil within the analysis area (site boundary) could occurs as a result of construction and operation of the proposed amended facility, specifically soil erosion impacts from wind or rain during the construction of facility components requiring shallow excavations and the removal of surface vegetation. Potential construction impacts to soils would be relatively consistent across all three design scenarios. Although the construction of underground cables, roadways, the solar array, and turbine pads would all require shallow excavation and vegetation removal, the impacts would be temporary, and the exposure of the soils to wind and water erosion during construction would "prevail for a relatively limited time period until trenches are backfilled and pads are constructed."[27] Additionally, as required by the Habitat Mitigation Plan, areas temporarily disturbed during construction would be revegetated and restored after construction is complete, further reducing potential for erosion.

The certificate holder explains that the use of heavy machinery to deliver aggregate, concrete, water, turbine components, cranes, support structures, could cause localized soil compaction, resulting in temporary loss of agricultural productivity during construction.[28] In Section I.6.2 of Exhibits I, the certificate holder asserts that the agricultural productivity will be "restored" after construction. To ensure that any temporary loss of agricultural productivity will be restored after construction, the Department recommends that Council adopt the following Condition 92:

> **Recommended Amended Condition 92**:
> The certificate holder shall restore areas disturbed by facility construction but not occupied by permanent facility structures according to the methods and monitoring procedures described in the final Revegetation Plans for each phase of the facility, as approved by the Department in consultation with ODFW. The final Revegetation Plan shall be based on the

[27] MWPAMD4 Exhibit I, p.I-4 2019-04-05
[28] *Id.*

draft plan ~~that is incorporated~~ provided in Attachment ~~F~~E in the *Final Order on Request for Amendment #~~3~~4*, and as amended from time to time. [AMD4]

Section III.H. of this Draft Proposed Order provides further explanation of how agricultural productivity will be restored, mitigation measures, and recommended conditions for the proposed amendment.

Potential Impacts during Operation

For all three design scenarios, the Department evaluated the likelihood of potential adverse impacts associated with the operation of Phase 2 components. Impacts associated with the solar array only apply to Design Scenario C. Potential impacts to soils may include erosion due to stormwater drainage from structures and concrete or gravel surfaces, or the repair or maintenance of underground facility components and inadvertent spills of small amounts of chemicals used at the facility may also potentially impact soils at the facility.[29] If constructed, the solar array may need to be washed occasionally; if so, the certificate holder states that the wash water would be allowed to evaporate and seep into the ground in accordance with a General Water Pollution Control Facilities Permit (WPCF) 1700-B, issued by DEQ. Council previously imposed Condition 87, which allows for blade-washing, subject to restrictions recommended by DEQ. The Department recommends that the Council amend Condition 87, to also include the washing of solar panels during facility operation, subject to the DEQ recommended restrictions, as an acceptable practice. WPCF permits are state-issued permits and would be under control of an EFSC-issued site certificate; however, the certificate holder states in Exhibit E that if a WPCF permit is necessary, it would be secured by a third-party contractor, which is allowed in accordance with OAR 345-022-022-0110(3) and (4). Additionally, Condition 80 is recommended to be updated to include a requirement for a topsoil management plan. This is a requirement of the Council's Land Use standard and OAR 660-033-0130(38)(f)(B).

Once constructed, operations of the amended facility would be confined to the gravel aprons surrounding each turbine site and the gravel roads, including any roads within and surrounding the wind turbine generators, the solar array, and the battery storage pads. Chemicals including lubricating oils, transformer coolant, and pesticides for weed control, would be used and stored on site. The use and storage of the aforementioned chemicals within the proposed amended site boundary would present a low risk to soils from accidental spills.

The certificate holder states that only if a lithium-ion battery system is chosen will the battery storage system contain chemicals that would present a risk to soils from accidental spills. Furthermore, not all lithium-ion battery systems require liquid coolant, but are typically air cooled. If a lithium ion battery storage system with a liquid cooling system is chosen, only the coolant, which is similar to automotive antifreeze, would contain potentially hazardous

[29] MWPAMD4 Exhibit I, p.I-6 2019-04-05

chemicals. If a lithium-ion battery storage system is selected (rather than a flow battery system), the replacement of 7,600 gallons per 1 MW of liquid coolant would be contained and recirculated within each battery module.[30] The coolant would be replaced every seven years, corresponding with the replacement of the battery modules every seven years. The coolant would be contained within each battery module during operation, and when the modules are replaced, the coolant will be replaced and disposed of at a facility approved to handle such material.

Similarly, if a flow battery storage system is selected, 7,000 gallons per 1 MW of electrolyte solution would be contained within each battery storage module. However, as described in RFA Exhibit G, the electrolyte solution is nonhazardous and nontoxic, and nonflammable and nonexplosive. As such, flow batteries, if chosen, would not present a risk to soil contamination. The certificate holder explains that 7,000 gallons per 1 MW of electrolyte solution would be replaced every 20 years, and would be disposed of at a licensed facility that is both permitted and operated in compliance with applicable.

The certificate holder states in Exhibit I and U that the operation and maintenance of the battery storage facility will not likely affect soil; the certificate holder will conduct inspections of the battery storage systems, which are stored in leak-proof modules on concrete pads. As such, even if a spill of material within the battery storage system were to occur, it is unlikely that the spilled material would reach native soil. The following recommended condition the Department recommends Council impose would apply to any final design or configuration in which the certificate holder proposes to construct battery storage. The recommended condition, Condition 118 is as follows:

Recommended Condition 118:
<u>During facility operation, the certificate holder shall:</u>

a. <u>Conduct monthly inspections of the battery storage systems, in accordance with manufacturer specifications. The certificate holder shall maintain documentation of inspections, including any corrective actions, and shall submit copies of inspection documentation in its annual report to the Department.</u>
b. <u>Provide evidence in its annual report to the Department of active property coverage under its commercial business insurance from high loss-catastrophic events, including but not limited to, onsite fire or explosion. [AMD4]</u>

The certificate holder indicates that in the unlikely event of an accidental hazardous materials release, any spill or release will be cleaned up according to applicable regulations. The Department recommends that the Council amend condition 80 to include a requirement that the certificate holder consult with DEQ, and if a Spill Prevention, Containment, and

[30] In response to RAI "G-3" from the RAI-1 Responses, the certificate holder clarifies that Lithium-ion battery systems do not typically require liquid coolant, but rather are air cooled. However, there are some Lithium-ion battery systems that require coolant (like the Tesla Powerpack). MWPAMD4Doc Montague RAI-1 Response Transmittal and Table 2018-04-11

Contingency plan is determined to be necessary for Phase 2 operation. If DEQ determines that a SPCC is necessary, the certificate holder shall provide the department a copy of the SPCC. If DEQ determines that a SPCC is not needed during Phase 2 operation, the certificate holder shall prepare and submit to the department for review and approval, an operational Spill Prevention and Management.

As such, the Department recommends that Council amend Conditions 87 and 80 as follows;

Recommended Amended Condition 87:
During facility operation, if blade-washing <u>or washing of solar panels</u> 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.

Recommended Amended Condition 80:

i. 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 requirements. [AMD4]

ii.

a. <u>Before beginning construction of Phase 2 facility components, the certificate holder shall submit to the Department and Gilliam County Planning Director for review and approval a topsoil management plan including how topsoil will be stripped, stockpiled, and clearly marked in order to maximize topsoil preservation and minimize erosion impacts. [OAR 660-033-0130(38)(f)(B)]. The topsoil management plan may be incorporated into the final Erosion and Sediment Control Plan, required under sub(iii) or may be provided to the Department as a separate plan.</u>

b. <u>Prior to beginning facility operation, the certificate holder shall provide the department a copy of a DEQ-approved operational SPCC plan, if determined to be required by DEQ. If an SPCC plan is not required by DEQ, the certificate holder shall prepare and submit to the department for review and approval an operational Spill Prevention and Management plan.</u>

c. <u>During operation, if blade washing and/or solar array washing becomes necessary, the certificate holder shall conduct all equipment washing in compliance with a General Water Pollution Control Permit (WPCF) 1700-C, as issued by DEQ to the site certificate holder's third party contractor. A copy of the</u>

permit shall be provided to the Department prior to blade or solar array washing. [AMD4]

Measures to Mitigate Potential Adverse Impacts to Soils

Erosion Concerns

As described above, construction of the proposed Phase 2 facility would result in permanent and unavoidable impacts to soils. However, there are a number of measures and best management practices (BMP's) that the certificate holder proposes to implement, to minimize impacts to soils, including erosion and soil compaction.

The proposed Phase 2 facility is subject to the requirements of the National Pollutant Discharge Elimination System Stormwater Discharge permit (NPDES 1200-C permit), which requires the development and implementation of an erosion and sediment control plan to minimize impacts to soils and the environment. NPDES 1200-C permits are federally-delegated from the U.S. Environmental Protection Agency to DEQ, and are therefore not included in or governed by the site certificate. During construction, the certificate holder would continue to be subject to the requirements of the NPDES 1200-C Construction Stormwater Permit. The NPDES 1200-C Permit Application was included as an attachment to Exhibit I, Attachment I-1, and has been reviewed by the Oregon Department of Environmental Quality (DEQ), and renewed through December 14, 2020. The NPDES 1200-C permit applies during construction, and is intended to regulate and manage stormwater. Compliance with the NPDES 1200-C permit and associated Erosion and Sediment Control Plan (ESCP), as approved by DEQ, would reduce erosion and soil impacts. The Department recommends that the Council find that existing site certificate Condition 80 shall continue to apply to the facility, including the proposed amendment. Condition 80 requires the certificate holder to conduct all construction work in compliance with the NPDES 1200-C permit and associated ESCP, satisfactory to the Department, and approved by DEQ.

During operation of the proposed amended facility, the certificate holder will continue to perform routine inspections on all roads, pads, and trenched areas, and will maintain or repair erosion and sediment control measures, in accordance with Council's previously adopted condition 85. Condition 85 requires the certificate holder to routinely inspect and maintain all roads, pads and trenched areas, while also maintaining or repairing erosion and sediment control measures.

In Section I.3 of RFA4 Exhibit I, the certificate holder states that Condition 44 of the Amended Site Certificate "duplicates the requirements of condition 92" and should be removed. The Department disagrees with this claim, and notes that the requirements of Condition 44 specifically apply to construction completion, whereas Condition 92 applies to facility operation. The Department recognizes that the requirements are similar, but the implementation phase of each condition is different. To control and mitigate potential impacts during operation of the proposed amended facility, the Department recommends that Council amend Condition 85, requiring routine inspections and maintenance to all roads, pads, and

trenched areas, and as necessary, maintenance or repair to erosion and sediment control measures during facility operation.

> **Recommended Amended Condition 85:**
> During facility operation, the certificate holder shall routinely inspect and maintain all facility components including roads, pads (including turbine and battery storage pad), solar array, and trenched areas and, as necessary, maintain or repair erosion and sediment control measures.

In Exhibit I, Section I.7, the certificate holder lists a number of mitigation measures and Best Management Practices (BMP's) that would be implemented to minimize impacts to soils.[31] As described by the certificate holder, those mitigation measures and BMP's include:

1. **Stabilized Construction Entrance/Exit**: Stabilized construction entrance/exits will be installed at newly constructed roads and construction laydown areas. The stabilized construction entrance/exits will be inspected and maintained for the duration of Facility life.
2. **Existing Vegetation:** To the extent practicable, existing vegetation will be preserved.
3. **Silt Fencing:** Silt fencing will be installed on contour downgradient of excavations, turbine footings, the operations and maintenance (O&M) building, and the substations. Silt fencing will also be installed around the perimeter of material stockpiles and construction staging areas.
4. **Straw Wattles:** Straw wattles may be installed to decrease the velocity of sheet flow stormwater along the downgradient edge of access roads adjacent to slopes or sensitive area.
5. **Mulching:** Mulch will be provided to immediately stabilize soil exposed as a result of land- disturbing activities and during the reseeding of disturbed areas.
6. **Stabilization Matting:** Jute matting, straw matting, or turf reinforcement matting may be used to stabilize slopes that could become exposed during installation of access roads, or to stabilize intermittent streams disturbed during construction of road crossings.
7. **Soil Binders and Tackifiers:** Soil binders and tackifiers may be used on exposed slopes to stabilize them until vegetation is established.
8. **Concrete Washout Area:** Concrete chutes and trucks will be washed out in dedicated areas near the turbine and solar panel support foundation construction areas. Concrete washout will be handled to prevent concrete washout water from leaving a localized area, and to ensure that the restored surface soil maintains positive infiltration.

[31] MWPAMD4Doc3-4 Exhibits F - I, p. 88, 2017-11-22

9. **Stockpile Management:** Soil from excavations will be temporarily stockpiled and used as backfill at the completion of turbine footings. Stockpiled will have silt fencing as perimeter control and covered with a thick layer of mulch or plastic sheeting.
10. **Revegetation:** At the completion of land-disturbing activities for each phase of work, the site will be revegetated with an approved seed mix. The seed will be applied with mulch to protect the seeds as the grass establishes.
11. **Dams and Sediment Traps:** Check dams and sediment traps will be used during the construction of low-impact ford crossings or culvert installations to minimize downstream sedimentation during construction of the stream crossings.
12. **Pollutant Management:** During construction, source control measures will be implemented to reduce the potential of chemical pollution to surface water or groundwater during construction. Fuels and oils will be stored in a dedicated area, and construction vehicles will be fueled and maintained only in dedicated areas. The handling, storage, and disposal of materials will be consistent with federal, state, and local ordinances. Spill kits will be located on-site during construction and operation for use in the event of an accidental spill of hazardous materials.
13. **Topsoil Conservation:** High-value farmland soils will be protected and conserved in accordance with OAR 660-033-0130(37), as described in Exhibit K (Land Use). Where topsoil or other high-value farmland soils are present at the surface of road or trench excavations (particularly in irrigated agricultural areas), this material will be identified and segregated from the remainder of the soils to be excavated. Topsoil will be stockpiled separately from the additional excavation spoils (either adjacent to the trench or road, or hauled off to be stockpiled and stored elsewhere), and then placed back at the surface of trenches as the final stage of backfilling. NRCS policy and procedures on prime and unique farmlands are published in the *Federal Register*, Volume 43, Number 21, dated January 31, 1978.
14. **Runoff**: Pervious soils and gravel aprons will surround each turbine pedestal engine to minimize runoff. Any runoff will be directed to a roadside drainage ditch constructed with vegetative buffer strips, check dams, and other erosion control structures
15. **Soil Compaction**: Haul truck traffic will be kept to improved road surfaces to limit soil compaction and disturbance. Soil compaction will be mitigated by scarifying and reseeding affected areas after construction is completed.
16. **Dust Control**: Dust will be controlled during construction through water applications to disturbed ground, by graveling of permanent roadways, imposing construction and operation speed limits of 20 miles per hour, and rescheduling work around especially windy days. Additional measures to control dust are discussed in Exhibit K.
17. **Retirement**: Should the Facility be retired, structures will be removed to 3 feet below the ground surface and soil surfaces will be reseeded (with the exception of the improved farm roads). Retirement requirements include strict implementation of

> erosion control measures when soil is exposed to prevent erosion. The retirement plan is described in Exhibit W.

In accordance with amended Condition 80, the certificate holder will conduct all construction work in compliance with the Erosion and Sediment Control Plan, which will include the BMPs listed above.

Potential Impacts Related to Spills

During construction and operation of Phase 2, small quantities of hazardous materials would be stored, used and generated onsite. If improperly handled, stored, or spilled, hazardous materials could adversely impact soils.

Existing Condition 55 requires the certificate holder to use any hazardous materials in a manner that is protective of human health and safety, safety and the environment and shall comply with all applicable local, state and federal environmental laws and regulations. The Department recommends that the Council amend Condition 55 to specify that storage of diesel fuel or gasoline shall not occur during facility operation, but should be allowed during construction. The Departments recommended amended Condition 55 language is as follows:

> **Recommended Amended Condition 55:**
>
> 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 during operations.

Condition 56 addresses the certificate holder's preparation for, and response to, spills and accidental releases of hazardous materials, and requires that spill kits be located on-site during construction and operation for the use in the event of an accidental spill of hazardous materials.[32]

Other Risks to Soils

If Design Scenario C is implemented, the certificate holder may occasionally wash the solar modules during facility operation. Water for solar panel washing is expected to be purchased from the City of Arlington or other permitted source. The applicant states that water used for washing would not contain cleaning solvents or detergents, and would not be heated. If used, the washwater would be allowed to evaporate and infiltrate into the ground, which is covered by a WPCF 1700-B permit. The Certificate Holder's Exhibit E of the Amendment Request provides that "Montague's third-party contractor will conduct the washing activities and seek

[32] MWPAPPDoc157-5 MWPFinal Order 2010-09-10, p.59-60

coverage under the WPCF-1700-B permit from DEQ following completion of construction and before initiating any washing activities."[33]

As discussed in section III.B. *Organizational Expertise*, the Department recommends that Council amend Condition 29, requiring the certificate holder to submit copies of all obtained third party permits, and also compliance recordkeeping as required by third-party permits normally governed by the site certificate. These requirements would be applied to a WPCF-1700-B permit, if one is required.

Monitoring Program

As stated above in the "Best Management Practices" section of the Soils analysis, the certificate holder has identified 17 BMP's that would be implemented to minimize impacts to soils. Existing Condition 80 will continue to ensure that the measures and BMP's described above are included in the ESCP and implemented in Phase 2 of the Montague facility.

Subject to compliance with existing conditions and the recommended amended conditions above, the Department recommends that the Council find the design, construction, and operation of the proposed amended facility would not be likely to result in a significant adverse impact to soils.

Conclusions of Law

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

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

> *(1) To issue a site certificate, the Council must find that the proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.*
>
> *(2) The Council shall find that a proposed facility complies with section (1) if:*
>
> > *(a) The certificate holder 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*

[33] MWPAMD4Doc3-1 Exhibits A - E 2017-11-22, p. 135

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

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

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

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

(3) As used in this rule, the "applicable substantive criteria" are criteria from the affected local government's acknowledged comprehensive plan and land use ordinances that are required by the statewide planning goals and that are in effect on the date the applicant submits the application. If the special advisory group recommends applicable substantive criteria, as described under OAR 345-021-0050, the Council shall apply them. If the special advisory group does not recommend applicable substantive criteria, the Council shall decide either to make its own determination of the applicable substantive criteria and apply them or to evaluate the proposed facility against the statewide planning goals.

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

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

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

(c) The following standards are met:

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

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

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

Findings of Fact

The Land Use standard requires the Council to find that a facility, with proposed changes, complies with the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC). Under ORS 469.504(1)(b)(A), the Council may find compliance with statewide planning goals if the Council finds that a facility, with proposed changes, "complies with applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is submitted." RFA4 was received on January 9, 2018.

The analysis area for potential land use impacts, as defined in the project order, is the area within and extending ½-mile from the proposed amended site boundary.
The facility, as approved and with proposed changes, is located within Gilliam County. Therefore, the governing body within Gilliam County is the Special Advisory Group (SAG).[34] Prior to previous approval of the site certificate, the Council appointed the Gilliam County Court as a SAG.

Proposed Facility Modifications

In RFA4, the certificate holder seeks flexibility to install any combination of wind and solar energy facility components as long as the total maximum output of Phase 2 would not exceed 202 MW. The certificate holder also requests to amend the site boundary and micrositing corridor, to include additional area and a separate micrositing corridor within the proposed amended site boundary for the proposed Phase 2 solar facility components.

Local Applicable Substantive Criteria

Under Oar 345-022-0030(2), the Council must apply the applicable substantive criteria recommended by the SAG. The applicable substantive criteria for which the certificate holder must comply are established in the Gilliam County Zoning and Land Development Ordinance

[34] Under ORS 469.480(1), the Council must designate as a Special Advisory Group the governing body of any local government within whose jurisdiction the facility is proposed or proposed changes of a facility would be located.

(GCZO) and Gilliam County Comprehensive Plan (GCCP), as updated and amended in 2017. The application criteria from GCZO and goals and policies from GCCP are presented below in Table 1, *Gilliam County Applicable Substantive Criteria*.

Table 1: Gilliam County Applicable Substantive Criteria

Gilliam County Zoning and Land Development Ordinance (GCZO)	
Article 4 – Use Zones	
Section 4.020	Exclusive Farm Use
Section A	High Value Farmland
Section C	Planning Director Review
Section D	Conditional Uses Permitted
Section H	Specific Review Criteria
Section J	Property Development Standards
Article 7 – Conditional Uses	
Section 7.010	Authorization to Grant or Deny Conditional Uses
Section A	General Approval Criteria
Section 7.020	Standards Governing Conditional Uses
Section A	Conditional Uses, Generally
Section Q	Conditional Uses in Exclusive Farm Use Zones
Section T	Wind Power Generation Facility Siting Requirements
Article 8 – Supplementary Provisions	
Section 8.030	Clear Vision Areas
Section 8.040	Outdoor Lighting Standards
Section 8.050	Sign Regulations
Section 8.070	Projections from Buildings
Section 8.100	Off-Street Parking Requirements
Section A	Number of Parking Spaces Required
Section 8.140	Site Plan Review
Section A	Purpose
Section E	Detailed Plan

Table 1: Gilliam County Applicable Substantive Criteria

Section F	Outdoor Storage and Activities, if Permitted in the Zone
Section G	Topographic Information
Section H	Drainage Plan
Section I	Identification of Proposed Trash Storage Locations
Section J	Location of All Existing and Proposed Utilities
Section K	Elevation Drawings
Section L	Approval Standards
Section M	The Development Will Not Result In Traffic Volumes that Will Reduce the Performance Standard
Section N	The Development Will Not Adversely Affect Agricultural or Forestry Uses
Gilliam County Comprehensive Plan (GCCP)	
(Goal 2) Land Use Planning – Policy 7 (Goal 3) Agricultural Lands – Policy 3 (Goal 5) Natural Resources – Policies 2 and 12 (Goal 6) Air, Water, and Land Resources Quality – Policies 6 and 7 (Goal 8) Recreation – Policy 3 (Goal 12) Transportation – Policies 10 and 14 (Goal 13) Energy Conservation – Policy 3	

The analysis presented below includes the Department's evaluation of RFA4 Exhibit K and the certificate holder's compliance assessment with the applicable substantive criteria as presented above in Table 1*: Gilliam County Applicable Substantive Criteria*.

Gilliam County Zoning Ordinance

The certificate holder assesses the proposed Phase 2 facility components in Gilliam County as four separate land uses under the Gilliam County Zoning Ordinance (GCZO):

- Wind Power Generation Facilities (includes proposed Phase 2 wind turbines, power collection system, collector substation, SCADA system, meteorological towers, O&M building, transportation and access roads, temporary construction areas, battery storage system [proposed Phase 2 wind facility components])
- Commercial Utility Facilities for the Purpose of Generating Power for Public Use by Sale (includes proposed Phase 2 solar photovoltaic modules and accessory equipment like trackers, posts, cabling, inverters, transformers, collection system, site access, private service roads, perimeter fencing, and gates, and temporary construction areas [proposed Phase 2 solar facility components])
- Transportation Improvements on Rural Lands (includes proposed Phase 2 road construction and improvements associated with the solar array)
- Utility Facilities Necessary for Public Service (includes proposed Phase 2 230 kV transmission line segment)

The following analysis addresses the applicable substantive criteria identified in the GCZO for the land uses listed above.

GCZO Article 4 Use Zones

GCZO Section 4.020: EFU Exclusive Farm Use
In an EFU Zone, the following regulations shall apply:

A. High Value Farmland. Due to the limited amount of High Value Farmland in Gilliam County, the uses for High Value Farmland are not listed in this section. If a use permitted in Subsections B – G of this section is located on High Value Farmland, the requirements of this section and the requirements of OAR 660, Division 33, shall be used for the review.

GCZO Section 4.020(A) applies to permitted uses, as defined in GCZO Section 4.020(B) – (G), on high value farmland and requires compliance with applicable GCZO Section 4.020(B) – (G) and OAR 660-030-0130 provisions.

The certificate holder identifies that the proposed solar micrositing corridor includes 351.4 acres of high value farmland, pursuant to OAR 195.300(10)(f)(c), due to the Columbia Valley American Viticultural Area designation and certain elevation, slope, and aspect criteria. As described above, the proposed Phase 2 facility components are evaluated under four separate land uses, all of which are identified as permitted uses within EFU-zoned land pursuant to GCZO Section 4.020(C) and (D). Therefore, the Department recommends Council find that the requirements of GCZO Section 4.020(A) apply. The evaluation of compliance with GCZO Section 4.020(C) and (D) and OAR 660-030-0130 provisions is presented in this section of the order.

C. Planning Director Review. In the EFU zone, the following uses and their accessory uses may be permitted if determined by the Planning Director to satisfy the applicable criteria and provisions of law. Authorization of these uses does constitute a land use decision pursuant to ORS 197.015(10). Notice and an opportunity for a hearing must be provided in the manner described in Section 11.140. These uses may be referred to the Planning Commission for review if deemed appropriate by the Planning Director. (emphasis added)

23. Transportation improvements on rural lands allowed by OAR 660-012-0065.

GCZO Section 4.020(C)(23) authorizes transportation improvements on rural lands on high value farmland when the improvements meet an applicable OAR 660-012-0065 definition and demonstrates compliance with applicable OAR 660-012-0065 provisions.

As described in RFA4 Exhibit K, proposed Phase 2 facility components would include transportation improvements on both public and private roads in high value farmland. The

certificate holder asserts that proposed public road improvements would meet the "accessory transportation improvements" definition under OAR 660-012-0065(2) as "transportation improvements that are incidental to a land use to provide safe and efficient access to the use." Pursuant to OAR 660-012-0065(4), accessory transportation improvements to a commercial utility facility necessary for public service shall be subject to the same procedures, standards and requirements applicable to the use to which they are the accessory. Based on this reasoning, the certificate holder applies the applicable substantive criteria for a commercial utility facility necessary for public service to the proposed public road improvements. As presented below, in the evaluation of GCZO Section 4.020(D), the Department recommends Council find that the proposed Phase 2 facility components considered under the commercial utility facility necessary for public service land use category (i.e. proposed Phase 2 solar facility components) satisfies the applicable substantive criteria.

The certificate holder asserts that based on the OAR 660-033-0130(37) definition of a wind power generation facility, which includes new or expanded private roads constructed to serve the facility, proposed private road improvements should be evaluated as an accessory use to the proposed Phase 2 wind energy generating components. Based on this reasoning, the certificate holder applies the applicable substantive criteria for a wind energy generating facility to proposed private road improvements. As presented below, in the evaluation of GCZO Section 4.020(D), the Department recommends Council find that the proposed Phase 2 facility components considered under the wind power generation facility land use category satisfies the applicable substantive criteria.

24. Utility facilities necessary for public service

GCZO Section 4.020(C)(24) authorizes utility facilities necessary for public service on high value farmland.

As described in RFA4 Exhibit K, proposed Phase 2 facility components would include an approximately 3-mile 230 kV transmission line segment that would connect the proposed Phase 2 collector substation to the Phase 1 substation, and ultimately to Bonneville Power Administration's (BPA) Slatt Substation. The Council has historically and consistently evaluated transmission lines associated with generation facilities as "utility facilities necessary for public service," a use permitted on EFU-zoned land pursuant to ORS 215.283(1)(c) subject only to either ORS 215.275 or 215.274 depending on the type of line. The certificate holder evaluates the proposed 3-mile 230 kV transmission line as an "associated transmission line" under ORS 215.274, as evaluated in Section III.E.2 below.

The Department recommends Council find that the proposed Phase 2 230 kV transmission line is a utility facility necessary for public service and that it is a permitted use in EFU-zoned land, subject to the evaluation criteria of ORS 215.274 presented below.

GCZO Section 4.020(D): Conditional Uses Permitted. In the EFU Zone, the following uses and their accessory uses may be permitted, either by a Type I or a Type II Conditional Use Permit

to satisfy the applicable criteria and procedures set forth in Section 7.010. The appropriate review criteria are identified for each use.

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11. Commercial utility facilities for the purpose of generating power for public use by sale, not including wind power generating facilities. A power generation facility not located on high-value farmland shall not preclude more than 20 acres from use as a commercial agricultural enterprise. Approval of a use pursuant to this subsection is subject to the review criteria of Section 4.020.H, and any other applicable criteria or provisions of law.

GCZO Section 4.020(D)(11) identifies "commercial utility facilities for the purposes of generating power for public use by sale" (commercial utility facilities) as a permitted conditional use in an EFU zone. GCZO Section 4.020(D)(11) limits commercial utility facilities to be located on non-high value farmland from precluding more than 20 acres for use as a commercial agricultural enterprise; and, imposes GCZO Section 4.020(H) and Section 7.010 review criteria.

The proposed Phase 2 solar facility components are evaluated under the "commercial utility facilities for the purpose of generating power for public use by sale" land use category. The proposed Phase 2 solar facility components would preclude up to 351.3 acres of high value farmland from use as a commercial agricultural enterprise.[35] Therefore, because the proposed Phase 2 solar facility components would preclude more than 20 acres of high value farmland from use as a commercial agricultural enterprise, the certificate holder would not comply with the GCZO Section 4.020(D)(11) acreage limitation and a Goal 3 exception would be needed. In RFA4, the certificate holder requests Council review and approval of a Goal 3 exception, as evaluated in Section III.E.3 below.

The evaluation of GCZO Section 4.020(H) and Section 7.010, which apply per GCZO Section 4.020(D)(11), is presented under review of these criteria below.

20. Wind Power Generation Facilities as commercial utility facilities for the purpose of generating power for public use by sale.

GCZO Section 4.020(D)(20) identifies "wind power generation facilities.." as a permitted conditional use in an EFU zone and imposes GCZO Section 7.010 review criteria. Proposed Phase 2 facility components would include wind power generation facility components, consistent with the OAR 660-033-0130(37) definition. Proposed wind power generation facility components would include wind turbines, meteorological towers, electrical cable collection systems, new or expanded private roads, O&M building, temporary laydown areas and other necessary appurtenances. The certificate argues that the proposed battery storage system would not be built but for the facility and therefore should be considered a "necessary appurtenance," a term used in the OAR 660-033-0130(37) definition, to the proposed Phase 2

[35] MWPAMD4. Certificate Holder Responses to Request for Additional Information – Batch 3. 2018-06-15.

wind facility components. In the absence of a more suitable land use category for battery storage within the GCZO, the Department recommends Council apply the land use and applicable criteria for wind power generation facilities to the proposed Phase 2 battery storage.

The evaluation of GCZO Section 7.010, which applies per GCZO Section 4.020(D)(20), is presented under review of this criteria below.

GCZO SECTION 4.020(H) EFU SPECIFIC REVIEW CRITERIA

1. *The use may be approved only where the County finds that the use will not:*

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

GCZO Section 4.020(H) establishes review criteria for specific conditional uses within EFU zoned land, including commercial utility facilities.[36] The review criteria include a demonstration that the proposed use would not force a significant change or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.[37]

As presented above, the proposed Phase 2 solar facility components are evaluated as a commercial utility facility and therefore GCZO Section 4.020(H) applies. Because the proposed amended site boundary is located entirely within EFU-zone, there would be no potential impacts to forest lands.

Accepted Farm Practices

In RFA4, the certificate holder defines the surrounding lands as the area within and extending ½-mile of the proposed amended site boundary. The Department notes that, typically, for GCZO Section 4.020(H), the evaluation of potential impacts to farm practices on surrounding lands applies to lands outside of the site boundary – as the impacts evaluated under GCZO Section 4.020(D)(11) apply to the area within the site boundary. The Department recommends Council evaluate the certificate holder's compliance with GCZO Section 4.020(H) based on potential

[36] GCZO Section 4.020(D)(20) *Wind Power Generation Facilities* does not identify GCZO Section 4.020(H) as applicable; therefore, GCZO Section 4.020(H) does not apply to the proposed Phase 2 wind facility components. However, as noted in RFA4 Exhibit K, GCZO Section 4.020(H) is mirrored in OAR 660-033-0130(37); therefore, the evaluation of potential impacts of proposed Phase 2 wind facility components is appropriately evaluated in Section III.E.2 of this order.

[37] GCZO Section 4.020(H) review criteria are taken directly from ORS 215.296. Pursuant to ORS 215.203(2)(a) "farm use" means "the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops.."

impacts to lands extending ½-mile outside of the site boundary so as not to duplicate the evaluation under GCZO Section 4.020(D)(11).

The certificate holder describes that agricultural use on surrounding lands includes dryland wheat farming with limited irrigated farming and some grazing on rangeland (no facility components are proposed on irrigated farmland). Dryland wheat crop land is periodically left fallow (plowed but not planted) between seasons. Accepted farm practices on surrounding lands devoted to farm use, verified during Phase 2 surveys conducted between April 3, 2017, and May 31, 2017, include soil preparation in the spring and fall, sowing, fertilizing, pest and weed management, and harvesting.

Potential Impacts to Accepted Farm Practices

In RFA4, potential impacts to accepted farm practices from construction of the proposed Phase 2 solar facility components, as identified in RFA4 Exhibit K, would include:

- Temporary, but minimal, crop yield interference from weed dispersal during ground disturbing activities
- Changes to access points for routes to farm fields to accommodate construction activities
- Delays in delivery of farm products or increased time to access farm fields due to increased truck traffic on Oregon Highway 19 (OR 19)
- Soil erosion and compaction from ground disturbance
- Decreased crop yield productivity if construction disturbance occurs prior to harvest

Potential impacts to accepted farm practices from operation of the proposed Phase 2 solar facility components, as identified in RFA4 Exhibit K, would include:

- Permanent changes to access points or routes to farm fields
- Modified planting and harvest practices to avoid Phase 2 components
- Varying application of fertilizers and other products to crops

Council previously imposed several conditions that would minimize potential impacts to accepted farm practices within the surrounding area. Previously imposed conditions are summarized below:

- Condition 38 requires that, during construction and operation, the certificate holder consult with area landowners and lessees and implement measures to reduce or avoid adverse impacts to farm practices

- Condition 39 requires that the certificate holder design and construct the facility to minimize impacts to farm practices
- Condition 43 requires that, during construction and operation, a Weed Control Plan be implemented
- Condition 73 requires that, during construction, traffic control measures be implemented and notification of activities and schedule be provided to adjacent landowners
- Condition 74 requires that, during construction, County roads not be used for equipment and machinery parking
- Condition 80 requires that, during construction, erosion and sediment control measures be implemented to minimize erosion and sediment impacts to adjacent land use
- Condition 81 requires that, during construction, truck traffic be limited to improved road surfaces, to the extent practicable, to minimize unnecessary soil compaction
- Condition 82 requires that, during construction, best management practices (such as watering) be implemented for dust control
- Condition 92 requires that, following completion of construction, temporarily impacted agricultural areas be revegetated

The certificate holder proposes to amend Condition 38 and 39, as presented in RFA4 Exhibit K, to minimize potential adverse impacts to ongoing dryland agricultural operations. The Department recommends Council amend Conditions 38 and 39, based on the certificate holder's representations, but following the condition format outlined in Section II.B. *Recommended Site Certificate and Condition Format* of this order, as presented below:

Recommended Amended Condition 38: The certificate holder shall:

i. C~~c~~onsult with area landowners and lessees during construction and operation of Phase 1 of the facility and ~~shall~~ implement measures to reduce and avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs. [Final Order on ASC]

ii. Consult with area landowners and lessees during construction and operation of Phase 2 of the facility and implement measures to reduce and avoid any adverse impacts to ongoing farm practices on surrounding lands, including coordination with the landowner of the solar micrositing area to ensure that the final solar array layout does not prevent the landowner from maximizing agricultural production on the land not occupied by the solar array.
[AMD4]

Recommended Amended Condition 39: The certificate holder shall design and construct:

i. Phase 1 of 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 on ASC]

ii. Phase 2 of the facility to minimize the permanent impacts to agricultural land, including to the extent practicable, using existing access roads, co-locating facilities, reducing road and transmission line/collector line lengths, and designing facility components to allow ongoing access to agricultural fields. [AMD4]

The certificate holder argues that the proposed Phase 2 solar facility components would not force a significant change in accepted farming practices because it would not change or preclude access to farm operations on surrounding lands or landowners, would not necessitate relocating any existing access routes or farm infrastructure, and would not result in changes to the practices for planting, irrigating, fertilizing, or harvesting. The Department agrees that based on the impacts described above, which appear to be largely specific to the proposed solar micrositing corridor – area within the site boundary – that potential impacts to farm practices on surrounding lands would not likely be significant. Based on compliance with existing and recommended amended conditions, the Department recommends Council find that the certificate holder would satisfy the GCZO Section 4.020(H)(1)(a) review criteria.

Potential Impacts to Cost of Accepted Farm Practices

The proposed Phase 2 solar facility components would not require relocation of any access routes or farm infrastructure, and would not result in changes to the practices for planting, irrigating, fertilizing, or harvesting on surrounding land devoted to farm use. Therefore, the certificate holder argues that the proposed Phase 2 solar facility components would not significantly increase the cost of accepted farm practices on surrounding lands devoted to farm use. While the proposed Phase 2 solar facility components would preclude up to 1,189 acres of arable land from use as a commercial agricultural operation, it would not increase the cost of accepted farm practices. Therefore, the Department recommends Council find that the proposed Phase 2 solar facility components would satisfy the GCZO Section 4.020(H)(1)(b) review criteria.

GCZO SECTION 4.020(J): Property Development Standards

PROPERTY DEVELOPMENT STANDARDS. In the EFU Zone, the following standards apply to residential and nonresidential development.

1. Building Height. No limitations.

2. Setbacks

a. The front and rear yard setbacks from the property line shall be 25 feet.

b. The side yard setbacks from the property line shall be 25 feet.

GCZO Section 4.020(J) establishes setback standards for front, rear and side yards for residential and nonresidential development within EFU zoned land. As described in GCZO

Article 4, nonresidential development includes new construction and substantial improvement of any commercial, industrial or other nonresidential structure.

Proposed Phase 2 facility components would include nonresidential structures – the proposed solar facility components, substation, O&M building and battery storage system. While the certificate holder references the Council's previous application of GCZO Section 4.020(J) to only the previously approved O&M building, the Department recommends Council apply GCZO Section 4.020(J) to the above described proposed Phase 2 facility components and amend Condition 42 as follows:

Recommended Amended Condition 42: The certificate holder shall construct all facility components in compliance with the following setback requirements:

(a) All facility components must be at least 3,520 feet from the property line of properties zoned residential use or designated in the Gilliam County Comprehensive Plan as residential.

(b) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest edge of any public road right-of-way. The certificate holder shall assume a minimum right-of-way width of 60 feet.

(c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest residence existing at the time of tower construction.

(d) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest boundary of the certificate holder's lease area.

(e) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each turbine tower to the nearest edge of any railroad right-of-way or electrical substation.

(f) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each meteorological tower to the nearest edge of any public road right-of-way or railroad right-of-way, the nearest boundary of the certificate holder's lease area or the nearest electrical substation.

(g) The certificate holder shall maintain a minimum distance of 50 feet measured from any facility O&M building to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's lease area.

(h) The certificate holder shall maintain a minimum distance of 50 feet measured from any substation to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's electrical substation easement or, if there is no easement, the nearest boundary of the certificate holder's lease area.

(i) Where (a) does not apply, the certificate holder shall maintain a minimum of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower from any overhead utility line. [Amendment #1]

(j) Where (a) does not apply, the certificate holder shall maintain a minimum of 150 percent of maximum turbine height from blade tip height, measured from the centerline of the turbine tower from federal transmission lines, unless the affected parties agree otherwise. [Amendment #1]

(k) <u>The certificate holder shall maintain a minimum distance of 25 feet measured from the fence line of the solar array to the nearest property line. [AMD4]</u>

(l) <u>The certificate holder shall maintain a minimum distance of 25 feet measured from the front, rear and side yard of the battery storage system site to the nearest property line. [AMD4]</u>

Based on compliance with recommended amended Condition 42, the Department recommends Council find that the proposed Phase 2 facility components, evaluated as nonresidential development, would satisfy the GCZO Section 4.020(J) property development standards.

<u>Article 7: Conditional Uses</u>

GCZO Section 7.010: Authorization to Grant or Deny Conditional Uses

GCZO Section 7.010 establishes general approval criteria and conditions that may be applied to conditional uses, regardless of the zone.

GCZO SECTION 7.010(A): GENERAL APPROVAL CRITERIA AND CONDITIONS

1. *In addition to criteria, standards and conditions that may be set forth in a specific Zone, this Article, or other regulations applicable to a specific Conditional Use shall not be approved or permitted unless the following criteria are met. A Conditional Use may be approved on the Condition or Conditions that the applicant obtain and maintain compliance with other permits and approvals required.*

    a. *The proposed use shall be in compliance with the applicable Comprehensive Plan designation and policies.*

GCZO Section 7.010(A)(1)(a) requires a demonstration that a proposed use would be in compliance with the applicable designations and policies of the GCCP. The evaluation of applicable GCCP goals and policies is presented below, where the Department recommends that the Council find that the proposed Phase 2 facility components would be consistent with the GCCP. Therefore, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO 7.010(A)(1)(a) general approval criteria.

    b. *As applicable, sewage and/or solid waste disposal methods shall be provided in compliance with applicable local, State and Federal regulations.*

GCZO Section 7.010(A)(1)(b) requires a demonstration that sewage and/or solid waste disposal methods of a proposed use would comply with applicable local, State and Federal regulations.

Construction and operation of the proposed Phase 2 facility components would generate sanitary and solid waste. As described in RFA4 Exhibit U, onsite sanitary and solid waste generated during construction and operation would be disposed of offsite by a licensed contractor. Council previously imposed Condition 28 requiring that the certificate holder and its contractors obtain all necessary federal, state and local permits. Therefore, the Department recommends that based on compliance with Condition 28, the certificate holder would satisfy the GCZO Section 7.010(A)(1)(b) general approval criteria.

c. Proposal shall be found to be in compliance or conditioned upon compliance with applicable air and noise pollution standards.

GCZO Section 7.010(A)(1)(c) requires a demonstration that a proposed use would comply, or with conditions would comply, with applicable air and noise pollution standards.

Applicable air and noise pollution standards are established in Oregon Department of Environmental Quality's (ODEQ) OAR 340-208-0210, *Visible Emissions and Nuisance Requirements* and 340-035-0035, *Noise Control Requirements*, respectively. ODEQ's visible emissions standard requires implementation of reasonable precautions to prevent particulate matter from becoming airborne; ODEQ's noise control regulation requires compliance with an ambient degradation and maximum allowable noise standard.

The proposed Phase 2 facility components would generate particulate matter (dust) emissions during ground disturbing construction activities. Council previously imposed Condition 82 requiring that, during construction, the certificate holder implement best management practices, such as watering roads and disturbed soil areas, to minimize visible emissions, consistent with OAR 340-208-0210. Condition 82 would continue to apply during construction of Phase 2 and would support OAR 340-208-0210 compliance. Because proposed Phase 2 operation would not include ground disturbing activities, particulate matter emissions would not be expected and therefore OAR 340-208-0210 would not apply.

The proposed Phase 2 facility components would generate noise during construction and operation. Construction related noise is exempt from OAR 340-035-0035. Operational noise and compliance with OAR 340-035-0035 is evaluated in Section III.Q.1. *Noise Control Regulation*, where the Department recommends Council find that the certificate holder would, based on compliance with recommended amended conditions, comply with OAR 340-035-0035.

Based on the analysis described above, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO Section 7.010(A)(1)(c) general approval criteria.

d. Required access shall be legally established, available, and adequate to serve the proposed use or provisions to provide such evident.

GCZO Section 7.010(A)(1)(d) requires a demonstration that access necessary to serve the proposed use be legally established, available and adequate. The Department interprets this condition of approval as applicable to: 1) proposed Phase 2 new and improved roads and 2) the site of proposed Phase 2 facility components, as access to both would be necessary to serve the proposed use.

Council previously imposed Conditions 70 and 71 requiring that, prior to construction, the certificate holder obtain all necessary permits and approval for road approach, crossing and modifications from Gilliam County Road Department and Oregon Department of Transportation. These conditions would apply to proposed Phase 2 new roads and road improvements.

Council previously imposed Condition 5, which mirrors OAR 345-025-0006(5), and requires the certificate holder to demonstrate that it is has obtained construction rights on all or parts of the site prior to construction.[38] This condition would apply to proposed Phase 2 wind and solar facility components.

Based on compliance with existing conditions, the Department recommends Council find that the certificate holder would satisfy the GCZO Section 7.010(A)(1)(d) general approval criteria.

> *e. Public services deemed necessary shall be available or provisions for such provided and no use shall be approved which is found to exceed the carrying capacities of affected public services unless there are provisions to bring such capacities up to the need.*

GCZO Section 7.010(A)(1)(e) requires a demonstration that a proposed use would not exceed the carrying capacities of public service necessary for the use. This general approval criteria aligns with the Council's Public Services standard at OAR 345-022-0110 and is evaluated in Section III.M. *Public Services* of this order.

As evaluated in Section III.M. *Public Services* of this order, the Department recommends Council find that construction and operation of the proposed Phase 2 facility components would not exceed the carry capacities of public service providers to provide services, including sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools. Therefore, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO Section 7.010(A)(1)(e) general approval criteria.

> *f. Proposal shall be in compliance with the applicable standards and limitations of the primary and combining zone as may be applicable.*

[38] OAR 345-025-0006(5) allows flexibility for wind facilities and authorizes construction, if prior to obtaining rights on all of the site, construction rights have only been obtained on parts of the sites.

GCZO Section 7.010(A)(1)(f) requires a demonstration that a proposed use be in compliance with applicable standards and limitations of the applicable primary and combining zones. The certificate holder represents that the proposed amended site boundary would be entirely within EFU-zoned land and would not be located within a designated combining zone. As identified above, the proposed Phase 2 solar facility components would not satisfy GCZO Section 4.020(D)(11) or 4.020(H)(1)(a); however, the certificate holder requests Council review of a Goal 3 exception. As presented in Section III.E.3, the Department recommends Council grant a Goal 3 exception, which effectively provides an exception from Section 4.020(D)(11) and 4.020(H)(1)(a).

> *g. No use shall be approved which is found to have a significant adverse impact on resource-carrying capacities unless there are provisions for mitigating such impact.*

GCZO Section 7.010(A)(1)(g) requires a demonstration that a proposed use would not have a significant adverse impact on carrying capacities of resources, such as air, soil, water supply and waterbodies. As presented in Sections III.D. *Soil Protection*, III.F. *Protected Areas*, III.H. *Fish and Wildlife Habitat*, and III.Q.3. *Water Rights*, proposed Phase 2 facility components would not result in significant adverse impacts to the carrying capacities of natural resources. Therefore, based on the analysis and reasoning presented in the referenced sections, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO Section 7.010(A)(1)(g) general approval criteria.

> *h. No use shall be approved which is found to exceed the carrying capacities of affected public services and facilities.*

GCZO Section 7.010(A)(1)(h) requires a demonstration that a proposed use would not exceed the carrying capacities of public services, such as police protection, fire protection, housing, schools, hospitals, traffic safety, stormwater infrastructure, wastewater treatment, water supply, necessary for the use. As presented in Sections III.M. *Public Services* of this order, proposed Phase 2 facility components would not result in significant adverse impacts the carrying capacities of affected public services. Therefore, based on the analysis and reasoning presented in the referenced section, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO Section 7.010(A)(1)(h) general approval criteria.

> *i. All required State and Federal permits or approvals have been obtained or will be as a condition of approval.*

GCZO Section 7.010(A)(1)(i) requires a demonstration that all required State and Federal permits or approvals have been or will be obtained for the proposed use. RFA4 Exhibit E presents State and Federal permits and approval required for the construction and operation of proposed Phase 2 facility components. Council previously imposed Conditions 28 and 29 requiring that the certificate holder provide copies of all necessary permits, including third-

party permits, prior to construction. Based on compliance with these conditions, the Department recommends Council find that the proposed Phase 2 facility components would satisfy the GCZO Section 7.010(A)(1)(i) general approval criteria.

> 2. *In addition to specific standards and/or conditions set forth by the applicable zone, this article or some other applicable regulations, other conditions may be imposed that are determined necessary to avoid a detrimental impact, and to otherwise protect the best interests of the surrounding area and the County as a whole. Such conditions may include, but are not limited to, the following:*
>
> a. *Limiting the manner in which the use is conducted including restricting the time an activity may take place and restraints to minimize such environmental effects as noise, vibration, air pollution, glare and odor.*
> b. *Establishing a special setback or other open space or lot area or dimension.*
> c. *Limiting the height, size or location of a building or other structure.*
> d. *Designating the size, number, improvements, location and nature of vehicle access points and parking or loading areas.*
> e. *Limiting or otherwise designating the number, size, location, height, and lighting of signs and outdoor lighting.*
> f. *Requiring diking, screening, fencing, landscaping or another facility to protect adjacent or nearby property and designating standards for its installation and maintenance.*
> g. *Protecting and preserving existing trees, vegetation, water resources, wildlife habitat or other significant natural resources.*
> h. *Limiting the term of the Conditional Use Permit to a specific time.*
> i. *Requiring necessary on-site or off-site improvements and maintenance.*
> j. *Requiring the holder of a Conditional Use Permit to obtain review, renewal, or reapplication approval of the permit in the event that there is an increase in impact from the use on public facilities beyond that which was projected at the time of initial approval.*

GCZO Section 7.010(A)(2) describes conditions that "may be imposed… [if] determined necessary to avoid a detrimental impact, and to otherwise protect the best interests of the surrounding area and the County as a whole." The ordinance lists discretionary conditions and does not contain substantive standards. During review of pRFA4, the Department consulted with the Gilliam County Planning Director and did not identify conditions that the County would consider "necessary to avoid a detrimental impact and to otherwise protect the best interests of the surrounding area and the County as a whole." Therefore, the Department recommends Council not impose additional conditions under GCZO Section 7.010(A)(2).

<u>GCZO SECTION 7.020: STANDARDS GOVERNING CONDITIONAL USES</u>

GCZO SECTION 7.020(A) Conditional Uses, Generally

1. Setback. Requirements are addressed in each individual zone.

GCZO Section 7.020(A) specifies that setback requirements are established for uses within specific zones. Therefore, compliance with applicable setback requirements is evaluated under GCZO Section 4.020(J) and 7.020(T)(5)(d).

GCZO SECTION 7.020(Q) Conditional Uses in Exclusive Farm Use Zones

1. *A Type I or Type II Conditional Use in an Exclusive Farm Use Zone may be approved only when the Planning Director or Hearings body finds that the use will not:*

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

GCZO Section 7.020(Q) establishes standards for Type 1 or Type 2 conditional uses within EFU zoned land.[39] The standards require a demonstration that the proposed use would not force a significant change or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use, which mirror the review criteria under GCZO Section 4.020(H) and OAR 660-033-0130(37). Because the evaluation under GCZO Section 7.020(Q) is identical to the evaluation under GCZO Section 4.020(H) and OAR 660-033-0130(37), it is not repeated. As presented under the evaluation of GCZO Section 4.020(H) and OAR 660-033-0130(37) in this section of the order, the Department recommended Council find that the proposed Phase 2 facility components would not be likely to force a significant change in accepted farm practices or significantly increase the cost of accepted farm practices on surrounding lands, and therefore would satisfy the applicable standards.

GCZO SECTION 7.020(T): Wind Power Generation Facility Siting Requirements

1. *Purpose. The Gilliam County Facility Siting Requirements are intended to establish a local conditional use permitting process that is clear, timely, and predictable as well as encompasses important local issues such as the health, safety and welfare of citizens in Gilliam County.*

4. *Requirements under the Energy Facility Siting Council. If a holder of a Site Certificate issued by the Oregon Energy Facility Siting Council requests a conditional use permit for an energy facility as outlined under ORS 469.401(3) and pays the requisite fee, the Planning Director shall issue such conditional use permit. The conditional use permit*

[39] GCZO Section 4.020(D)(20) *Wind Power Generation Facilities* does not identify GCZO Section 4.020(H) as applicable; therefore, GCZO Section 4.020(H) does not apply to the proposed Phase 2 wind facility components. However, as noted in RFA4 Exhibit K, GCZO Section 4.020(H) is mirrored in OAR 660-033-0130(37); therefore, the evaluation of potential impacts of proposed Phase 2 wind facility components is appropriately evaluated in Section III.E.2 of this order.

shall incorporate only the standards and conditions in Gilliam County's land use and other ordinances as contained in the site certificate. Issuance of the Conditional Use Permit shall be done promptly, not taking more than four weeks once it has been determined that a valid Site Certificate has been issued, the applicant has submitted a complete application and the fee has been received.

GCZO Section 7.020(T)(1) and (4) establish the local permit requirements for wind energy facilities requiring a site certificate or amended site certificate.

5. *Wind Power Generation Facility Siting Requirements.* The requirements set out in this section shall apply for the application and review of the siting of a Wind *Power Generation Facility and the issuance of a Gilliam County Facility Conditional Use Permit.*

    a. *The following information shall be provided as part of the application:*

        1. *A general description of the proposed Wind Power Generation Facility…*

GCZO Section 7.020(T)(5)(a)(1) establishes an informational requirement for wind power generation facilities seeking a site certificate or amended site certificate and establishes that, for the conditional use permit to be issued by the county, the certificate holder shall provide a general description of wind facility components, a tentative construction schedule, and map and description of facility location. RFA4 includes a general description of wind facility components, a tentative construction schedule, and map and description of facility location, which is also summarized in this order in Sections II.A. *Requested Amendment*, and III.A. *General Standard of Review*.

        2. *Identification of potential conflicts if any, with:*

            a. *Accepted farming practices as defined in ORS 215.203(2)(c) on adjacent lands devoted to farm uses;*
            b. *Other resource operations and practices on adjacent lands except for wind power generation facilities on such adjacent lands; and*
            c. *The nature and extent of the proposed facility on the cost of accepted farm or forest practices on surrounding EFU land*

GCZO Section 7.020(T)(5)(a)(2) establishes an informational requirement for wind power generation facilities seeking a site certificate or amended site certificate and establishes that, for the conditional use permit to be issued by the county, potential conflicts with accepted farming practices, or other resource operations, and cost of accepted farm practices on adjacent lands must be identified. Potential conflicts with accepted practices and cost of accepted practices on adjacent lands is evaluated under GCZO Section 4.020(H) and OAR 660-033-0130(37) of this order.

        3. *A Transportation Plan, with proposed recommendations.*

The certificate holder discusses traffic concerns of the proposed Phase 2 facility amendment in its RFA 4 Exhibit U. Council previously imposed Condition 73 requiring that the certificate holder implement measures to minimize traffic impact during construction. The requirements of this condition would continue to apply. The Department's review of compliance with the Public Services standard, which includes a review of potential traffic impacts, is included in Section III.M. Public Services of this order. As such, based on compliance with Condition 73, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

4. An avian impact monitoring plan.

The certificate holder discusses impacts to avian species in RFA 4 Exhibit P and Q. Furthermore, Condition 91 requires the certificate holder to complete post-construction monitoring for potential bird and bat fatalities from wind turbine collusion; this condition would continue to apply. As such, the Department recommends that, based on Compliance with Condition 91, the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

5. A covenant not to sue.

Condition 41 requires the certificate holder to file a covenant not to sue with regard to generally accepted farming practices on adjacent farmland. As such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

6. A fire prevention and emergency response plan.

The certificate holder discusses a fire prevention and emergency response plan in RFA4 Exhibit U. The Department's review of compliance with the Public Services standard, which includes a review of potential impacts to fire protection service providers, is included in Section III.M. *Public Services* below. Condition 60 requires the certificate holder to develop and implement a fire safety plan, in consultation with the North Gilliam Country Rural Fire Protection District. Conditions 76 and 77 require the development of health and safety plans. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

7. An erosion control plan.

The certificate holder discusses an erosion and soil control plan in its RFA 4 Exhibit I. The Department's review of compliance with the Soil standard, which includes a review of potential erosion impacts, is included in Section III.D. *Soil Protection* above. Furthermore, Condition 80 requires that all construction work be completed in compliance with an Erosion and Sediment Control Plan (ESCP) that is approved by the Oregon Department of Environmental Quality. As

such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

8. A weed control plan.

The certificate holder discusses weed control in its RFA 4 Exhibit I. Furthermore, Condition 43 requires the certificate holder to implement a weed control plan, which is approved by the Gilliam County Weed Control Officer. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

9. A socioeconomic impact assessment of the Wind Power Generation Facility.

The certificate holder conducts a socioeconomic analysis below under GCZO 7.020(5)(a)(10) below. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

10. The requirements of OAR 660-033-0130(37) will be satisfied.

An evaluation of the certificate holder's ability to satisfy the requirements of the Oregon Land Conservation and Development District rules for wind energy generation facilities, at OAR 660-033-0130(37), is provided in this section.

11. Information pertaining to the impacts of the Wind Power Generation Facility on:

a. Wetlands;
b. Wildlife;
c. Wildlife Habitat;
d. Criminal activity (vandalism, theft, trespass, etc.) and proposed actions, if any, to avoid, minimize or mitigate negative impacts.

The certificate holder provided information relating to these subjects in its RFA4 Exhibit J, P, Q and U. Based on the analysis of these sections, as presented in Section III.H., *Fish and Wildlife Habitat*, III.I. *Threatened and Endangered Species*, and III.M. *Public Services*, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

12. A dismantling and decommissioning plan of all components of the Wind Power Generation Facility.

The certificate holder provided a retirement and decommissioning plan in RFA4 Exhibit W. Furthermore, Council previously imposed Condition 32 requiring that, prior to construction, the certificate holder provide a bond or letter of credit sufficient to decommission the facility, and obligates the certificate holder to return the land to a useful non-hazardous condition. As such,

the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 7.020(T)(5):

> b. *Gilliam County may impose clear and objective conditions in accordance with the County Comprehensive Plan, County Development Code and State law, which Gilliam County considers necessary to protect the best interests of the surrounding area, or Gilliam County as a whole.*

This is not a substantive applicable criteria; the certificate holder acknowledges that the County may recommend additional conditions.

> c. *Prior to commencement of any construction, all other necessary permits shall be obtained, e.g., Gilliam County Zoning Permit, road access and other permits from the Gilliam County Road Department, and from the Oregon Department of Transportation.*

As discussed above, Condition 28 requires the certificate holder to obtain all necessary federal, state, and local permits prior to construction. As such, the Department recommends that the Council find that proposed Phase 2 facility components could satisfy this GCZO provision.

> d. *The following setback requirements and restrictions apply to the siting of a facility:*
>
> *The Wind Power Generation Facility shall be on property zoned EFU, and no portion of the facility shall be within 3,520 feet of properties zoned residential use or designated on the Comprehensive Plan as residential. (For clarification purposes of this section, EFU Zones are not considered zoned for residential use.) Towers shall be set back at a minimum, 110% of maximum total turbine height from blade tip height, measured from the centerline of the turbine tower from:*
>
> *(1) Any State, County or Federal right-of-way or the nearest edge of a State, County, or Federal roadway, whichever is closer;*
> *(2) Any right of ingress or egress on the owner's property;*
> *(3) Any overhead utility lines;*
> *(4) All property lines; if adjacent landowner agrees in writing to a lesser distance, this requirement may be waived.*
> *(5) Any existing guy wire, anchor, or small wind energy tower on the property.*
> *(6) Any residence including those outside the project boundary. If a landowner agrees in writing to a lesser distance, this requirement may be waived.*
> *(7) A minimum of 150% of the maximum total turbine height from blade tip height, measured from the centerline of the turbine tower, from federal*

transmission line. If affected parties agree in writing to a lesser distance, this requirement may be waived.

The certificate holder represents that no portion of the facility would be within the City of Arlington, or other areas that are zoned for residential use. Furthermore, Condition 42 of the site certificate requires the certificate holder to construct all facility components in compliance with the setbacks listed above, in addition to other setback requirements. As such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

e. Reasonable efforts shall be made to blend the wind facility's towers with the natural surroundings in order to minimize impacts upon open space and the natural landscape.

Conditions 102 through 105 of the site certificate impose restrictions relating to visual impacts. In pertinent part, turbines must be mounted on smooth low-reflectivity structures, substations must be painted a low-reflectivity neutral color, and turbines and meteorological towers must maintain a distance of 1,000 feet to the Fourmile Canyon interpretive site (looking toward visible Oregon Trail ruts). As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

f. Reasonable efforts shall be taken to protect and to preserve existing trees, vegetation, water resources, wildlife habitat or other significant natural resources.

The certificate holder discusses trees, vegetation, water resources, wildlife habitat, and other significant resources in its Exhibits J, L, O, P, and Q. Furthermore, Condition 43 requires the implementation of a weed control plan; Condition 44 requires that temporarily disturbed areas are revegetated after disturbance; Conditions 80 through 87 require the implementation of an Erosion and Sediment Control Plan and best management practices and; Condition 91 requires the implementation of a Wildlife Monitoring and Mitigation Plan. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

g. The turbine towers shall be designed and constructed to discourage bird nesting and wildlife attraction.

Site certificate Conditions 95 through 100 relate to the preservation of avian species and bird habitat. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

h. The turbine towers shall be of a size and design to help reduce noise or other detrimental effects.

The certificate holder indicates that the turbines within proposed Phase 2 would be "of similar size and design" as turbines previously approved by the Council. Additionally, Condition 107 requires the certificate holder to provide the final facility design to the Department, which includes a noise analysis of facility components. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

i. Private access roads shall be gated to protect the facility and property owners from illegal or unwarranted trespass, and illegal dumping and hunting.

Site certificate Conditions 66 and 69 require that the Facility's turbine towers and collector substations be locked to prevent public entry. The certificate holder also represents that the O&M building and associated parking and storage area would also be locked, and that locked gates would be located at the entrance of access roads. If the landowner does not prefer gates, then the certificate holder would pursue a variance from Gilliam County. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

j. Where practicable the electrical cable collector system shall be installed underground, at a minimum depth of 3 feet; elsewhere the cable collector system shall be installed to prevent adverse impacts on agriculture operations.

Site certificate Condition 88 requires that the 34.5 kV collector system would be installed underground "to the extent practical," and would be installed to a depth of three feet. However, the certificate holder notes that "where site-specific conditions require, the collector system may be proposed aboveground;" siting aboveground would allow for passage over canyons and intermittent streams. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

k. Required permanent maintenance/operations buildings shall be located off-site in one of Gilliam County's appropriately zoned areas, except that such a building may be constructed on-site if:

(1) The building is designed and constructed generally consistent with the character of similar buildings used by commercial farmers or ranchers; and

The certificate holder indicates that it seeks flexibility to relocate one of the previously approved O&M buildings into the expanded site boundary; however, the relocated building would not differ from previously considered and would be "consistent with the character of similar buildings in the area." As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

(2) The building will be removed or converted to farm use upon decommissioning of the Wind Power Generation Facility consistent with the provisions of this section.

Site certificate Condition 32 requires that the certificate holder obtain a bond or letter of credit, prior to construction, that would ensure that the facility is returned to a useful non-hazardous condition. This includes the requirement to return the land to a state that may be used for agricultural purposes. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

6. *Decommissioning/Dismantling Process. The applicant's dismantling of incomplete construction and/or decommissioning plan for the Wind Power Generation Facility shall be completed and filed with the Planning Department prior to construction and shall include the following information:*
    a. *A plan for dismantling and/or decommissioning that provides for completion of dismantling or decommissioning of the facility without significant delay and protects public health, safety and the environment in compliance with the restoration requirements of this section.*
    b. *A description of actions the facility owner proposes take to restore the site to a useful, no hazardous condition, including options for post-dismantle or decommission land use, information on how impacts on fish, wildlife and the environment would be minimized during the dismantling or decommissioning process, and measures to protect the public against risk or danger resulting from post-decommissioning site conditions in compliance with the requirements of this section.*
    c. *A current detailed cost estimate, a comparison of that estimate with present funds set aside for dismantling or decommissioning, and a plan for assuring the availability of adequate funds for completion of dismantling or decommissioning. The cost estimate will be reviewed and be updated by the facility owner/operator on a 5-year basis.*
    d. *Restoration of the site shall consist of the following:*
        (1) *Dismantle turbines, towers, pad-mounted transformers, meteorological towers and related aboveground equipment. All concrete turbine pads shall be removed to a depth of at least three feet below the surface grade.*
        (2) *The underground collection and communication cables need not be removed if at a depth of three feet or greater. These cables at a depth of three feet or greater can be abandoned in place if they are deemed not a hazard or interfering with agricultural use or other consistent resource uses of the land.*
        (3) *Gravel shall be removed from areas surrounding turbine pads.*
        (4) *Access roads shall be removed by removing gravel and restoring the surface grade and soil.*
        (5) *After removal of the structures and roads, the area shall be graded as close as reasonably possible to its original contours and the soils shall be restored to a condition compatible with farm uses or consistent with other resource uses. Re-vegetation shall include planting by applicant of native plant seed mixes, planting by applicant of plant species suited to the area, or planting by*

landowner of agricultural crops, as appropriate, and shall be consistent with the weed control plan approved by Gilliam County.

(6) Roads, cleared pads, fences, gates, and improvements may be left in place if a letter from the landowner is submitted to Gilliam County indicating said landowner will be responsible for, and will maintain said roads and/or facilities for farm or other purposes as permitted under applicable zoning.

e. The applicant (facility owner/operator) shall submit to Gilliam County a bond or letter of credit acceptable to the County, in the amount of the decommissioning fund naming Gilliam County and the landowner as beneficiary or payee.

(1) The calculation of present-year dollars shall be made using the U.S. Gross Domestic Product Implicit Price Deflator as published by the U.S. Department of Commerce, Bureau of Economic Analysis, or any successor agency (the "Index"). The amount of the bond or letter of credit account shall be increased at such time when the cumulative percentage increase in the Index exceeds 10 percent from the last change, and then the amount shall be increased by the cumulative percentage increase. If at any time the Index is no longer published, Gilliam County and the applicant shall select a comparable calculation of present-year dollars. The amount of the bond or letter of credit account shall be prorated within the year to the date of decommissioning.

(2) The decommissioning fund shall not be subject to revocation or reduction before decommissioning of the Wind Power Generation Facility.

(3) The facility owner/operator shall describe the status of the decommissioning fund in the annual report submitted to Gilliam County.

f. If any disputes arise between Gilliam County and the landowner on the expenditure of any proceeds from the bond or the letter of credit, either party may request nonbonding arbitration. Each party shall appoint an arbitrator, with the two arbitrators choosing a third. The arbitration shall proceed according to the Oregon statutes governing arbitration. The cost of the arbitration (excluding attorney fees) shall be shared equally by the parties.

g. For projects sited by EFSC, compliance with EFSC's financial assurance and decommissioning standards shall be deemed to be in compliance with the dismantling and decommissioning requirements of this Section.

The certificate holder discusses facility retirement and decommissioning within RFA 4 Exhibit W. Furthermore, site certificate Condition 32 requires the certificate holder obtain a bond or letter of credit, prior to construction, that would ensure that the facility is returned to a useful non-hazardous condition. Section III.G. *Retirement and Financial Assurance* of this order recommends that the Council find that the certificate holder would be capable of obtaining a bond or letter of credit in an amount sufficient to decommission the facility and return the land

to a useful, non-hazardous state. As such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

7. Wind Power Generation Facility Siting Subsequent Requirements
a. A bond or letter of credit shall be established for the dismantling of uncompleted construction and/or decommissioning of the facility. For projects being sited by the State of Oregon's Energy Facility Siting Council (EFSC), the bond or letter of credit required by EFSC will be deemed to meet this requirement.

The certificate holder discusses facility retirement and decommissioning within RFA 4 Exhibit W. Furthermore, site certificate Condition 32 requires the certificate holder obtain a bond or letter of credit, prior to construction, that would ensure that the facility is returned to a useful non-hazardous condition. Section III.G. *Retirement and Financial Assurance* of this order recommends that the Council find that the certificate holder would be capable of obtaining a bond or letter of credit in an amount sufficient to decommission the facility and return the land to a useful, non-hazardous state. As such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

b. The actual latitude and longitude location or State plane NAD 83(91) coordinates of each turbine tower, connecting lines, and transmission lines shall be provided to Gilliam County once commercial electrical production begins.

Site certificate Condition 45 requires the certificate holder to provide to the Department, and to Gilliam County, the "actual latitude and longitude or State plan NAD 83(91) coordinates" of each turbine tower, connecting lines, and transmission lines. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

c. A summary of as-built changes in the facility from the original plan, if any, shall be provided by the owner/operator.

Site certificate Condition 45 requires the certificate holder to provide a summary of "as-built" changes compared to the original plan. As such, the Department recommends that the Council find that proposed Phase 2 facility components would satisfy this GCZO provision.

d. Within 120 days after the end of each calendar year, the facility owner/operator shall provide Gilliam County an annual report including the following information:
(1) Energy production by month and year.
(2) Nonproprietary information about wind conditions (e.g., monthly averages, high wind events, bursts).
(3) A summary of changes to the facility that do not require facility requirement amendments.

(4) A summary of the avian monitoring program – bird injuries, casualties, positive impacts on area wildlife and any recommendations for changes in the monitoring program.
(5) Employment impacts to the community and Gilliam County during and after construction.
(6) Success or failures of weed control practices.
(7) Status of the decommissioning fund.
(8) Summary comments – any problems with the projects, any adjustments needed, or any suggestions.
(9) For facilities under EFSC jurisdiction and for which an annual report is required, the annual report to EFSC satisfies this requirement.
The annual report requirement may be discontinued or required at a less frequent schedule by the County. The reporting requirement and/or reporting schedule shall be reviewed, and possibly altered, at the request of the facility owner/operator.

Site certificate Condition 46 requires the certificate holder to submit its EFSC Annual Report, which is required under OAR 345-026-0080, to Gilliam County. Condition 21 of the site certificate indicates that the certificate holder must provide updates on all monitoring and mitigation activities. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

<u>Article 8. Supplementary Provisions</u>

GCZO SECTION 8.030 CLEAR VISION AREAS

A. In all zones, a clear-vision area shall be maintained on the corners of all property at the intersection of two roads, a road and a driveway, or a road and a railroad. A clear-vision area shall contain no planting, fence, wall, structure, or temporary or permanent obstruction exceeding three and one-half feet (3½) in height, measured from the established road center line grade, except for authorized road signs and cyclone or other open construction fences which permit clear vision through the triangular area. Trees may be located in this area as long as all branches and foliage are removed to a height of eight (8) feet above the grade.

B. A clear-vision area shall consist of a triangular area, two sides of which are lot lines intersecting at the corner of the lot, and the third side of which is a line across the corner of the lot joining the non-intersection ends of the other two sides. For purposes of this section, lot lines shall be considered to be the edge of the right-of-way.

C. Any side of the triangular clear-vision area adjacent to a road, railroad, or access drive to a parking area shall be at least 30 feet. Any side of the clear-vision area adjacent to a residential driveway shall be at least 15 feet.

As described throughout RFA4, the certificate holder proposes four new locations to allow for access to the Phase 2 collector substation, O&M building, proposed solar array, and battery storage system. As indicated in Figures B-4, K-2A and K-2B, primary access is from Oregon State Highway 19, and secondary access is from either Bottemiller Lane, or the Columbia Basin Electric substation access road. The certificate holder represents that clear vision will be maintained at each point of junction with primary or secondary access locations, and a triangular "clear-vision area" would be maintained on either side of intersections with Oregon State Highway 19 and Bottemiller Lane; the certificate holder will consult with ODOT and the Gilliam County Public Works Department prior to construction relating to this provision. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 8.040 – OUTDOOR LIGHTING STANDARDS

> *All outdoor lighting, including for accessory facilities and the lighting of commercial signs, shall comply with the following:*
>
> *A. Any outdoor light shall be shielded to illuminate downward.*
> *B. The outdoor light source (bulb or element) shall not be visible at or beyond the property line.*
> *C. Outdoor lights shall not exceed the height limit of the zone where the light will be located.*
> *D. Structures over 50 feet in height shall not be lighted unless required to be lighted by the Federal Aviation Administration (F.A.A.). Structures over 50 feet in height that are required to be lighted by F.A.A. shall be shielded to illuminate upward.*

Site certificate condition 104 restricts the use of exterior lighting at nighttime, with the exception to accommodate: (a) minimum turbine tower lighting for FAA requirements; (b) security lighting at O&M buildings and substations, provided that the lighting is shielded or downward facing; (c) lighting necessary for repairs or emergencies and; (d) minimum light necessary for construction activities. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 8.050 – SIGN REGULATIONS

> *The following regulations shall apply to any sign erected, moved, or altered after adoption of this Ordinance. Official traffic control signs and instruments of the state, county, or municipality are exempt from all provisions of this Section.*

The certificate holder represents that the expanded site boundary would include signage to identify access points to the facility, and represents that it would design signage in a manner consistent with GCZO 8.050. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 8.070 – PROJECTIONS FROM BUILDINGS

> *Architectural features such as cornices, eaves, canopies, sun shades, gutters, chimneys, and flues shall not project more than three feet into a required yard.*

The certificate holder represents that this provision does not apply to the facility because the O&M building would not exhibit the architectural features listed above, and the O&M building would also not abut a neighboring yard. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 8.100 – OFF-STREET PARKING REQUIREMENTS

> *At the time of construction, reconstruction, or enlargement of a structure, or at the time a use is changed in any zone, off-street parking spaces shall be provided as required.in accordance with standards required below:*
>
> *A. NUMBER OF PARKING SPACES REQUIRED*
>
> 1. *The minimum number of parking spaces required for various uses is shown in this section. Square feet specifications refer to the floor area of the building containing the use. In addition to these requirements, one space is required per employee working on the premises during the largest anticipated shift at peak season, including proprietors.*
> 2. *Parking requirements for uses not specified in (A) shall be based on the listed use that is most similar to the proposed use. If no use listed in (A) is similar to the proposed use, the applicant shall submit a parking study that includes an estimate of the parking demand based on recommendations of the Institute of Traffic Engineers or similar data.*
> 3. *Accessible (ADA) parking spaces shall be provided in accordance with current state Structural Specialty Code and ODOT adopted standards.*
> 4. *In the event several uses occupy a single structure or parcel of land, the number of required spaces shall be the total of the requirements for all of the uses.*
> 5. *Uses that require more than ten parking spaces shall include an area designated for bicycle parking, with bike racks that will accommodate at least one bicycle for each ten vehicle parking spaces. The bicycle parking area may be in the same location as the vehicle parking spaces or may be located closer to the building entrance or use.*

The certificate holder represents that the proposed Phase 2 O&M building would meet or exceed the minimum parking requirements imposed by GCZO 8.100(A)(1). As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

GCZO SECTION 8.140 – SITE PLAN REVIEW

A.PURPOSE
The purpose of site plan review is to provide for administrative review of the design of certain developments and improvements in order to promote functional, safe, innovative, and attractive site development that is compatible with the natural and man-made environment and is consistent with applicable requirements of this Ordinance.

E. DETAILED PLAN for any required or proposed landscaping that shall clearly illustrate:
1. Plants and tree species, their initial sizes and other proposed landscaping materials.
2. The location and dimensions of all areas to be devoted to landscaping, and location of any automatic sprinkler systems.

The certificate holder represents that no landscaping would be associated with the proposed Phase 2 facility.

F. OUTDOOR STORAGE AND ACTIVITIES, IF PERMITTED IN THE ZONE: Type, location and height of screening devices.

The Council previously approved the use of temporary staging and laydown areas during construction. The certificate holder proposes to relocate some temporary staging and laydown areas into the expanded site boundary to accommodate Phase 2 construction. The certificate holder represents that outdoor storage may occur near the O&M building, and asserts that the staging areas would be similar to previously approved by the Council. Outdoor storage during construction would be temporary and only occur during construction. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

G. TOPOGRAPHIC INFORMATION for any area with slopes exceeding 10 percent. Contour intervals shall be ten feet or smaller.

The certificate holder provides topographic information in Figure B-4 through B-6. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

H. DRAINAGE PLAN, or evidence that stormwater runoff will be accommodated by an existing storm drainage system.

The certificate holder is required to include a drainage plan within its National Pollutant Discharge Elimination System (NPDES) 1200-C General Stormwater Discharge Permit, which is attached as I-1 within RFA 4. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

I. IDENTIFICATION OF PROPOSED TRASH STORAGE LOCATIONS, including proposed enclosure design construction and access for pickup purposes.

The certificate holder describes its solid waste disposal plans within RFA4 Exhibit U. The Department's review of compliance with the Public Services standard, which includes a review of solid waste management, is included in Section III.M. *Public Services* of this order. The certificate holder indicates that construction related waste disposal would be provided by private contract through local commercial waste haulers, and attests that the waste quantities generated by proposed Phase 2 facility components would be similar to those previously considered by the Council; no new types of waste would be generated through proposed Phase 2 facility components. Lastly, site certificate Conditions 111 and 112 require the certificate holder to develop and implement a waste management plan. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

J. LOCATION OF ALL EXISTING AND PROPOSED UTILITIES and septic systems on or abutting the property.

The certificate holder indicates that it would receive electricity from PacifiCorp or the Columbia Basin Electric Co-op, and a septic system would be located onsite to service O&M domestic purposes. Water would be provide onsite through the use of an exempt well. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

K. ELEVATION DRAWINGS showing the exterior appearance of all proposed buildings.

The certificate holder represents that it would provide drawings that demonstrate the elevation of the O&M building at the time it files for building permits. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

L. APPROVAL STANDARDS:
1. All provisions of this zoning ordinance and other applicable regulations are complied with.
2. Elements of the site plan are arranged so that:
a. Traffic congestion is avoided.
b. Pedestrian and vehicular safety and welfare are protected.
c. Significant features and public amenities are preserved and maintained.
d. Surface drainage systems are designed so as not to adversely affect neighboring properties, roads, or surface and subsurface water quality.
e. Structures and facilities for storage, machinery and equipment, services (mail, refuse, utility wires, etc.), loading and parking and similar accessory areas shall be buffered or screened to minimize adverse impact on neighboring properties.

The certificate holder represents that proposed Phase 2 facility components would be consistent with GCZO 8.140(L) because it would not contribute to traffic "congestion" on nearby roads such as Oregon Highway 19, Bottemiller Lane, or Base Line Road, and would also not affect vehicular safety. There is no anticipated pedestrian traffic in proximity to Phase 2 components; the certificate holder's NPDES 1200-C General Stormwater Discharge permit includes a drainage plans; and the certificate holder will implement best management practices to minimize erosion and sedimentation. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

> *M. THE DEVELOPMENT WILL NOT RESULT IN TRAFFIC VOLUMES THAT WILL REDUCE THE PERFORMANCE STANDARD of a transportation facility below the minimum acceptable level identified in the Transportation System Plan (LOS C). This standard may be met through a condition of approval requiring improvements to the transportation facility.*

The certificate holder discusses anticipated traffic volume in its RFA Exhibit 4; the Department recommends that the Council find that the proposed Phase 2 facility would not result in significant adverse impacts to traffic in Section <INSERT SECTION> within this Draft Proposed Order. As such, the Department recommends that the Council find that proposed Phase 2 facility would satisfy this GCZO provision.

> *N. THE DEVELOPMENT WILL NOT ADVERSELY AFFECT AGRICULTURAL OR FORESTRY USES.*

As described above in Section GCZO 4.020(H), the Department recommends that the Council find that the proposed Phase 2 facility would not force a significant change in agricultural practices. As such, the Department recommends that the Council find that this provision of the GCZO is satisfied.

Gilliam County Comprehensive Plan

The Gilliam County Comprehensive Plan (GCCP) is modeled after, and is consistent with, Oregon's Statewide Planning Goals. Under GCZO 7.010(A)(1)(a), a conditional use must be in compliance with the Comprehensive Plan. The relevant Comprehensive Plan provisions are discussed below:

Goal 3. Agricultural Lands

> *Goal: To preserve and maintain agricultural lands.*
>
> *The policies adopted in Goal Three of the Comprehensive Plan outline County policy with regard to agriculture and the preservation of agricultural lands. These policies are founded on the authority given a county to establish Exclusive Farm Use zones (ORS 215.203), to exercise its authority in these zones to protect the health, safety and welfare of the citizens (ORS 215.253{2}) and to review and regulate proposals for subdividing farm lands (ORS*

215.263). The policies are intended to support the state's agricultural land use policy (ORS 215.243) and should be so interpreted and construed.

Policies:

In consideration of the above Findings, the Gilliam County Court adopts the following policies:

1. *In order to preserve the maximum level of agriculture in the County, all "Agricultural Lands" shall be so designated and shall be zoned in accordance with the provisions of ORS 215.283. Further, those non-farm uses permitted by ORS 215.283(1) shall be permitted uses, and those non-farm uses permitted by ORS 215.283(2) may be allowed as conditional uses subject to ORS 215.296.*

This policy is implemented under GCZO Section 4.020. As noted by the certificate holder, the proposed solar array would not comply with the County's "Goal 3," because the array would exceed acreage thresholds contained within GCZO 4.020(D)(11) and would be required to obtain a goal exception under ORS 469.504(4)[40]. The Department recommends approval of the Goal Exception in the Section III.E.IV. Therefore, the Department recommends that the Council conclude that the proposed Phase 2 facility would be consistent with this policy.

Goal 5. Natural Resources, Scenic, and Historic Areas, and Open Spaces

Goal: To conserve open space and protect natural and scenic resources.

Policies:

2. *The Department of Fish and Wildlife (ODFW) will be consulted when proposed land use actions may affect fish or wildlife habitats.*

This policy requires consultation with ODFW when proposed land use actions may affect fish or wildlife habitats within natural resources, scenic and historic areas, and open spaces. The certificate holder represents that it has consulted with ODFW relating to the proposed modifications within RFA4. Additionally, the Department consulted with ODFW during review of RFA4 and will continue to consult with ODFW for the life of the facility during review of pre-construction compliance requirements and ongoing annual reporting related to weed management, revegetation and wildlife surveys and mitigation. Furthermore, Conditions 91 through 101 also require further ODFW consultation (in pertinent part) relating to the Wildlife Monitoring and Mitigation Plan (WMPP), Revegetation Plan, Habitat Mitigation Plan, Washington Ground Squirrel surveys, and sensitive wildlife surveys. Therefore, the Department,

[40] The solar micrositing corridor contains approximately 326.7 acres of high-value farmland; as such, the Department evaluates potential impacts of a solar facility assuming maximum impacts at 362.7 acres.

recommends that the Council conclude that proposed Phase 2 facility components would be consistent with this policy.

> *12. Gilliam County will continue to encourage the development of alternative sources of energy.*

This comprehensive plan policy is a directive to the County to encourage alternative energy development in its implementation of its plan. However, to the extent this policy is considered an "applicable substantive criteria," the proposed Montague facility expansion could be considered an "alternative" source of energy because it would produce electricity from wind and solar, and utilize a battery storage system. Therefore, the Department recommends that the Council conclude that the proposed Phase 2 facility would be consistent with this policy.

Goal 6. Air, Water and Land Resources Quality

> *Goal: To maintain and improve the quality of the air, water, and land resources of the state.*
>
> *Policies:*
>
> > *6. All new industrial development should comply with DEQ air, noise and water quality standards.*
> >
> > *7. The Department of Environmental Quality and other affected agencies should be notified of all proposals for industrial development or other uses which may affect environmental quality. Their comments should be considered in decisions concerning the proposal.*

This policy requires that development comply with relevant air, water, and land standards. The certificate holder represents that it has notified DEQ of its proposal and has considered DEQ comments. Furthermore, existing site certificate Condition 80 requires the implementation of an Erosion and Sediment Control Plan (ESCP), which is satisfactory to DEQ; the certificate holder must comply with Condition 106 through 108, which emanate from DEQ noise standards. Therefore, the Department recommends that the Council conclude that the proposed Phase 2 facility would be consistent with this policy.

Goal 8. Recreation Needs

> *Goal: To satisfy the recreation needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*
>
> *Policies:*

3. *Private development should not be permitted if it would block access to or otherwise have a significant adverse impact on public open space lands.*

This policy prohibits private development if such development would block access to public open space lands, or otherwise have a significant adverse impact on public open space lands. Based on review of the impact evaluation included RFA 4 Exhibits L and T, the Department recommends that the Council conclude that the proposed Phase 2 facility would be consistent with this policy.

Goal 12. Transportation

Goal: To provide and encourage a safe, convenient, and economic transportation system.

Policies:

10. *Operation, maintenance, repair and preservation of existing transportation facilities shall be allowed without land use review, except where specifically regulated.*

14. *Gilliam County shall provide notice to ODOT of land use applications and development permits for properties that have frontage or access onto a state highway.*

This policy prohibits development from interfering with the operation, maintenance, repair and preservation of existing transportation facilities. The certificate holder represents that facility employees would access the facility through existing interstate, state, and county roads; no new public roads would be constructed as a result of the modifications proposed in RFA 4. The certificate holder notes that it may need to improve existing state and county public roads, which includes Oregon Highway 19, Berthold Road, Bottemiller Lane, Weatherford Road, and Baseline (Ione) Rd, as well as other unnamed existing county roads.[41]

Existing site certificate Condition 71 provides, in pertinent part, that the certificate holder shall modify, as necessary: (1) County roads, within County road rights-of-way, and in conformity with County road design standards subject to Gilliam County Road Department approval and; (2) State roads, within State road rights-of-way, and in conformity with Oregon Department of Transportation (ODOT) and subject to ODOT approval. Existing site certificate Condition 75 provides, in pertinent part, that the certificate holder shall cooperate with the Gilliam County Road Department to ensure that any “unusual damage or wear” to County roads would be repaired by the certificate holder.

Based on the above described existing site certificate conditions, the Department recommends that the Council conclude that the proposed Phase 2 facility would be consistent with this policy.

[41] MWPAMD4. Request for Amendment 4 Exhibit K Section K.7.1.2. 2019-04-05.

Goal 13. Energy Conservation

Goal: To conserve energy.

Policies:

13. Applications for new energy generation facilities, whether public or private, should consider impacts on neighboring properties.

This policy establishes that impacts to neighboring properties should be considered during the review of applications for new energy generation facilities. The design of proposed Phase 2 facility components and compliance with the existing, recommended new and amended conditions, would reduce adverse impacts to neighboring properties. Therefore, the Department recommends that the Council conclude that the proposed Phase 2 facility components would be consistent with this policy.

III.E.2 Directly Applicable State Statutes and Administrative Rules

Oregon Revised Statutes

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

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

ORS 469.300(3) defines "associated transmission lines" as "new transmission lines constructed to connect an energy facility to the first point of junction of such transmission line or lines with either a power distribution system or an interconnected primary transmission system or both or to the Northwest Power Grid," and that definition is incorporated by reference in ORS 215.274. Associated transmission lines reviewed under ORS 215.274 are a subset of the transmission lines that could be evaluated as utility facilities necessary for public service under ORS 215.283(1)(c). The proposed 3-mile 230 kV transmission line would interconnect the proposed Phase 2 and Phase 1 collector substations, to transmit electricity to BPA's Slatt Substation.[42] As such, the proposed Phase 2 230 kV transmission line is an "associated transmission line."

Gilliam County has not adopted local code provisions to implement ORS 215.274. Therefore, the requirements of the statute apply directly to the proposed 230 kV transmission line and the applicable requirements are evaluated below.

[42] MWPRFA4, Section B.5.5

<u>ORS 215.274(2)</u>: 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.

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

<u>ORS 215.274(3):</u> 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;
(b) The associated transmission line is co-located with an existing transmission line;
(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or
(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.

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

<u>ORS 215.274(4)(a):</u> 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:

ORS 215.274(4)(a) requires an evaluation of reasonable alternatives to determine whether the associated transmission line may be sited on land other than EFU-zoned land. The evaluation of "reasonable alternatives" does not require an evaluation of all alternative EFU zoned routes on which the transmission line could be located. Rather, the certificate holder must consider

reasonable alternatives and show that the transmission line must be sited on EFU-zoned land in order to provide the service. In RFA4 Exhibit K, the certificate holder describes and presents on Figure K-12 that five routes were considered - a primary route and four alternative routes, all of which would be located on EFU zoned land.

As presented in RFA4 Exhibit K, Figure K-3, the entire proposed amended site boundary would be located within EFU zoned land. Therefore, because the proposed 230 kV transmission line segment would initiate and terminate at proposed facility component locations within the proposed amended site boundary, there is no non-EFU zoned land between the transmission line and the interconnection point to provide an alternative route. The Department therefore recommends that the Council find that the certificate holder has evaluated reasonable alternatives and demonstrates that no reasonable alternatives that would avoid EFU land exist. However, note that ORS 215.274(4) requires both a demonstration that no reasonable alternatives that would avoid EFU land exist, and that two or more of the listed factors [ORS 215.274(a)(A) through (E)] be met, which is evaluated below.

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

ORS 215.274(4)(a)(A) requires that the certificate holder demonstrate that the transmission line must be sited in an EFU zone due to technical and engineering feasibility constraints. The Department interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through EFU-zoned land. The certificate holder, in contrast, evaluates four alternative routes and compared the feasibility of constructing alternative routes compared to the proposed route based on differences in impacts (i.e. number of structures, permanent disturbance, etc). All of the routes – the proposed and four alternative routes - would be located within EFU zoned lands; and, as described under the evaluation of ORS 215.274(4)(a) above, non EFU zoned land does not exist within or surrounding the proposed amended site boundary. Therefore, the Department recommends Council find that there are not technical or engineering constraints, such as extreme topographic features, that cannot be overcome but for siting the proposed 230 kV transmission line segment through EFU zoned land and therefore, ORS 215.274(4)(a)(A) would not be satisfied.

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

ORS 215.274(4)(a)(B) requires that the certificate holder demonstrate that the transmission line must cross high value farmland or arable land to achieve a reasonably direct route and therefore is locationally dependent. As presented in RFA4 Figure K-7, the proposed 230 kV transmission line route is surrounded by interspersed areas of high-value farmland, pursuant to ORS 195.300, and arable land comprised of Class 3 and 4 soils. Because there is no reasonable

route to interconnect the proposed Phase 2 facility collector substation to the approved Phase 1 collector substation without traversing high value farmland and arable land, the Department recommends Council find that the proposed 230 kV transmission line must cross high value farmland and arable land to achieve a reasonably direct route, and that the associated transmission line is therefore "locationally dependent" and would satisfy ORS 215.274(4)(a)(B).

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

ORS 215.274(4)(a)(C) requires that the certificate holder demonstrate a lack of available existing linear facility rights-of-way for which the transmission line could be located. To inform this criteria, the certificate holder evaluates the availability of existing rights-of-way along the proposed 230 kV transmission line route, specifically the existing OR 19 right-of way. The certificate holder describes that the existing OR 19 road right-of-way is not available for the proposed route because it contains an existing pipeline on the east side, and topographic constraints include ditches with steep rises to adjacent fields on both sides of OR 19, which eliminate usable space within the right of way and make it difficult to locate the poles within the right-of-way while also setback for traffic safety. Based on the reasoning provided above and evaluation of availability of the existing road right of way, as presented in RFA4 Exhibit K, the Department recommends the Council find that the proposed 230 kV transmission line route would satisfy ORS 215.274(4)(a)(C).

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

ORS 215.274(4)(a)(D) requires that the certificate holder demonstrate that the transmission line must be sited on EFU-zoned land to minimize potential impacts to public health and safety. As described under the evaluation of ORS 215.274(4)(a) above, non EFU zoned land does not exist within or surrounding the proposed amended site boundary. Therefore, while the proposed route is described as minimizing potential public health and safety impacts by selection of a route with the greatest distance from residences, the Department does not consider those facts to be applicable to the evaluation of ORS 215.274(a)(D) and recommends Council find that the proposed 230 kV transmission line would not satisfy ORS 215.274(4)(a)(D).

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

ORS 215.274(4)(a)(E) requires that the certificate holder demonstrate that the transmission line must be sited in an EFU zone due to other state or federal requirements. The certificate holder does not accurately address ORS 215.274(4)(a)(E) to demonstrate compliance with ORS 215.274(4)(a).

ORS 215.274(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.

ORS 215.274(4)(b) requires that the certificate holder demonstrate that the transmission line would not result in a significant change in accepted farm practices or a significant increase in cost of farm practices on surrounding land. The certificate holder represents that transmission line support structures would impact approximately 0.03 acres of agricultural land and further argues that the proposed 230 kV transmission line route would minimize potential impacts to accepted farm practices by paralleling existing roads, be located on the perimeter of fields and would not result in permanent roads.

To ensure that potential impacts to farm practices and the cost of farm practices on surrounding lands is minimized during construction, Council previously imposed Conditions 38 and 39 requiring that the certificate holder design and construct the facility using the minimum land use necessary, and that the certificate holder consult with area landowners and lessees to identify and implement measures to reduce or avoid adverse impacts to farm practices and farming cost. Based on compliance with previously imposed conditions and the minimal amount of permanent impacts to EFU-zoned land, the Department recommends that the Council find that the proposed 230 kV transmission line would not result in a significant change to accepted farm practices or significantly increase costs of farm practices on surrounding land. Therefore, the Department recommends Council find that the proposed 230 kV transmission line would satisfy 215.274(4)(b).

<u>ORS 215.274(4)(c):</u> 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.

ORS 215.274(4)(c) allows for consideration of costs in determining whether the associated transmission line is necessary for public service. The certificate holder indicates that, based on its review of four alternative routes and the increased length of those routes, construction costs would increase. Although this subsection does not require the consideration of costs, the Department acknowledges that if the transmission line were required to parallel existing rights of ways, the length of the transmission line would increase and the certificate holder would be required to obtain new land rights; these changes would increase costs associated with the transmission line.

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

Oregon Administrative Rules

OAR 660-033-0130(38) states,

> *For purposes of this rule a wind power generation facility includes, but is not limited to, the following system components: all wind turbine towers and concrete pads, permanent meteorological towers and wind measurement devices, electrical cable collection systems connecting wind turbine towers with the relevant power substation, new or expanded private roads (whether temporary or permanent) constructed to serve the wind power generation facility, office and operation and maintenance buildings, temporary lay-down areas and all other necessary appurtenances. A proposal for a wind power generation facility shall be subject to the following provisions:*
>
> *(a) For high-value farmland soils described at ORS 195.300(10), the governing body or its designate must find that all of the following are satisfied:*
>
> *(A) Reasonable alternatives have been considered to show that siting the wind power generation facility or component thereof on high-value farmland soils is necessary for the facility or component to function properly or if a road system or turbine string must be placed on such soils to achieve a reasonably direct route considering the following factors:*
>
> *i. Technical and engineering feasibility;*
> *ii. Availability of existing rights of way; and*
> *iii. The long term environmental, economic, social and energy consequences of siting the facility or component on alternative sites, as determined under OAR 660-331-0130(37)(a)(B).*

The proposed Phase 2 facility would be located within the Columbia AVA region and the wind turbines would be sited on a "worst case" scenario of 2.7 acres of high value farmland.[43] Therefore, the Phase 2 facility must meet the requirements imposed by OAR 660-033-0130(37).

OAR 660-033-0130(37)(a)(A) requires the certificate holder to consider "reasonable alternatives" to building 81 turbines, or components of the facility, on high-value farmland. The applicant must "show that siting the wind power generation facility or component thereof on high-value farmland soils is necessary for the facility or component to function properly." In the case of access roads and turbine strings, the applicant must show that these components must be placed on high-value farmland soils "to achieve a reasonably direct route." To demonstrate the necessity of using high-value farmland for the facility to "function properly" or for a road or turbine string to "achieve a reasonably direct route," the certificate holder must consider technical and engineering feasibility and the availability of existing rights-of-way. The certificate holder must also consider the long term environmental, economic, social and energy

[43] MWPRFA4. Exhibit K, Table K-1. 2019-04.05.

consequences of siting the facility or component on alternative sites, as determined under OAR 660-033-0130(37)(a)(B).

i. Technical and Engineering Feasibility

The proposed Phase 2 wind facility components would impact up to 2.7 acres of high value farmland. The Council previously found in the *Final Order on the ASC* that a "reasonable alternative" under OAR 660-033-0130(37)(a)(A) must enable the wind facility to make efficient use of a comparable wind resource compared to the proposed location. Specifically, the Council directed an analysis of whether the facility could "function properly" and whether turbine strings and roads could "achieve a reasonably direct route" if sited in an alternative location.[44] Ostensibly, the certificate holder argues that the Council's previous reasoning is still applicable to the proposed Phase 2 facility components. Namely, the certificate holder indicates that there are not large contiguous areas of high-value farmland located within the subject area, and because the areas of non-high-value farmland are interspersed with high-value farmland, the proposed turbine strings, access roads, and collector lines cannot be sited in a manner that achieves a "reasonably direct route" without affecting high-value farmland. The Department agrees that this reasoning is still valid, and confirms through Figure K-9 that areas of non-high-value farmland are interrupted by large swathes of high-value farmland. The proposed amended site boundary is interspersed with High Value Farmland. Because it is interspersed with High Value Farmland, it is not feasible from a technical and engineering perspective to avoid high value farmland. however, potential impacts to high-value farmland are expected to be less than three acres, and therefore minimal.

iii. Long-Term Environmental, Economic, Social, and Energy Consequences

The long-term environmental, economic, social, and energy consequences from the proposed Phase 2 wind facility components are "not more significantly adverse than would typically result from the same proposal being located on other agricultural lands that do not include high-value farmland soils."[45]

The Department recommends that the Council find that the wind facility components associated with Phase 2 would satisfy this criteria because: (1) the Department recommends findings of compliance with the Soil Protection standard; Protected Areas standard; Recreation Standard; Scenic Resources standard; Fish and Wildlife Habitat standard; and the Threatened and Endangered Species standard; (2) the wind facility would result in direct payments to landowners and indirect benefits to local business and the County tax base; (3) the Department recommends findings of compliance with the Historic, Cultural and Archaeological Resources standard and; (4) the wind facility would produce renewable energy.

[44] MWPAPP. *Final Order on the ASC,* p. 54

[45] The test is similar to that required under ORS 459.504(2)(c)(B) when the Council determines whether to grant a "reasons" exception to a statewide planning goal: "The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility.

(C) Costs associated with any of the factors listed in paragraph (A) may be considered, but costs alone may not be the only consideration in determining that siting any component of a wind power generation facility on high-value farmland soils is necessary;

OAR 660-033-0130(37)(a)(C) provides that costs may be considered in the analysis but "may not be the only consideration in determining that siting any component of a wind power generation facility on high-value farmland soils is necessary." Considerations other than cost have been discussed above. The certificate holder noted that it does not rely on costs.

(*D) The owner of a wind power generation facility approved under subsection (a) 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. Nothing in this subsection shall prevent the owner of the facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration; and*

OAR 660-033-0130(37)(a)(D) requires the owner of a wind facility to restore agricultural land damaged by the wind power facility. Exhibit W of the application, addressed in Section IV.G of this Draft Proposed Order, and the Draft Revegetation Plan, describe the tasks the certificate holder would perform to restore areas disturbed by the construction, operation, or retirement of the facility. To ensure adequate restoration, Soil Protection Conditions 44 and 92 require the certificate holder to restore all areas according to the requirements of a final Revegetation Plan.

(D) <u>Additional Criteria</u>

Subsections (b), (c) and (d) of OAR 660-033-0130(37) provide additional criteria for wind power generation facilities located on "arable" or "nonarable" land. OAR 660-033-0130(37)(b) defines "arable land" as "lands that are cultivated or suitable for cultivation, including high-value farmland soils" and provides criteria for locating a facility on arable land. OAR 660-033-0130(37)(c) defines "nonarable land" as land "not suitable for cultivation" and provides that the criteria in subsection (b)(D) apply on nonarable land. Subsection (d) provides that when a proposed wind power generation facility is located on a combination of arable and nonarable lands, then all of the criteria in subsection (b) apply to the entire facility. Proposed Phase 2 wind facility components are proposed to be located on a combination of arable and nonarable lands. Accordingly, the criteria in subsection (b) apply to the entire facility. These criteria are discussed below.

(A) <u>Impacts on Agricultural Operations</u>

OAR 660-033-0130(37)(b)(A) provides that the proposed wind power facility must not "create unnecessary negative impacts on agricultural operations conducted on the subject property." The potential effects of the facility on agricultural operations and the measures proposed by

the certificate holder to minimize the negative impacts on agricultural operations are discussed above in findings of compliance with GCZO 4.020(H). As described by the certificate holder, these measures (outlined in Exhibit K4) are intended to avoid unnecessary negative impacts on agricultural operations.

As shown on Figure K-7, proposed Phase 2 wind facility components would be located predominately on land comprising Class 3 soils with some scattered permanent impact to Class 4-Class 7 soils. The Council previously found that the facility impacted arable land suitable for cultivation under OAR 660-033-0020(1)(a)(A). The certificate holder proposes to site turbines and related or supporting facilities, including a battery storage system, onto arable lands. The majority of the land that is actively cultivated is dryland crop production. In total, under the worst case scenario, approximately 65.2 acres of arable land would be permanently impacted by the wind facility components of Phase 2.[46] In the *Final Order on the ASC*, the Council found that the requirements imposed by this subsection of OAR 660-033-0130(37) are substantially equivalent" to GCZO 4.020(H); the Department recommends that the Council find that the proposed Phase 2 facility would not force a significant change to accepted farming practices. As such, the Department recommends that the Council find the proposed Phase 2 facility would comply with this OAR provision.

(B) <u>Soil Erosion or Loss</u>

OAR 660-033-0130(37)(b)(B) provides that "the presence of a proposed wind power facility" must not result in unnecessary soil erosion or loss that could limit agricultural productivity. Potential adverse impacts to soils and measures to avoid or control soil erosion and loss are addressed by the Council's Soil Protection standard, discussed in Section IV.D, Soil Protection of this Draft Proposed Order. The findings in that section indicate that construction and operation of the proposed Phase 2 facility would not result in unnecessary soil erosion or loss that would reduce the productivity of soil for crop production.

(C) <u>Soil Compaction</u>

OAR 660-033-0130(37)(b)(C) provides that facility construction or maintenance activities must not result in unnecessary soil compaction that reduces the productivity of soil for crop production. Potential adverse impacts to soils and measures to avoid or control soil compaction are addressed by the Council's Soil Protection standard, discussed in Section IV.D, Soil Protection of this Draft Proposed Order. The findings in that section indicate that construction and operation of the proposed Phase 2 facility would not result in unnecessary soil compaction that would reduce the productivity of soil for crop production.

(D) <u>Weed Control</u>

[46] This estimate includes components associated with the wind facility and does not include impacts relating to the solar array.

OAR 660-033-0130(37)(b)(D) provides that facility construction or maintenance activities must not result in the "unabated introduction or spread of noxious weeds and other undesirable weeds species." Site certificate Condition 43 requires the certificate holder to implement a weed control plan that is approved by the Gilliam County Weed Control Officer. As such, the proposed Phase 2 facility would not result in the unabated spread of noxious weeds.

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

(e) For high-value farmland described at ORS 195.300(10), a photovoltaic solar power generation facility shall not use, occupy, or cover more than 12 acres unless an exception is taken pursuant to ORS 197.732 and OAR chapter 660, division 4 or the requirements of paragraph (G) are met. The governing body or its designate must find that:

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

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

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

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

(E) The project is not located on high-value farmland soils unless it can be demonstrated that:

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

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

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

The Gilliam County Zoning Ordinance has not been updated to incorporate Oregon Administrative Rule 660-033-0130. OAR 660-033-0130(38)(h) establishes that, for projects that would be sited on 12 acres or more of high-value farmland, an exception is required pursuant to ORS 197.732 and OAR Chapter 660, division 4. The proposed solar array micrositing corridor contains approximately 326.7 acres of high-value farmland. However, as shown on Figure K-11 of Exhibit K, the high-value farmland is "scattered" across the micrositing corridor. As explained in this order, the land is only designated as high-value farmland because of its presence in the Columbia Valley AVA, and meets certain slope, elevation, and aspect criteria.

While the certificate holder seeks approval to site the solar array anywhere within the micrositing corridor, and it is theoretically possible that all the high-value farmland would be impacted by certain configurations of solar modules, it is very unlikely that the entirety of the designated high-value farmland would be affected by the proposed Phase 2 solar facility components. However, regardless of the specific configuration, it is likely that the proposed Phase 2 solar facility components would preclude more than 12 acres of high-value farmland,

and as such, a Goal 3 exception is required.[47] The Department's assessment of the certificate holder's Goal 3 exception request is evaluated in Section III.E.4 below and recommends that the Council find that an exception to Goal 3 is justified. The other provisions of this OAR apply because the facility would affect land classified as high-value farmland.

OAR 660-033-0130(A):

OAR 660-033-0130(38)(f)(A) requires a demonstration that the proposed photovoltaic solar power generation facility would not create unnecessary negative impacts to agricultural operations, soil erosion or loss, soil compaction, or the unabated introduction or spread of noxious weeds.[48] The certificate holder asserts that the proposed energy facility would not impact or create unnecessary negative impacts on agricultural operations for the following reasons:

The design and layout of the proposed solar array would not require relocation of any existing farm access routes or farm infrastructure, and would not result in changes to existing farm practices for planting, irrigation, fertilization, or harvesting on adjacent land.[49] A letter provided by Weedman Ranches confirmed that their agricultural practices would not be unnecessarily impacted.[50] The proposed solar array site would be located on land that is not currently irrigated (and has never been irrigated), nor are there water rights for the site, and the site has limited agricultural productivity.[51]

The solar micrositing area is proposed as a continuous "large block;" therefore, by definition, the solar array would preclude the use of land for agricultural purposes in areas where solar panels are constructed but the solar array would not otherwise alter the ability for Weedman Ranches to engage in agricultural operations adjacent to the solar facility. The presence of the solar facility would not diminish the Weedman Ranch's ability to expand its agricultural operations from the solar facility, and would not otherwise affect its ability to acquire legal rights to lease farmland or water rights, not would the presence of a solar facility result in a destabilization of the overall character of the study area.

The Department agrees with the certificate holder's analysis and recommends that the Council conclude that the proposed solar array would not create unnecessary negative impacts on agricultural operations conducted on any portion of the subject property not occupied by facility components, and therefore satisfies the requirements under OAR 660-033-0130(38)(f)(A).

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[47] MWPRFA4 Section K.4.3, p. K-11

[48] "Tract" is defined in LCDC rule as "one or more contiguous lots or parcels under the same ownership." OAR 660-033-0020(14).

[49] RFA 4, Section 4.020(H)

[50] MWPRFA4, Attachment K-4

OAR 660-033-0130(38)(f)(B):

OAR 660-033-0130(38)(f)(B) requires the certificate holder to demonstrate that the proposed solar array would not "result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property" and states that the "provision may be satisfied by submittal and county approval of a soil and erosion control plan prepared by an adequately qualified individual, showing how unnecessary soil erosion will be avoided or remedied and how topsoil will be stripped, stockpiled and clearly marked."

As necessary, to satisfy this provision, the certificate holder must demonstrate compliance with the Council's Soil Protection standard; current Condition 80 of the Site Certificate requires the certificate holder to construct the facility in accordance with an Erosion and Sediment Control Plan, which must be approved by the Oregon Department of Environmental Quality (DEQ), and a National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge General Permit 1200-C. Furthermore, Condition 92 requires the Certificate Holder to comply with a Revegetation Plan. These plans include best management practices to be implemented during facility construction and operation, and are designed to reduce and minimize unnecessary soil erosion or loss that could limit agricultural productivity within the proposed facility site and on adjacent EFU zoned land.

The Department agrees with the certificate holder's analysis and recommends that the Council conclude that the proposed solar array would not result in unnecessary soil erosion or loss that could limit agricultural productivity, and therefore satisfies the requirements under OAR 660-033-0130(38)(f)(B).

OAR 660-033-0130(38)(f)(C):

OAR 660-033-0130(38)(f)(C) requires the Certificate Holder to demonstrate that the proposed solar array would not "result in unnecessary soil compaction that reduces the productivity of soil for crop production." Soil compaction would be limited by the certificate holder's use of existing or constructed access roads, which would limit potential impacts from driving across or through productive soils used for crop production; specifically, Condition 81 mandates that truck traffic be limited to the extent practicable to improved road surfaces to avoid compaction. The Council stated in the *Final Order on the ASC*, that the facility "will not result in unnecessary soil erosion." Although the certificate holder proposes new related or supporting facilities this would not alter the certificate holder's ability to comply with Conditions that require the minimization of soil compaction. As such, the Department recommends that the Council conclude that the proposed energy facility would not result in unnecessary soil compaction, and would satisfy the requirements under OAR 660-033-0130(38)(f)(C).

OAR 660-033-0130(38)(f)(D):

OAR 660-033-0130(38)(f)(D) requires the Certificate Holder to demonstrate that the proposed energy facility would not result in the "unabated introduction or spread of noxious weeds and other undesirable weed species." The certificate holder must comply with Condition 43, which requires that it implement a weed control plan, which must be approved by the Gilliam County Weed Control Officer. Based upon compliance with Condition 43, the Department recommends that the Council conclude that the proposed solar array would not result in unabated introduction or spread of noxious weeds or other undesirable weed species, and would satisfy the requirements under OAR 660-033-0130(38)(f)(D).

OAR 660-033-0130(38)(f)(E):

OAR 660-033-0130(38)(f)(E) requires the Certificate Holder to demonstrate that the proposed solar array is not located on high-value farmland soils, which are defined as Class I, II, prime and unique soils. As described in Exhibit I and K, the proposed Phase 2 solar array would be sited on mostly Class III soils, and also includes Class IV, VI, and VII. As such, this criterion is met.

OAR 660-033-0130(38)(f)(F):

OAR 660-033-0130(38)(f)(F) requires the certificate holder to establish a 1-mile study area and evaluate the presence of other approved and developed solar facilities, and the OAR also identifies specific evaluative criteria in circumstances where at least 48 acres of land within the study area have been developed for solar facilities. The certificate holder asserts that there are no other solar facilities within the study area that have either been constructed or that have received land use approvals/building permits. Therefore, under OAR 660-033-0130(38)(f)(F)(i), no further action is necessary. The Department agrees with the certificate holder's assessment and recommends that Council conclude that the requirements under OAR 660-033-0130(38)(f)(F) would be satisfied.

As relevant to the proposed energy facility, OAR 660-033-0130(38) further provides that:

> *(g) For arable lands, a photovoltaic solar power generation facility shall not preclude more than 20 acres from use as a commercial agricultural enterprise unless an exception is taken pursuant to ORS 197.732 and OAR chapter 660, division 4. The governing body or its designate must find that:*
>
> *(A) The project is not located on high-value farmland soils or arable soils unless it can be demonstrated that:*
>
> *i. Nonarable soils are not available on the subject tract;*
>
> *ii. Siting the project on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully; or*

iii. The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of nonarable soils;

(B) No more than 12 acres of the project will be sited on high-value farmland soils described at ORS 195.300(10) unless an exception is taken pursuant to 197.732 and OAR chapter 660, division 4;

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

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

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

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

<u>OAR 660-033-0130(38)(g)(A)</u>

OAR 660-033-0130(38)(g)(A) requires the certificate holder to demonstrate that the proposed energy facility could not be located on high-value farmland soils or arable soils unless: 1) nonarable soils are not available on the subject tract; 2) siting the project on nonarable soils, if present, would significantly impact the project's ability to operate; or 3) the site is better suited than other possible sites because it would allow continued operation of existing farmland.[52]

The certificate holder indicates that the subject tract is predominantly composed of class 3 soils; however, approximately 1,286 acres of Class 6 and Class 7 soils exist within the subject tract, which represents approximately 16% of total tract acreage.[53] The certificate holder represents that these non-arable soils are "distributed throughout the periphery of the tract" and are located below plateaus and ridgelines dissected by small gullies. The soil classifications

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

[53] MWPAMD4, Section OAR 660-033-0130(38)(g)(A)

are provided within Figure K-7B, which confirms that Class 6 or 7 soils are predominantly located at the outer boundary of the analysis area, and are in irregular areas that parallel the Middle and Upper Rock Creek Roads. The Department agrees with the certificate holder that siting the solar array along these geographic features would not be conducive to a solar array.

Based on the above analysis, the Department recommends the Council conclude that because nonarable soils represent a small proportion of the total acreage on the on the subject tract, and because non-arable soils are located at the outer edges of the analysis area and along topographic features that would reduce efficiency of a solar facility; that siting the proposed energy facility on an alternate location within the tract would reduce the ability of the facility to operate successfully, and the proposed site is better suited to allow continuation of an existing commercial farm than other locations, the provisions of OAR 660-033-0130(g)(A) would be satisfied.

OAR 660-033-0130(38)(g)(B)

OAR 660-033-0130(38)(g)(B) establishes that for projects that would be sited on 12 acres or more of high-value farmland, an exception is taken pursuant to ORS 197.732 and OAR Chapter 660, division 4.[54] The Department's assessment of the Applicant's Goal 3 exception request is evaluated in Section IV.E.4 below, and recommends that the Council find that an exception to Goal 3 is justified under ORS 469.504(2).

OAR 660-033-0130(38)(g)(C)

OAR 660-033-0130(38)(g)(C) requires the certificate holder to establish a 1-mile study area of EFU-zoned land and evaluate the presence of other approved and developed solar facilities, and identifies specific evaluation criteria in circumstances where at least 80 acres of land within the study area have been developed for solar facilities. The certificate holder asserts that there are no other solar facilities within the study area that are either constructed or that have received land use approvals/building permits; therefore under OAR 660-033-0130(38)(g)(C)(i), no further action is necessary. The Department agrees with the certificate holder's assessment and recommends that Council conclude that the requirements under OAR 660-033-0130(38)(g)(C) would be satisfied.

OAR 660-033-0130(38)(g)(D)

OAR 660-033-0130(38)(g)(D) requires the certificate holder to demonstrate that the provisions of OAR 660-033-0130(38)(f)(A)-(D) have been satisfied. Based on the analysis presented above, the Department recommends that Council conclude that OAR 660-033-0130(38)(f)(A)-(D) would be satisfied.

[54] Note that for EFSC-jurisdictional facilities, Council statutes and rules govern the goal exception process, found at ORS 469.504(2) and OAR 345-022-0030(4).

OAR 660-033-0130(38)(i)-(j)

Provisions (i) and (j) under OAR 660-033-0130(38) are also relevant to the proposed energy facility and provide that:

> *(i) The county governing body or its designate shall require as a condition of approval for a photovoltaic solar power generation facility, that the project owner sign and record in the deed records for the county a document binding the project owner and the project owner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices as defined in ORS 30.930(2) and (4).*
> *(j) Nothing in this section shall prevent a county from requiring a bond or other security from a developer or otherwise imposing on a developer the responsibility for retiring the photovoltaic solar power generation facility.*

OAR 660-033-0130(38)(i)

OAR 660-033-0130(38)(i) requires the governing body to impose a condition that the certificate holder sign and record in the deed records for the County a document binding the project owner and the project owner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming. Current site certificate Condition 41 requires the certificate holder to record "in the real property records of Gilliam County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland." The certificate holder indicates that it will amend its "Covenant Not to Sue" that is currently recorded, to include land within the proposed site boundary expansion. Therefore, based on Condition 41 and the certificate holder's representation, the Department recommends that Council conclude the requirements under OAR 660-033-0130(38)(i) would be satisfied.

OAR 660-033-0130(38)(j)

OAR 660-033-0130(38)(j) allows for the governing body to require a bond or letter of credit for the amount necessary to retire the facility during decommissioning. Existing site certificate Condition 32 requires the certificate holder to obtain a bond or letter of credit, before beginning construction. Therefore, based upon existing Condition 32, in conjunction with the Department's recommended amendment to Condition 32 contained within Section III.G., *Retirement and Financial Assurance* of this order, the Department recommends that Council conclude that the requirements under OAR 660-033-0130(38)(j) would be satisfied.

III.E.3 Goal 3 Exception

The proposed Phase 2 solar facility components would be sited on more than 12 acres of high-value farmland as defined in ORS 195.300(10), and would preclude more than 12 acres of high

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

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

> *(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732 (emphasis added), the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process goal, the Council may take an exception to a goal if the Council finds:*
>
> *(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;*
> *(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or*
> *(c) The following standards are met:*
>
> *(A) Reasons justify why the state policy embodied in the applicable goal should not apply;*
>
> *(B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and*
>
> *(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.*

The provisions of OAR 345-022-0030(4)(a) and (b) are not applicable to the proposed facility. The certificate holder submitted an assessment as to why a goal exception under OAR 345-022-0030(4)(c) is appropriate for the proposed facility; the Department agrees that a goal exception

under OAR 345-022-0030(4)(c) is appropriate, and the Department's evaluation of the OAR 345-022-0030(4)(c) is provided below.

Reasons Supporting an Exception

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

Local Economic Benefits

The certificate holder asserts that the solar generation facility would promote rural economic development through job creation and by stimulating the Gilliam County tax base. The certificate holder represents that Gilliam County contains approximately 723,405 acres of farmland, and the solar array would remove a maximum of 1,189 acres from production. The certificate holder asserts that the removal of 1,189 acres from 723,405 is "insignificant." Furthermore, the certificate holder notes that loss to agricultural fields is offset through lease payments to the landowners, and the solar array would result in economic benefits to the County. The certificate holder maintains a "Strategic Investment Plan" that would "provide the tax revenue directly to the County." Furthermore, facility construction and operation would create up to 24 new employment opportunities, which would indirectly benefit local business. The Department agrees that the proposed facility site would benefit the local economy through the stimulation of the local tax base, that payments would be directed the landowners, and that the solar array would create some new employment opportunities. The Department recommends the Council to conclude that this argument is a relevant "reason" justifying a Goal 3 exception.

Minimal Loss to Productive Agriculture

The certificate holder asserts that the proposed site would remove 1,189 acres of the total 8,276 acres contained within the Weedman Ranches. The solar micrositing area accounts for approximately 14.4% of the entire farming operation, and the solar array itself would remove 14.4% of land from the Weedman Ranch. The solar micrositing area is currently used for dryland wheat agriculture, and the landowner consented to the removal of dryland wheat farming operations in the solar micrositing area. As such, the Department considers this relevant information for the Council to consider when evaluating "reasons" that justify why a state policy embodied in the applicable goal should not apply, and the Department recommends the Council to conclude that this argument a relevant "reason" justifying a Goal 3 exception.

Lack of Water Rights on Proposed Solar Array

The certificate holder asserts that there are no agricultural irrigation water rights located in the solar micrositing area, nor is Weedman Ranch able to obtain new water rights after the expiration of water right No. G15187. The proposed solar array would be located within an area that was previously granted a water right (Permit G-15187).[55] However, as explained within the RFA 4 and from a letter provided by Weedman Ranches Inc., the water right is no longer valid and was never used by Weedman Ranches.[56] Thus, water is not available for agricultural use at the solar micrositing area. The land is currently used for dryland winter wheat agriculture, which can be grown without irrigation. However, the Department takes the position that a lack of water right is a relevant "reason" justifying a Goal 3 exception. In the Columbia Plateau region, the availability of water for irrigation is limited; but when available, irrigation typically leads to a substantial increase in the farming productivity of the land. As such, the Department considers this relevant information for the Council to consider when evaluating "reasons" that justify why a state policy embodied in the applicable goal should not apply, and the Department recommends the Council to conclude that this argument a relevant "reason" justifying a Goal 3 exception.

Proximity to Existing Infrastructure

It is relevant to the Goal 3 exception reasons to consider that the proposed Phase 2 solar facility components would be located in close proximity to existing infrastructure, "co-located" with the Phase 1 Montague facility currently under construction. As described elsewhere in this order and in the RFA4, the proposed Phase 2 230-kV transmission line would extend approximately three miles to connect the Phase 2 substation to the Phase 1 substation. Additionally, road access to the solar facility is available via existing state highway 19.

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

The certificate holder asserts that it does not seek to permanently remove land from agricultural production, and that the land would be returned to agricultural purposes following retirement and restoration. The Department agrees that the site would be returned to agricultural purposes after facility retirement; however, the Department does not consider this argument relevant to "reasons supporting an exception." The site, as requested, would preclude agricultural use for 40 years, at least. While effects of the land removal may not "permanent" in a long time scale, such effects nonetheless sufficiently disturb land for an extended period of time. The Department therefore recommends that the Council conclude that the mere fact that the land may be returned for agricultural use, after its projected retirement after 40 years or more, is not a sufficient "reason" justifying a Goal 3 exception for the proposed facility.

[55] *See* Figure K-5: Location of Water Rights within the Proposed Expanded Site Boundary
[56] *See* Attachment K-4: Weedman Ranches Inc. Letter; Attachment K-5: Oregon Water Resources Department Correspondence

The certificate holder asserts that the availability of reliable renewable energy relates to the ability to recruit and retain energy-dependent businesses, which may maintain renewable energy procurement policies. The certificate holder has not provided evidence of any specific companies that are considering to expand, or move business, because of renewable energy procurement policies. Therefore, the Department finds this argument to be attenuated and lacking specifics; therefore, the Department recommends that the Council conclude that this argument is not a sufficient reason justifying a Goal 3 exception.

The certificate holder indicates that it has an interconnection agreement with Bonneville Power Administration to transport electricity to the Slatt Substation. Furthermore, the certificate holder notes that the solar array would be sited in proximity to the Phase 2 collector substation, which is "comparatively convenient access to the regional grid." However, the Phase 2 substation is not constructed and is under review for approval as part of this RFA process.

The certificate holder asserts that the facility would further public and private policies, including but not limited to Oregon's Renewable Portfolio Standard (RPS), which requires utilities to provide 50% of its electricity from renewable sources by 2040. The Department agrees that energy generated by the proposed facility could apply towards the State's RPS requirements if RECs are generated and purchased by in-state utilities. However, there is no requirement in the state RPS requirements that renewable energy be procured from Oregon-based resources, nor direct facility development on agricultural lands, the Department does not consider abstract consistency with the State's RPS standard to be a sufficient "reason" justifying a Goal 3 exception for the Montague solar array, specifically. Additionally, Avangrid has not provided a power purchase agreement or other documentation that would demonstrate that the Phase 2 solar array would provide power to an Oregon utility in support of its RPS requirements. Therefore, the Department recommends that Council conclude that although the development of the proposed Phase 2 solar facility as a renewable energy source would further and advance the State's renewable energy resources policy, this is not considered a sufficient reason supporting or justifying a Goal 3 exception for the proposed facility.

<u>Significant Environmental, Economic, Social and Energy Consequences</u>

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

Environmental Consequences

The proposed facility must satisfy the requirements of all applicable EFSC standards, rules and statutes. Applicable environmental EFSC standards include: General Standard of Review; Soil Protection standard; Protected Areas standard; Recreation Standard; Scenic Resources

standard; Fish and Wildlife Habitat standard; and the Threatened and Endangered Species standard. The Department recommends that the Council find that the proposed facility has been designed to avoid impacts to soils, wetlands, fish and wildlife habitats, and threatened and endangered species. The land is already impacted by farming, and as described in Section III.H. *Fish and Wildlife Habitat*, is classified as Category 6 habitat, the lowest quality for wildlife. Siting the solar facility on Category 6 habitat avoids impacts higher quality wildlife habitat that could result if the solar facility were sited elsewhere.

Based on the Department's recommended findings of fact, conclusions of law, and conditions of approval presented within this order, the Department recommends that Council find that the proposed Phase 2 solar facility, including mitigation, would not cause significant adverse environmental consequences or impacts.

Economic Consequences

The certificate holder represents that construction and operation of the proposed facility would result in beneficial economic consequences from job creation and subsequent tax revenue for the County, and the diversification of underlying landowner income sources. Although existing areas within the site boundary are used for agricultural purposes, the land proposed for use as a solar array is not irrigated and does not possess a water-right. Therefore, the Department recommends that the Council conclude that the proposed Phase 2 solar facility represents a net benefit compared to the site's existing uses and economic consequences.

Social Consequences

The certificate holder represents that the proposed facility would not result in significant adverse social consequences. The Department considers social consequences as impacts on a community from a proposed facility, such as impacts from facility visibility, noise, traffic or demand on providers of public services. As demonstrated in the applicable sections of this proposed order, the Department agrees that impacts to scenic resources, protected areas, and recreational opportunities would, considering the recommended conditions, not result in significant adverse impacts and would comply with the appropriate Council standards. The Department addresses potential adverse impacts to public services in Section IV.M, *Public Services*, and impacts to cultural resources in Section IV.K., *Historic, Cultural and Archaeological Resources*. The Department recommends that the Council find that the proposed Phase 2 solar facility would not result in significant adverse impacts to these areas.

The certificate holder also represents that, when fully inverted, the solar panels would not exceed 15 feet, and would not present a visual issue for automobile drivers. The certificate holder further represents that "modern photovoltaic solar modules use a sophisticated antireflective coating to nearly eliminate the reflection of sunlight off the module face and are not expected to generate significant reflective glare." While the Department is aware that

"glare" may be considered a subjective concern, the Department recommends Council consider that modern solar photovoltaic technologies should not pose a significant glare impact. Based on the Department's recommended findings of fact and conclusions of law, and recommended conditions of compliance, as presented in the order, the proposed Phase 2 solar facility would not cause significant adverse social consequences.

Energy Consequences

The certificate holder represents that, because the proposed facility would produce renewable energy, the energy consequences would be beneficial and would be consistent with the State's Renewable Portfolio Standard and "Oregon's commitment to rural economic development." Although the Department notes that Oregon maintains an aggressive Renewable Portfolio Standard, the certificate holder has not provided evidence that the sale of energy derived from the solar array would contribute towards any specific Oregon utility's RPS requirements. However, whether the sale of energy from the solar array would be directly attributable to the Renewable Portfolio Standard is not a material consideration. The mere fact that the facility would generate renewable energy indicates that the solar array would not result in significant adverse energy consequences. Based upon the above analysis, the Department recommends the Council find that the proposed Phase 2 solar facility would meet the standard under OAR 345-022-0030(4)(c)(B).

Compatibility of Adjacent Uses

The Department agrees that the proposed Phase 2 facility would not force a significant change in accepted farm practices in its discussion of GCZO 4.020(H); the reasoning found in that discussion applies to whether the solar array is compatible with other adjacent uses, or whether the solar array would be made compatible through measures designed to reduce adverse impacts. Specifically, while the certificate holder states that the solar array could cause adverse impacts, these impacts are mitigated through the imposition of an Erosion and Sediment Control Plan and a Revegetation and Weed Control Plan; as well as implement best management practices to control construction-related dust; ensure that truck traffic would be limited to improved road surfaces and; provide notice to adjacent landowners relating to traffic impacts; employ flaggers, signage, and institute traffic control measures. Additionally, site certificate Condition 41 requires the certificate holder to record a "Covenant Not to Sue," relating to generally accepted farming practices on adjacent farmland, and the landowner attests that the solar array would not prevent continued farming operations.[57]

Conclusions of Law

Based on the foregoing findings and the evidence in the record, and subject to compliance with the recommended amended and existing site certificate conditions, the Department recommends the Council finds an exception to Goal 3 is justified under OAR 345-022-0030(4)(c)

[57] MWPAMD4. Request for Amendment 4 Exhibit K, Attachment K-4, Weedmans Ranches Inc. Letter. 2019-04-05.

and ORS 469.504(2)(c); and that therefore the Department recommends that the Council find that the facility, with proposed changes, and its supporting facilities complies with the applicable statewide planning goal (Goal 3). As such, subject to the existing, new and amended conditions, the Department recommends the Council find that the facility, with proposed changes, and its supporting facilities complies with the Council's Land Use standard.

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

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

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

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

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

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

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

(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, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;

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

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

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

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(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one

transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

Findings of Fact

The Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a proposed facility or facility, with proposed changes, are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040.[58] The following potential impacts during construction and operation of the facility, with proposed changes, are evaluated: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions.

The analysis area for protected areas is the area within and extending 20 miles from the proposed amended site boundary. In RFA4, thirteen protected areas were identified within the analysis area, as presented in Table 2, *Protected Areas within the Analysis Area and Distance from Proposed Amended Site Boundary*. Protected areas that are shaded in gray in the table were not identified in previous Council orders on the Montague facility.[59]

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

[59]MWPAMD4 Exhibit L, p.L-3 2019-04-05. As shown in Table L-1 of RFA4, Crow Butte State Park is located across the Columbia River, approximately 20 miles north from the approved facility (Phase 1). The Department concludes that non-Oregon state parks are not identified as protected areas subject to the Council's Protected Areas standard. Under OAR 345-022-0040(h), protected areas include "State parks and waysides as listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway." Being in Washington, Crow Butte State Park is not listed by the Oregon Department of Parks and Recreation and therefore would not qualify as a protected area under the Council's standard. However, even if Crow Butte State Park were considered to be a protected area, the facility would not cause a significant adverse impact to the park from noise or other impacts. The park is across the Columbia River and there are a number of other intervening development features including I-84, SR-14, railroad lines, existing transmission lines, and other features. As such, Crow Butte State Park is not further addressed in the draft proposed order.

Table 2: Protected Areas within the Analysis Area and Distance from Proposed Amended Site Boundary

Protected Area	Approximate Distance and Direction from Proposed Amended Site Boundary	Protected Area Designation Basis (OAR Reference)
Horn Butte Wildlife Area	0 miles northeast	345-022-0040(1)(o)
John Day Wildlife Refuge	5 miles west	345-022-0040(1)(d)
John Day Wild and Scenic River	5 miles west	345-022-0040(1)(k)
John Day State Scenic Waterway	5 miles west	345-022-0040(1)(k)
John Day (Hildebrand) State Park	5 miles west	345-022-0040(1)(h)
Cottonwood Canyon State Park[1]	6 miles southwest	345-022-0040(1)(h)
Willow Creek Wildlife Area	12 miles northeast	345-022-0040(1)(p)
Ferry Canyon ACEC	17 miles southwest	345-022-0040(1)(o)
Umatilla National Wildlife Refuge	20 miles northeast	345-022-0040(1)(d)
Lindsey Prairie Preserve	20 miles east	345-022-0040(1)(i)
Boardman Research Natural Area	20 miles east	345-022-0040(1)(o)

Notes:
1. RFA4 Exhibit L includes an evaluation of potential impacts to Cottonwood Canyon State Park, even though the State Park was not designated as a protected area until 2015. Potential impacts to this park were not previously evaluated by Council, as the standard applies to protected areas with designations that predate May 12, 2007.

As presented in Table 2, *Protected Areas within the Analysis Area and Distance from Proposed Amended Site Boundary,* the majority of the listed protected areas are located at least five miles from the proposed amended site boundary. The protected areas closest to the site boundary include the Horn Butte Wildlife Area (0 miles); and John Day Wildlife Refuge, John Day Wild and Scenic River, John Day State Scenic Waterway, and John Day (Hildebrand) State Park (5 miles, each). It is important to note that the Horn Butte Wildlife Area is adjacent to the Phase 1 previously-approved facility site boundary but is not adjacent to the Phase 2 site boundary. Potential adverse impacts to protected areas during construction and operation of the facility, with proposed changes, from noise, traffic, water use and wastewater disposal, and visual are discussed below.

Potential Noise Impacts

The significance of potential noise impacts to identified protected areas is based on the magnitude and likelihood of the impact on the affected human population or natural resources

that uses the protected area.[60] The nearest protected area, Horn Butte Wildlife Area, is a 6,000 acre area managed by the Bureau of Land Management as an "Area of Critical Environmental Concern" (ACEC) to protect nesting habitat for the long-billed curlew. The protected area is adjacent to the Phase 1 site boundary as previously-approved by EFSC, but would be approximately 6 miles from the nearest components associated with Phase 2. Potential noise impacts from construction and operation of the facility, with proposed changes, are evaluated at the closest protected areas: Horn Butte Wildlife Area and John Day Wildlife Refuge, John Day Wild and Scenic River, and John Day State Scenic Waterway, to determine the likelihood of potential significant adverse impacts.

Construction

Construction of the facility, with proposed changes, would result in noise impacts. In RFA4, the certificate holder provides a qualitative analysis of potential construction-related noise, describing that construction related noise impacts would be similar to the impacts identified in the quantitative analysis included in the Final Order on ASC and ASC Exhibit X. The certificate holder previously represented that total composite equipment noise levels, based on equipment operating for each construction phase (i.e. clearing, excavation, foundation, erection, finishing) and a typical usage factor for each piece of equipment, would result in a maximum noise level of 90 A-weighted decibels (dBA) at 50 feet, and would attenuate to approximately 60 dBA at 1,500 feet based on an attenuation rate of 6 dBA per doubling of distance.[61] For reference, noise levels at 60 dBA are equivalent to a vacuum cleaner at 10 feet or a data processing center, with a moderately loud subjective impression.

Based on noise attenuation, construction related noise levels at the nearest protected areas, located approximately 6 miles from the Phase 2 components, would be approximately 30 dBA. Noise levels of 30 dBA are equivalent to a soft whisper at 5 feet, with a quiet subjective impression.[62] In addition, existing site certificate Condition 106 would reduce noise impacts during construction by requiring the use of exhaust mufflers on combustion engine-powered equipment, limiting the noisiest operation of heavy construction equipment to daylight hours, and requiring that the certificate holder establish a noise complaint response system. Based on potential noise levels at the nearest protected areas, and the fact that other protected areas are located approximately 14 miles from proposed facility components and construction activities, the Department recommends that Council find that construction of the facility, with

[60] The Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040. OAR 345-001-0010(53) defines "significant" as: "having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact."
[61] MWPAPPDoc1. ASC Exhibit X. 2010-04-27.
[62] *Id.*

proposed changes, would not be likely to result in significant adverse noise impacts at any protected area within the analysis area.

Operation

The facility, with Phase 2 components, would generate noise during facility operation. To evaluate potential noise impacts at protected areas during facility operation, noise modeling was conducted based on the sources and maximum sound power levels as presented in Table 3, *Modeled Noise Sources* which includes the Phase 1 facility components and Phase 2 components for each design scenario.

Table 3: Modeled Noise Sources – Phase 1 and Phase 2 (A, B or C)

Noise Source	Phase 1	Phase 2 Scenarios			Maximum Sound Power Level at Source (dBA)[2]
		A	B	C	
	No. of Sources				
Wind Turbine[1]	2	-	-	-	110.5
	46	-	-	-	110.2
	-	-	48	-	110
	-	70	-	-	109.2
	3	-	-	-	108.1*
	-	11	-	-	107.7*
	5	-	-	-	107.5*
Substation Transformer	2	2	2	2	98
Battery Storage System[3] (Per 10 MW centroid)	-	10	10	10	102.2
Solar Array Inverter	-	-	-	102	95.5

Notes:
1. Maximum sound power levels include 2 dBA to account for uncertainty, consistent with manufacturer specifications.
2. Maximum sound power levels were provided to the Department under separate confidential cover under ORS 192.501(2).
3. Sounds levels of the battery storage system include noise generating sources such as HVAC and inverters.

*Includes noise reduction from serrated trailing edge blades.

Proposed Phase 2 facility components would be approximately 5 miles from the John Day River, the closest protected area. Noise data from RFA4 Exhibit X shows an expected decibel level of 36 dBA less than a mile beyond the site boundary. At 5 miles distance, noise generating during operation of proposed Phase 2 facility components would be unlikely to be audible and as such would not be likely to cause a significant adverse impact from noise.

Traffic Impacts

Traffic impacts will arise through construction and operation of Phase 2. Roads that will be used to access the facility are to remain the same for Phase 2 as Phase 1, and construction activities will occur in: areas south and west of the intersection of Oregon Highway 19 and Old Tree

Road; areas east and north of Baseline and Lone Roads. Additional access to Phase 2 land will occur via Weatherford Road, Bottemiller Lane, and Middle Rock Creek Lane.

The closest road to any protected area is Fourmile Road, which passes within 2 miles the Horn Butte Wildlife Area. The effects of traffic to this road were previously considered by the Council. Traffic along the Fourmile road is estimated at between 59 and 119 trips per day during the 12 month Phase 2 construction period. During facility operation, it is expected that a permanent work force of approximately 10 to 30 staff will use the road system.

The Certificate holder asserts that any traffic effects will be further reduced through utilizing a "phased" construction approach. Phase 1 of the facility began in September 2017, and is expected to be completed by December 2019. The Certificate holder expects that construction of both Phase 1 and Phase 2 will require approximately 31,900 truck trips. In the Final Order on the ASC, Council considered the potential impacts resulting from the construction of two different design scenarios; the construction of 269 (1.5 MW) turbines, and the construction or 134 (3.0 MW) turbines. Moreover, the certificate holder provided approximate totals of construction truck trips per component, and estimated that the construction of either scenario would not exceed 31,920 truck trips, assuming a 12 month construction timeline, and 20 workdays per month.

Due to the fact that construction and operation traffic for Phase 2 will be located on roads that are at least 2 miles from the closest protected area; the Department recommends that the Council find that potential traffic-related impacts during construction of Phase 2 and operation of Phase 1 and 2 would not likely result in significant adverse impacts to any protected areas.

Water Use and Wastewater Disposal

No water used on the site would be discharged into streams, wetlands or other water bodies.[63] The Certificate holder anticipates that Phase 2 construction will consume approximately 18,200,000 gallons of water.[64] The Certificate holder intends to source the water from the City of Arlington; no water will be sourced from protected areas.

The certificate holder indicates that no cleaning solvents or other additives will be utilized for the solar array washwater. Water used to clean the solar array will be discharged to the ground for evaporation or infiltration. The Certificate holder indicates that it will obtain an Oregon general water pollution control facilities permit (WPCF-1700-B) to accommodate water discharge arising from the solar panels. Solar array cleaning will be limited to its immediate vicinity and would not affect protected areas.

The certificate holder indicates that it will not use more water for Phase 1 and Phase 2 than previously approved by the Council for Phase 1, and will purchase water from the same source

[63] App, Exhibit L, p. 8
[64] App, Exhibit L, p. 7.

initially approved. The certificate holder will minimize effects to protected areas by using water for dust control purposes. Furthermore, no water will be drawn or discharged to or from protected areas. Therefore, the Department recommends that the Council find that water use and disposal during construction and operation of the facility, as amended, would not affect water quantity or water quality within any protected area.

Potential Visual Impacts of Facility Structures

Proposed Phase 2 components, which could result in visual impacts at protected areas within the analysis area could include: wind turbines with a maximum blade tip height of 597 feet; a solar array of up to 1,189 acres including a 13-feet in height; battery storage systems extending 20-feet in height; and 230 kV transmission line structures.

To evaluate potential visual impacts of wind turbines at protected areas within the analysis area, the certificate holder provides a "zone of visual influence" analysis. To evaluate potential visual impacts from the proposed 230 kV transmission line structures, solar array, and battery storage systems, the certificate holder provides as a separate analysis a discussion of the existing viewshed. Table 4, *Proposed Phase 2 Visible Structures and Visual Impact Assessment Methodology*, presents proposed facility structures and the certificate holder's visual impact assessment methodology, per proposed design scenario.

Table 4: Proposed Phase 2 Visible Structures and Visual Impact Assessment Methodology

Proposed Phase 2 Components			Visual Assessment Methodology
Proposed Design Scenario	**Structures**	**Dimensions used in Visual Assessment**	
A and B	81 wind turbines (Scen. A) 40 wind turbines (Scen. B)	Blade tip height = 597 feet Rotor diameter = 492 feet	Zone of Visual Influence (ZVI) map
	230 kV transmission line structures	100 feet in height, spaced approximately 500 feet apart	Description of impacts to existing viewshed
	104 battery storage containers or warehouse	20 feet in height; 6.4 acres of permanent disturbance	
C	230 kV transmission line structures	100 feet in height	Description of impacts to existing viewshed
	104 battery storage containers	20 feet in height; 6.4 acres of permanent disturbance	
	Solar Array	15 feet in height (security fence)	

<u>Horn Butte Wildlife Area</u>

The Horn Butte Wildlife Area (also known as the Horn Butte Curlew Area) is a 6,000 acre area managed by the Bureau of Land Management as an "Area of Critical Environmental Concern"

(ACEC) to protect nesting habitat for the long-billed curlew. The Horn Butte Wildlife Area is a protected area under OAR 345-022-0040(1)(o). The protected area is adjacent to the Phase 1 site boundary, but in areas of site boundary where there are no facility components proposed.

Because the Horn Butte Wildlife Area is managed to protect nesting habitat for the long-billed curlew, and nesting habitat would not be impacted by changes in viewshed, visibility of proposed Phase 2 components under any proposed design scenario would not adversely impact the protected area. Additionally, Council found that the Phase 1 facility would not cause a significant adverse impact to the Horn Butte Wildlife Area, and as noted, Phase 1 site boundary is adjacent to the wildlife area. Therefore, the Department recommends Council continue to find that any potential visual impacts of the facility, with proposed changes, would not impact this protected area.

John Day Wildlife Refuge

The John Day Wildlife Refuge is a State wildlife refuge and is a protected area under OAR 345-022-0040(1)(d). The protected area is located approximately 5 miles east of the site boundary, and extends ¼- of a mile from the high-water flowline along the John Day River form the Columbia River, south to its junction with Thirty Mile Creek.[65]

The John Day Wildlife Refuge is designated a protected area due to its refuge qualities of mule deer, elk, and black bears, along with peregrine falcons, bald eagles and anadromous fish.[66] It is unlikely that Phase 2 components would be visible at the refuge, and if so, the refuge is approximately 5 miles from the site boundary. Visibility of proposed Phase 2 components under any design scenario would not adversely impact the protected area and its use by wildlife as a wildlife refuge. Therefore, the Department recommends Council continue to find that any potential visual impacts of the facility, with proposed changes, would not impact this protected area.

John Day River

The John Wild and Scenic River and John Day State Scenic Waterway, referred to as John Day River, are a designated wild or scenic river and scenic waterway identified as protected areas under 345-022-0040(1)(k). Both protected areas are located 5 miles east of the site boundary. Based on the revised ZVI analysis, some of the proposed turbines may be visible from limited vantage points in the canyon, and higher elevated areas. However, the revised ZVI supports Council's previous findings that during facility operations, wind turbines would not be visible from any viewpoints on the river. Furthermore, the certificate holder explains that any Phase 2 components under any proposed design scenario would not adversely impact either of the protected areas, because the distance of the components will be 5 miles or more from the river, and the visual impact of the components will be diminished. Based on this analysis, the

[65] ORS 501.425
[66] *The Bureau of Land Management*, https://www.blm.gov/visit/john-day-wild-scenic-river

Department recommends that the Council continue to find that any potential impacts of the facility, with proposed changes, would not impact these protected areas.

The protected areas associated with the John Day River (Wildlife Refuge, Wild and Scenic River, and Scenic Waterway) are the closest protected areas to both the proposed solar array and proposed battery storage system. These protected areas are located seven miles east of the solar array and battery storage system. The certificate holder explains that the solar array will "appear as a dark line" on the horizon, if viewed from a location with a similar elevation. If viewed from a higher elevation, the Certificate holder indicates that the solar array may be more visible than viewing from similar elevations. [67] However, the certificate holder explains that the solar array will incorporate anti-reflectivity technology that would minimize the potential for glare to less than that of natural bodies of water.

To minimize any visual impacts of the batter storage system to the nearest protected areas, the certificate holder states that the battery storage containers will be painted in a low-reflectivity, neutral color. Furthermore, the certificate holder claims that the visual impacts of the battery storage system would be similar to that of the already approved O&M building, and that based on topography, location, and height of the battery storage system, visibility of the battery storage system would be limited or nonexistent at the closest protected areas.

<u>Cottonwood Canyon State Park[68]</u>

Cottonwood Canyon State Park, a state park that was established by the Oregon Parks and Recreation Department in 2013, but not designated as a protected area until 2015. The state park is located approximately 6 miles southwest of the site boundary, and includes Cottonwood Bridge and J.S. Burres State Park, as well as additional acreage along the John Day River. As explained in greater detail in Section III.J., Scenic Resources, of this Order, turbines would only be visible from a few, higher elevation ridges in the park, south of Hay Creek. From these select locations, the nearest turbines would be located approximately 7.5 miles away.

The certificate holder represents in RFA Exhibit L, Table L-2 that "0-50" turbines could be visible from the Cottonwood Canyon State Park; however, due to distance, the views of turbines or other facility components would be diminished, and is not expected to have an adverse visual impact to the protected area. Phase 2 wind turbines or other facility components are not expected to be visible from the John Day River. Because the park's most important use area is the John Day River, and visibility of proposed Phase 2 components under any proposed design scenario would not adversely impact the protected area, the Department recommends Council

[67] MWPAMD4Doc3-5 Exhibits L - O 2017-11-22, p. 12

[68] Cottonwood Canyon State Park was not designated as a protected area until 2015, and the standard applies to protected areas as of May 11, 2007. However, in anticipation of a 2019 Protected Areas rulemaking, the Department has evaluated Cottonwood Canyon State park as though it were a protected area per OAR 345-022-0040(1)(h). In Exhibit L of RFA4, the certificate holder did provide an evaluation of potential visual impacts of the facility, with proposed changes, at Cottonwood Canyon State Park.

find that any potential visual impacts of the facility, with proposed changes, would not impact this protected area.

Willow Creek Wildlife Area

The Willow Creek Wildlife Area is a state wildlife and management area designated as a protected area under OAR 345-022-0040(1(p), and is located is located along the Columbia River (approximately 12 miles northeast of the proposed amended site boundary).[69] The Willow Creek Wildlife Area is included within the Columbia Basin Wildlife Area, which is managed for "the conservation and recreation of fish and wildlife."[70] The Willow Creek Wildlife Area is bounded to the north by Interstate 84 and extends south to the confluence of the Willow Creek. The management plan for the Columbia Basin Wildlife Area indicates that the protected areas "play an important role for the Fall and Spring migrations of waterfowl in addition to resident upland game bird production" and "Goal 1" from the management plan is "to protect, enhance and manage wetland habitats to benefit native fish and wildlife and desired game species."[71] Recreational opportunities, including hunting, fishing, and trapping are allowed (where possible) within the Columbia basin Wildlife areas.[72]

The certificate holder represents in its Table L-2 that "0-50" turbines could be visible from the Willow Creek Wildlife Area; however, the Council previously found that the facility would not be visible from the Willow Creek Wildlife Area.[73] Assuming that turbines, or other facility components, could be visible from the Willow Creek Wildlife Area, such visual impacts would not result in a significant adverse impact to the protected area due to distance from the facility. Because the primary purpose of the Willow Creek Wildlife Area is to preserve wildlife habitat, visibility of proposed Phase 2 components under any proposed design scenario would not adversely impact the protected area. Therefore, the Department recommends Council continue to find that any potential visual impacts of the facility, with proposed changes, would not impact this protected area.

Other Protected Areas

Based on the existing viewshed, distance, and results of the revised ZVI analysis, the facility, with proposed changes, would not result in visual impacts at the following protected areas:

- John Day (Hilderband) State Park
- Ferry Canyon ACEC
- Lindsey Prairie Preserve
- Boardman Research Natural Area

[69] MWPRFA4, Figure L-1 2019-04-05
[70] Oregon Department of Fish and Wildlife, *Willow Creek Wildlife Area Visitor's Guide.* https://myodfw.com/willow-creek-wildlife-area-visitors-guide
[71] https://www.dfw.state.or.us/wildlife/management_plans/wildlife_areas/docs/columbia_basin.pdf at p. 1; p. 37.
[72] *Id.*
[73] MWPAPPDoc 157 MWP Final Order p. 64

- Umatilla National Wildlife Refuge

Conclusions of Law

Based on the foregoing findings, and subject to compliance with the recommended conditions of approval, the Department recommends the Council conclude that, taking into account mitigation, the design, construction and operation of the facility, with proposed changes, would not be likely to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Area standard.

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

> *To issue a site certificate, the Council must find that:*
>
> *(1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.*
>
> *(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.*

Findings of Fact

The Retirement and Financial Assurance standard requires a finding that the facility site can be restored to a useful, non-hazardous condition at the end of the facility's useful life, should either the certificate holder stop construction or should the facility cease to operate. In addition, it requires a demonstration that the certificate holder can obtain a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires the Council to find that the site of the facility, with proposed changes, can be restored to a useful non-hazardous condition at the end of the facility's useful life, or if construction of the facility were to be halted prior to completion. In RFA4, the certificate holder estimates that the useful life of the facility, with proposed changes, would be 40 years.[74]

[74] In the 2010 Final Order, Council determined that the facility, as approved, could have a useful life of at least 25-30 years, and that if the facility were to be "repowered" in the future, the facility's' useful life could be longer than 30 years.

The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. The certificate holder states that proposed modifications under RFA4 would not alter the specific actions and tasks needed to restore the wind energy components of the site. For reference, though, and because RFA4 includes wind turbines, the Department provides tasks and actions previously identified as necessary for wind facility decommissioning.

Restoring the site to a useful, non-hazardous condition upon retirement would involve dismantling all aboveground structures. Nacelles and rotors would be removed, and the turbine towers would be dismantled. Pad-mounted transformers and related aboveground equipment would be removed. Concrete turbine tower and transformer pads and underground foundations would be removed to a minimum depth of three feet below grade. Gravel or crushed rock would be removed from adjacent turbine pad areas. All aboveground 230 kV and 34.5 kV transmission lines, SCADA lines, and support structures would be removed. Underground transmission lines and communication cables that are at least three feet below grade would be left in place. At a depth of three feet, underground components and foundations are not expected to interfere with farming practices or crop root growth. All excavated areas would be backfilled with topsoil. The surface would be graded. The affected areas, including areas temporarily disturbed during site restoration activities, would be replanted with native plant seed mixes or agricultural crops, as appropriate, based on the use of surrounding lands. Demolition waste material would be transported for disposal at authorized sites.

The certificate holder describes that the tasks and actions necessary to restore the site of the proposed photovoltaic solar array and battery storage system would include:

- Separating solar modules from the posts, directly loading the modules into a truck or roll-off container for offsite disposal or recycling, removing the posts from the ground, and recycling them as scrap metal;[75]
- Decommissioning the transformers and disposing them offsite;
- Underground electrical collector cables that are at least three feet below grade would be left in place;
- Fluids associated with the battery storage system would be drained and transported offsite for recycling, self-contained battery components would be removed and disposed of or recycled by a qualified vendor; and
- Access roads would be removed, and the entire footprint of the solar array and battery storage system would be reseeded.

The Council previously imposed several conditions to ensure the certificate holder could restore the site to a useful, nonhazardous condition in accordance with the Retirement and Financial Assurance standard, as summarized below: [76]

[75] Although not explicitly stated in RFA4, and consistent with how the concrete turbine and transformer pads and underground foundations would be removed, the Department expects the certificate holder to remove solar module posts, including concrete foundations, to a minimum depth of three feet below grade.
[76] Conditions 7, 8, and 9 are mandatory conditions under OAR 345-026-0006.

- Condition 7 requires that the certificate holder prevent the development of any conditions on site that would preclude restoration of the site to a useful, nonhazardous condition.
- Condition 8 requires the certificate holder to submit a bond or letter of credit to the State of Oregon, through the Council, in a form and amount satisfactory to the Council to restore the site to a useful nonhazardous condition. [the certificate holder has provided a bond for $7,705,000 (Q3 2018), in accordance with the site certificate, related to Phase 1 of the facility]
- Condition 9 requires the certificate holder to retire the facility in accordance with a Council-approved retirement plan.
- Condition 32 allow the certificate holder the ability to adjust the bond or letter of credit (required by Condition 8) based on the final design configuration of the facility.
- Condition 33 requires the certificate holder to ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules, and the site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation, or retirement of the facility, if a bond is used to meet the requirements of Condition 32.

In Section III.B., *Organizational Expertise* of this order, the Department recommends Council find that the certificate holder has the organizational expertise to construct, operate, and retire the facility, with proposed changes, in compliance with the standard. In addition, the Department recommends Council finds that the certificate holder would continue to satisfy the requirements of the Soil Protection, Fish and Wildlife Habitat, and Waste Minimization standards (Sections III.D., III.H. and III.N. of this order, respectively). Each of those sections describes existing and recommended amended conditions designed to minimize adverse impacts on the surrounding land from construction and operation of the components proposed in the amendment request.

Subject to compliance with the conditions identified above, the Department recommends the Council find that the site of the facility, with proposed changes, could be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation.

Estimated Cost of Site Restoration

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

The certificate holder prepared the decommissioning cost estimate for Phase 2 facility components. The certificate holder explains that the Department's former *Cost Estimating Worksheet* was utilized for proposed wind facility components, and that a unit cost per MW was derived for the proposed solar array and battery storage systems. The certificate holder

also describes that the Phase 2 retirement cost estimate assumes components would be recycled to the maximum extent possible.

While the Department no longer recommends use of its former *Cost Estimating Worksheet* due to its latency in formal review and update, because the certificate holder inflated costs based on time of RFA preparation (3rd Quarter 2017) and because it is consistent with the methodology originally approved for the wind facility, at a time when the *Cost Estimating Worksheet* represented an acceptable methodology, the Department recommends Council consider that the *Cost Estimating Worksheet* with inflated unit rates is acceptable for adequately and accurately estimating retirement costs for the proposed Phase 2 wind facility components.

To support the Council's review of the retirement cost estimate methodology utilized for the proposed solar array and battery storage systems, the certificate holder describes the assumptions included in its per MW unit cost. The unit cost per MW includes labor, transportation costs, disposal costs, waste management, and site retirement and restoration costs, and the following general assumptions:

- Battery removal assumes recycling of materials and shipping of materials for recycling up to 100 miles from site.
- Demolition debris would be removed to a licensed landfill that would accept construction materials.
- Steel, concrete, and other components would be recycled to the extent possible.
- Underground material below 3 feet will be left in place. This includes concrete foundations and solar module posts at or below 3 feet underground.
- Inverters and transformers would be removed with oils in place.
- Bare ground portions would be reseeded in accordance with the *Revegetation Plan* (submitted as a supplement to Exhibit P on March 14, 2018) once retirement and restoration are complete.
- During retirement and restoration, care would be taken to minimize the disturbance to existing vegetation. To be conservative, this estimate assumes that the entire area occupied by the solar array and battery storage would be reseeded.
- The O&M facility would be removed, and the surrounding graveled area will be removed, regraded, and reseeded.
- The site perimeter fence, O&M fence, and substation fence would be removed and recycled.
- Internal services roads and access road would be removed, regraded, and reseeded as part of retirement and restoration activities.
- Salvage value of facility materials is not included, but should be considered if Council policy or rules change to allow credit for these values.
- The cost estimate includes a 10 percent administration and project management allowance and a 10 percent future developments contingency allowance.

In RFA4 Exhibit W, the certificate holder provides cost estimates for each of the three proposed design scenarios as Tables W-1A, -1B, and -1C. The certificate holder estimates that the retirement and restoration cost for Design Scenario A (81 Turbines and 100 MW of Battery Storage) would total $8,859,000 (3rd Qtr 2017 dollars). The cost estimate provided for Design Scenario B (48 Turbines and 100 MW of Battery Storage) totaled $7,564,000 (3rd Qtr 2017 dollars). The certificate holder's retirement cost estimate for Design Scenario C totaled $9.759 million (2nd Qtr 2019 dollars). Of the three Design Scenario's, the estimated cost of Phase 2 retirement and restoration of Design Scenario C ($9.759 million in 2nd Qtr 2019 dollars) was the largest if the three proposed configurations. For comparison, the bond amount for Phase 1 (56 wind turbines) is $7.9 million (Q3 2018).

The Department reviewed RFA4 Exhibit W and the above-described cost estimates and recommends Council adjust the retirement cost estimate by applying a 20 percent future development contingency to the retirement cost estimate for the proposed solar array and battery storage systems to account for additional uncertainties in scalability in the unit cost per MW approach and general assumptions (e.g. cost based on recycling of battery components versus landfill disposal cost; cost based on oil remaining within solar inverters and transformers versus drain and disposal cost). The Phase 2 retirement cost estimate, based on maximum impact (or Design Scenario C), with Department recommended adjustments is presented in Table 5, *Phase 2 Retirement Cost Estimate* below.

Table 5: Phase 2 Retirement Cost Estimate
(Photovoltaic Solar Array and Battery Storage)

Task or Action	Quantity	Unit Cost[1]	Unit	Estimate
Solar Array				
Disconnect electrical and ready for disassembly	1	$16,153	Each	$16,153
Remove solar generation equipment[1]	202	$2,333	MW	$471,266
Remove steel posts	202	$2,062	MW	$416,524
Remove pad transformer and foundation	202	$925	MW	$186,850
Restore module site	202	$18,135	MW	$3,663,270
Battery Storage - Zn-Fe Redox Flow technology				
Remove battery equipment	100	$2,847	MW	$284,681
Remove Fencing	100	$85	MW	$8,514
Remove pad transformer and foundation	100	$284	MW	$28,380
Restore module site	100	$568	MW	$56,800
Wind Turbines and Towers				
Disconnect electrical and ready for disassembly	0	$924	Each	$0
Remove turbine blades, hubs, and nacelles	0	$4,910	Each	$0
Remove turbine towers	0	$63	Ton	$0
Foundation and Pad Areas				
Remove pad-mounted transformers and foundations	0	$2,199	Each	$0
Remove turbine foundations	0	$30	Cu. Yd	$0

Table 5: Phase 2 Retirement Cost Estimate
(Photovoltaic Solar Array and Battery Storage)

Task or Action	Quantity	Unit Cost[1]	Unit	Estimate
Restore turbine pads and turnouts	0	$7,691	Acre	$0
Met Towers				
Dismantle and dispose of met towers	0	$7,833	Each	$0
Collector Substations				
Dismantle and dispose of collector substation	0	$123,775	Each	$0
Operations and Maintenance Facility(s)				
Dismantle and dispose of O&M Facility(s)	1	$42,222	Each	$42,222
Electrical System				
Remove 230 kV transmission line	3	$16,808	Mile	$50,424
Remove above-ground 34.5 kV collector	0	$4,671	Mile	$0
Remove below-ground junction boxes to 4' below grade	18.3	$1,246	Each	$22,802
Access Roads				
20-foot road removal, grading, and seeding	1.23	$7,911	Acre	$9,730.53
Improved existing road 14-foot road removal, grading, and	3.96	$7,911	Acre	$31,328
Temporary Areas				
Around access roads, turnouts and met towers	15.8	$5,275	Acre	$83,345
Around transmission lines and crane paths	15.1	$2,618	Acre	$39,531
Around turbine pads and disassembly areas	20.7	$2,618	Acre	$54,193
General Costs				
Permits, mobilization, engineering, overhead, utility disconnects	1	$418,617		$418,617
Subtotal				$6,008,430
Adjust to 2Q 2019 dollars				$8,033,271
Performance Bond		1	Percent	$80,333
Gross Cost				$8,113,604
Administration and Project Management		10	Percent	$811,360
Future Development Contingency		10/20	Percent	$1,504,399
Phase 2 Retirement and Restoration Cost (Q1 2019 Dollars) – Rounded to the Nearest $1,000 =				**$10,429,000**
Phase 1 Retirement and Restoration Cost (Q2 2019 Dollars) – (Final Design – 56 Wind Turbines) =				**$7,918,000**
Retirement and Restoration Cost – Facility, with Proposed Changes (Phase 1 and 2) =				**$18,347,000**

[1] Unit Costs per component did not vary between all three design scenario cost estimates. The unit costs of components previously evaluated by Council subsequent Orders also did not vary. Costs associated with Solar Generation were only included in the cost estimate of Design Scenario C.

Based on the recommended adjustments, the Department recommends Council find that the Phase 2 retirement cost estimate of $10.5 million (Q1 2019 dollars) is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition.

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

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

A bond or letter of credit provides a site restoration remedy to protect the state of Oregon and its citizens if the certificate holder fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the certificate holder has fully restored the site. OAR 345-025-0010(8) establishes a mandatory condition, imposed under Condition 8, which ensures compliance with this requirement. As described above, the amount necessary to restore the site of the proposed Phase 2 facility components to a useful, nonhazardous condition would be approximately $10.5 million (Q1 2019 dollars), adjusted annually as required per existing Condition 32.

To demonstrate its ability to receive an adequate bond or letter of credit, the certificate holder provides an October 19, 2017 letter from Liberty Mutual Insurance Company, a financial institution pre-approved by Council. The bank letter is intended solely to demonstrate that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in the amount necessary for site restoration, as required prior to construction. The amount necessary for site restoration must be based on the methodology, as approved by Council in Final Order on ASC and any subsequent Final Order on amendments. Adjustments to the final site restoration bond or letter of credit amount may be made but are limited to final facility design adjustments (e.g. based on design scenario)

Based on the October 2017 bank letter, and the certificate holder's demonstrated ability to obtain and submit a bond through Phase 1 activities, the Department recommends Council considers that the certificate holder continues to demonstrate a reasonable likelihood of obtaining a bond or letter of credit in the amount necessary for site restoration. Additionally, as described above and in accordance with Condition 8, construction cannot begin on the facility until the Department receives a satisfactory bond or letter of credit.

To both accommodate the institution of a multi-phase development (Phase 1 and Phase 2), and the integration of new technology and components previously unevaluated by Council, the Department recommends that Council amend conditions 8 and 32 as follows:

> **Recommended Amended Condition 8:** OAR 345-025-0006~~027-0020~~ (8): Before beginning construction of the facility or a phase of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit, in a form and amount satisfactory to the Council to restore the site or a portion of the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility or the phase of the facility has been retired. The Council may specify different amounts for the bond or letter of credit during

construction and during operation of the facility or a phase of the facility. (See Condition 32.) [AMD4]

Recommended Amended Condition 32:

i. Before beginning construction of Phase 1 of the facility, 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 is either $21.511 million (3rd Quarter 2010 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in (b).
    a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected by applying the unit costs and general costs illustrated in Table 2 in the *Final Order on the Application* and calculating the financial assurance amount as described in that order, adjusted to the date of issuance as described in (b) and subject to approval by the Department.
        i. Adjust the Subtotal component of the bond or letter of credit amount (expressed in mid-2004 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 average of the 2nd Quarter and 3rd Quarter 2004 index values (to represent mid-2004 dollars) 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 mid-2004 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.
    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:
    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 under Condition 21.

f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

ii. Before beginning construction of Phase 2 of the facility, 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 bond or letter of credit will be issued for Phase 2 in an amount that is either $10.429 million (1st Quarter 2019 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in (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 both the-battery storage or turbine types selected by applying the unit costs and general costs illustrated in Table 5 of the *Final Order on Amendment 4* and calculating the financial assurance amount as described in that order, adjusted to the date of issuance as described in (b) and subject to approval by the Department. The certificate holder may adjust the amount of the bond or letter of credit under (a) if opting to construct only a portion of the facility.

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 mid-2004 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 average of the 2nd Quarter and 3rd Quarter 2004 index values (to represent mid-2004 dollars) 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 mid-2004 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, add 20 percent of the adjusted Gross Cost of the Solar Generation and Battery Storage System (ii) and 10 percent of the adjusted Gross Cost of all other facility components(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 under Condition 21.
f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[AMD4]

The Department recommends Council find that the certificate holder 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.

Conclusions of Law

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

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

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

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

Findings of Fact

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

The analysis area for potential impacts to fish and wildlife habitat, as defined in the project order, is the area within and extending ½-mile from the site boundary.[77] To inform the

[77] MAPNOIDoc24 MWP NOI Project Order 2010-01-05, p.14

evaluation of impacts under the Council's Fish and Wildlife Standard, both biological and botanical surveys were conducted including wetland delineation surveys, special-status plant surveys, raptor nest surveys, habitat mapping updates, and Washington ground squirrel (WGS) surveys, as further described below.

As discussed above in Section III.D. *Soil Protection,* Condition 44, requires the certificate holder to restore all areas temporarily disturbed by facility maintenance or repair activities using the same methods and monitoring procedures as described in the final Revegetation Plan. In Exhibit P of RFA4, the certificate holder recommends that Condition 44 be deleted. The certificate holder explains that Condition 44 is not required as a mandatory condition prescribed in OAR 345-027-0020 or 345-027-0023, and that it duplicates the language of Condition 92. The Department agrees that Condition 44 is not a mandatory condition, however, disagrees with the certificate holder's interpretation that the requirements of Condition 44 are duplicated in condition 92. Condition 44 is applicable during facility operations, whereas Condition 92 applies to areas temporarily disturbed by facility construction.

Habitat Types and Categories in the Analysis Area

As stated in the Final Order on the ASC, habitat within the analysis area of the approved facility was identified by the certificate holder's consultants, Northwest Wildlife Consultants (NWC) in 2009, and field verified the habitat types. As evidence in the record, the certificate holder also referenced habitat mapping that was conducted in 2010 in the Phase 2 site boundary by a previous owner of the facility. In 2017, the Certificate holder's consultant, CH2M, reviewed the previous habitat mapping information and conducted additional desktop and field surveys for areas that had not previously been surveyed (pursuant to OAR 635-415-0025) to identify habitat categories and subtypes within the analysis area of the proposed site boundary expansion. CH2M concurrently conducted the habitat mapping with WGS protocol surveying. As provided in RFA4, habitat mapping was updated for the Montague facility to include the Phase 2 analysis area.

Besides habitat mapping and WGS surveying, CH2M also conducted raptor nest surveying, special status plant surveying, and wetland delineation surveying in the spring and winter of 2017. The habitat mapping within the analysis area of the facility, with proposed changes indicates that Phase 2 includes Categories 1, 2, 3, 4, and 6 habitat, but with the vast majority of areas anticipated to be impacted by the Phase 2 facility are Category 6 habitat, active

agriculture. The identified habitat subtypes within the analysis area of the facility include the following:

- Category 1
  Washington Ground Squirrel (WGS) Occupied: areas with suitable habitat that are within a 785-foot buffer of active WGS burrows.
    - Grassland
    - Shrub-steppe
    - Woodland
    - Developed
- Category 2
  WGS Potential Seasonal Home Range Shift and Dispersal Areas: 1500-meter buffer from active WGS burrow
    - Exposed Rock
    - Grassland
    - Shrub-steppe
    - Woodland
    - Developed
- Category 3
    - Developed
    - Grassland
    - Shrub-steppe
    - Woodland
- Category 4
    - Developed
    - Grassland
    - Shrub-steppe
- Category 6
    - Developed

The Council previously addressed the Fish and Wildlife Habitat standard in the *Final Order on the ASC*, *Final Order on Amendment 1, Final Order on Amendment 2*, and *Final Order on Amendment 3*. In each of the previous three orders, the Council made findings regarding on-site characteristics of the habitat subtypes within each habitat category within the Phase 1 site boundary. As proposed, Phase 2 consists of similar habitat subtypes as were originally described in the Final Order. The review of the habitat categorization, both what was provided on record and results of the 2017 surveying indicates that the proposed Phase 2 site boundary expansion does not contain any Category 5 habitat, and does not result in the identification of any new habitat or species that were not previously evaluated by Council. Council previously found that subject to conditions imposed in the site certificate, the design, construction, and operation of the approved facility (Phase 1) would be consistent with ODFW's habitat mitigation goals and standards, and would comply with the Council's Fish and Wildlife Habitat Standard.

The certificate holder explains that Design Scenario C has the greatest total acreage of impacts, as the proposed solar array would permanently occupy a greater amount of land than the wind turbines of Design Scenario A (maximum turbine layout), but that the solar around would be sited entirely on Category 6 land, active agriculture. Additionally, the certificate holder explains that while Montague may choose to construct a smaller solar array within the solar micrositing corridor, for the purposes of estimating habitat impacts, a maximum layout of 1,189 acres was used for the proposed solar array. Furthermore, the certificate holder states that although the size of the proposed solar array may change, Montague will limit impacts of the solar array to Category 6 habitat.[78] By limiting the solar array to Category 6 habitat, the certificate holder states in Exhibit P that 99 percent of Design Scenario C total impacts will be to Category 6 habitat, whereas 94 percent of Design Scenario A habitat impact would be to Category 6 habitat.[79] The remaining 6 percent of potential habitat impact of Design Scenario A would primarily be to Grassland habitat, specifically Revegetated or Other Planted Grassland (DR). Table 6 below summarizes the estimated habitat impacts of Design Scenario A, by category and subtype, and the calculated habitat mitigation area (per Habitat Category) when applicable. Category 6 habitat is considered the least valuable to wildlife per ODFW policy, and impacts to Category 6 habitat do not require mitigation.

Potential Impacts to Fish and Wildlife Habitat

Depending on the design scenario chosen, construction and operation of the proposed Phase 2 facility components could result in temporary, temporal, and permanent habitat impacts to Category 2 (WGS Potential Seasonal Home Range Shift; Grasslands; and developed areas); Category 3 (Sagebrush steppe, grasslands, and developed areas); Category 4 (Grasslands); and Category 6 (Developed areas).[80]

As explained by the certificate holder in Exhibit P of RFA4, to calculate temporary, temporal and permanent habitat impacts of the proposed Phase 2, disturbances were calculated based on both the maximum wind turbine (81 2.5-MW turbines) Design Scenario A layout and the maximum solar array (up to 1,189 acres) Design Scenario C layout. Design Scenario C was evaluated, and found to be the least impactful to higher-rated habitat, out of the three proposed facility design layouts. As presented below in Table 6, *Estimated Maximum Temporary and Permanent Habitat Impacts (by Category and Subtype), for the Facility with*

[78] MWPAMD4 Exhibit P, p.P-36

[79] MWPAMD4 Exhibit P, p.P-34

[80] Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes identified within the site boundary, based on pre-construction estimates, including sagebrush steppe and broom snakeweed shrublands are reasonably expected to require a longer restoration timeframe (5+ years) and therefore would be expected to result in temporal loss requiring compensatory mitigation beyond the certificate holder's revegetation obligation.

Proposed Changes, the proposed Phase 2 facility components represented in Design Scenario A, would temporarily disturb approximately 21.45, 8.06, and 0.76 acres of Category 2, 3 and 4

Table 6: Estimated Maximum Temporary and Permanent Habitat Impacts (by Category and Subtype), for the Facility with Proposed Changes

Habitat Category and Subtype	Temporary Impacts	Permanent Impacts	Calculated Mitigation Area (Temporal and Permanent impacts)
	Acres		
Facility, as Approved: "Phase 1"[1]			
Habitat Category 2	15.8	3.76	16.15
Habitat Category 3	19.64	5.31	
Habitat Category 4	11.21	2.33	
Habitat Category 6	610.90	67.19	
Proposed Changes: "Phase 2" Design Scenario A			
Habitat Category 2			
ESC – Exposed Rock on Slopes – Escarpment	0	0	4.6
DR - Revegetated or Other Planted Grassland	11.03	1	
GA - Exotic Annual Grassland	10.22	1.1	
GB - Native Perennial Grassland	0	0	
SSA - Basin Big Sagebrush Shrub-steppe	0.20	0	
SSB - Rabbitbrush/Snakeweed Shrub-steppe	0	0	
Woodland – Juniper	0	0	
Habitat Category 2 Total	**21.45**	**2.1**	
Habitat Category 3			
DC - Developed-CRP or Other Planted Grassland	0.14	0	0.53
DR - Developed-Revegetated or Other Planted Grassland	7.82	0.44	
GA – Exotic Annual Grassland	0	0	
GB - Native Perennial Grassland	0.01	0	
SSA - Basin Big Sagebrush Shrub-steppe	0.09	0	
SSB - Rabbitbrush/Snakeweed Shrub-steppe	0	0	
WJ – Woodland Juniper	0	0	
Habitat Category 3 Total	**8.06**	**0.44**	
Habitat Category 4			
DB- Developed-Old Field			0.09
DR - Developed-Revegetated or Other Planted Grassland	0	0	
GA - Exotic Annual Grassland	0.76	0.09	

GB – Native Perennial Grassland	0	0	
SSA – Shrub-steppe – Sagebrush (Big Sage)	0	0	
SSB - Rabbitbrush/Snakeweed Shrub-steppe	0	0	
Habitat Category 4 Total	**0.76**	**0.09**	
Habitat Category 6			
DW - Developed-Dryland Wheat	460.41	64.28	0.00
DI - Developed Irrigated Agriculture	5.98	0.85	
DX - Developed-Other	2.58	0.13	
Habitat Category 6 Total	**468.97**	**65.26**	
Grand Total: "Phase 2" Design Scenario A ("Worst Case Mitigation Obligation")	499.24	67.89	5.22
Estimated Size of Habitat Mitigation Area Summary			
Size of Habitat Mitigation Area: "Phase 1"			17.03
Size of Maximum Anticipated Habitat Mitigation Area for: "Phase 2" (rounded up to the nearest whole acre)			**6 (5.22) acres**

habitat, respectively, resulting in temporary and temporal habitat impacts. As proposed, Phase 2 facility components represented in Design Scenario A would permanently disturb approximately 2.1, 0.44, and 0.09 acres of Category 2, 3, and 4 habitat, respectively.[81] The certificate holder clarifies that although Design Scenario C represents the greatest total acreage of impacts due to the construction of the solar array, Design Scenario A would require the greatest amount of mitigation as it would have the greatest amount of impacts affecting higher-quality habitat.[82] Scenario B would have less impact than Scenario A, so it is not represented on the Table 6. The Phase 2 draft Habitat Mitigation Plan uses Design Scenario A habitat impact estimates as the basis for the calculation of the size of the Phase 2 mitigation Area. The solar array (Design Scenario C) would be exclusively sited in Category 6 habitat within the solar micrositing corridor. Because Category 6 does not require any mitigation resulting from impacts to habitat, only the related or supporting facility components sited on Category 2, 3, or 4 habitat would require habitat mitigation. As such, data for Scenario C is not shown on Table 6.

It is possible that related or supporting facility components associated with the Phase 2 facility that would be common between any design scenario may require habitat mitigation; however, the impacted acreage that would require compensatory mitigation would be less than that of Scenario A. As described elsewhere in this section, the Montague facility habitat mitigation area has sufficient available mitigation acreage to provide the quantity of mitigation necessary for Phase 2, under any design scenario.

Per ODFW policy and the EFSC Fish and Wildlife Habitat standard, compensatory mitigation shall be provided for temporary impacts to shrub-steppe habitat consistent with the mitigation

[81] MWPAMD4Doc Exhibit P, Tables P-4 and P-5, 2019-04-05
[82] MWPAMD4Doc Exhibit P, p.P-36, 2019-04-05

obligation for permanent impacts to the same habitat type. Table 6 shows the anticipated required mitigation obligation per habitat type and habitat classification. The habitat mitigation plan (Attachment D) provides additional details. Temporary impacts must be restored in accordance with site certificate Condition 92. Mitigation must be provided for temporary impacts to shrub-steppe habitat as this habitat type is slow to recover to pre-disturbance state. Temporary impacts to grassland habitat types do not require compensatory mitigation as long as the disturbed areas are restored in accordance with the Revegetation Plan (Attachment E). It is noted that the obligation to provide mitigation for temporary impacts to shrub-steppe habitat with a sage component, consistent with the mitigation obligation for permanent impacts to the same habitat type is a change in ODFW policy since the EFSC review and approval of the Phase 1 facility. The requirements of Condition 95(a), which restrict construction of any facility components within areas of Category 1 habitat will continue to apply to the Phase 2 facility.

In Exhibit P of RFA4, the certificate holder explains that ODFW has indicated that habitat adjacent to a WGS "Colony" (as defined by ODFW as a "cluster of holes") is considered Category 2 habitat as an "area of potential [WGS] use" if it is of similar habitat type and quality as the area occupied by the WGS.[83] The certificate holder references ODFW's September 29, 2008 Oregon Columbia Plateau Ecoregion Wind Energy Siting and Permitting Guidelines when discussing the consideration of Category 2 habitat at areas of potential WGS use. Although the ODFW guidelines do not specifically identify distance parameters for the Category 2 habitat classification, ODFW has clarified that Category 2 WGS habitat include any suitable habitat within 1,500-meters of an active WGS burrow. As such, the Department recommends that the Final Habitat Mitigation Plan for Phase 2 shall include ODFW's recommended habitat categorization for any suitable WGS habitat within 1,500-meters of an active WGS burrow unless there is a break in the habitat that would pose as a barrier to WGS movements.

Much like the habitat categorization for suitable WGS habitat within 1,500-meters of an active WGS burrow, ODFW considers mule deer winter range to be Category 2 habitat, unless it is active agriculture, which case the habitat remains as Category 6. In RFA4, the certificate holder explains that although mule deer range is mapped within portions of the proposed site boundary expansion, the facility, as proposed would not impact ODFW mule deer winter range. ODFW concurred with the certificate holder's claim, in a February 23, 2018 comment letter, and stated that the ODFW [mule deer] winter range boundary in that portion of Gilliam County is intended to be within the breaks of Rock Creek and not encompass any of the uplands above the breaks of the canyon.[84]

Council previously imposed Conditions 91, 92, and 95 Condition 95 of the site certificate requires the site certificate holder to conduct pre-construction plant surveys, wildlife surveys, avian use surveys, and raptor nest surveys. Because the requirements of Conditions 91, 92, and

[83] MWPAMD4. Exhibit P, p.P-14. 2019-04-05.
[84] MWPAMD4 ODFW pRFA Comments and Transmittal 2018-02-28

95 would continue to apply to Phase 2, the Department recommends that Council administratively amend each of the conditions as presented in Attachment A of this order.

Proposed Habitat Mitigation

Depending on the design scenario chosen, construction and operation of the facility, with proposed changes could result in temporary, temporal and permanent habitat impacts to Category 2, Category 3, Category 4, and Category 6. Of these categories, impacts to Category 2, 3 and 4 habitat must be mitigated in accordance with the EFSC Fish and Wildlife Habitat standard and ODFW's Habitat Mitigation Policy, and would be mitigated as described in the Phase 2 Wildlife and Habitat Monitoring and Mitigation Plan (Phase 2 HMP) (Attachment D to this draft proposed order).[85]

The certificate holder proposes to mitigate temporal habitat impacts (i.e. loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function) and permanent habitat impacts in the form of a permanent conservation easement on a habitat mitigation area (HMA). Specifically, for temporal habitat impacts, the certificate holder proposes to include in its HMA 2 acres for every 1 acre of Category 2 habitat temporarily disturbed (a 2:1 ratio), and 1 acres for every 1 acre of Category 3 and 4 habitat temporarily disturbed (a 1:1 ratio). Based on this proposed methodology, the HMA would include 0.4, and 0.09 acres, or approximately 0.49 acres, of Category 2, and 3 habitat, respectively, as mitigation for habitat loss associated with Design Scenario A.

To mitigate the permanent, and temporary habitat impacts, the Council previously imposed Condition 93 requiring the certificate holder to mitigate for temporary and permanent habitat impacts, according to the final design configuration, and as incorporated into the Habitat Mitigation Plan. The Department recommends that the Council amend Condition 93 to differentiate the habitat mitigation requirements and plans for each phase of the facility. Since the last amendment, ODFW habitat mitigation calculations for temporal impacts to Category 2, 3, and 4 Shrub-steppe habitat have changed. As such, the Department recommends that the new habitat impact calculations be used for the proposed Phase 2 components, and that an updated habitat mitigation area calculations be provided to the Department and ODFW for review within 30 days of construction completion. The Departments recommended amended condition language for Condition 93 is provided below.

A draft Phase 2 HMP was prepared by the certificate holder and evaluated by both the Department and ODFW for RFA4. In the Phase 2 HMP, the certificate holder proposes to provide 2 acres for every 1 acre of Category 2 habitat permanently impacted (a 2:1 ratio to provide no net loss and a net benefit). Impacts to habitat Categories 3 and 4 will be mitigated by including 1 acre for every 1 acre that is permanently impacted within its HMA (a 1:1 ratio to

[85] ODFW provided comments on the proposed Phase 2 Draft Habitat Mitigation Plan, to which the certificate holder responded to by amending the HMP to reflect ODFW's comments and suggestions.

provide no net loss). This approach is consistent with the ODFW Fish and Wildlife Habitat Mitigation Policy and the EFSC Fish and Wildlife Habitat standard.

In RFA4, the certificate holder proposes to mitigate Phase 2 impacts within the same 440-acre parcel of land that has already been approved by the Department and ODFW for use, in part, as a mitigation area for Montague Phase 1, the Leaning Juniper facility (both LJIIA and LJIIB), and other wind facilities in the region.[86] Within the 440-acre property, an 80 acre conservation easement has been executed for the Montague facility, and a 17-acre parcel was required to mitigate for Phase 1 habitat impacts. The remaining area within the Montague facility parcel of the 440-acre property remains relatively remote, and habitat protection and enhancement actions continue to remain feasible and sufficient for the mitigation of Phase 2 habitat impacts. The Department finds that the proposed HMA contains sufficient land to provide the required compensatory mitigation of the Phase 2 project.

As mentioned above, Council previously imposed Condition 93 requiring the certificate holder to prepare and provide the Department and ODFW with updated habitat impact and mitigation area calculations. To provide additional clarification on agency review and timing, the Department recommends that Council administratively amend Condition 93 as follows:

Recommended Amended Condition 93:
The certificate holder shall:

(a) 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 and shall provide a copy of the documentation to the Department. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plans for each phase of the facility, as approved by the Department in consultation with ODFW. The final Habitat Mitigation Plans shall be based on the draft plan included as Attachment G to the Final Order on Request for Amendment #3 and updated based on Condition 31. The final Habitat Mitigation Plans may be amended from time to time. [Amendment #3, AMD4]

(b) Prior to construction of Phase 2 components, the certificate holder shall finalize and implement the Habitat Mitigation Plan (HMP) included as Attachment D to Final Order, as approved by ODOE in consultation with ODFW. Provision 93(c) regarding impacted acreage calculations shall be completed and submitted to the department after construction is complete as described in the condition below.

(c) Within 30 days of completion of construction, the certificate holder shall submit to the Department and ODFW updated habitat impact and mitigation area calculations. [AMD4]

[86] MWPAPPDoc157 MWP Final Order, p.110

State Sensitive Species within the Analysis Area

In order to identify State Sensitive species that could occur within the analysis area, the certificate holder's consultants, CH2M, conducted an updated desktop survey for state sensitive species that may occur within the site boundary or within a 5-miles of the site boundary (Survey Area). CH2M used the U.S. Fish and Wildlife Services (USFWS) county lists of *Federally Listed and Proposed Endangered and Threatened Species, Candidate Species and Species of Concern for* Gilliam County, the Oregon Department of Agriculture (ODA) Oregon Listed Plants by County (ODA, 2017), and the Oregon Biodiversity Information Center (ORBIC) database to identify special status species known to occur or potential to occur within 5 miles of the facility site boundary.

Previous surveys for special- status wildlife species were conducted in portions of the Phase 1 site boundary by NWC in Spring 2006, and Spring 2009. NWC also conducted a full year of avian use surveys at five plots within the Phase 1 site boundary, from September 4, 2008 to August 7, 2009. Special-status plant and wildlife field surveys were conducted in 2008 and 2010, and were updated in 2017 for areas within Phase 2 that were not previously surveyed. Avian use surveys were conducted from fall 2009 through spring 2010, and raptor nest surveys were conducted in 2010, and updated in 2017.[87]

Based on this Desktop review, which included and review of prior surveys conducted within the Phase 1 and Phase 2 site boundaries, Ch2M identified state sensitive species with either a known occurrence or have the potential to occur within the site boundary (both Phase 1 and Phase 2), or within 5 miles of the site boundary. Of the 52 plant and wildlife species identified in Table P-2, suitable habitat within the Survey Area for: 17 state-sensitive species (including 4 mammals, 1 reptile, and 7 avian species) either have suitable habitat within the site boundary, or were observed within the site boundary while surveying. The table below, Table 7, *State Sensitive Species Observed or Potential to Occur within the Analysis Area*, lists the observed State Sensitive Species or State Sensitive Species with potential to occur, based on presence of suitable habitat, within the analysis area.

Table 7: State Sensitive Species Observed or Potential to Occur within Analysis Area

[87] MWPAMD4 Exhibit P, p.P-5 2019-04-05

Species	State Status
Birds	
Ferruginous hawk *(Buteo regalis)*	Sensitive – Critical (SC)
Western burrowing owl *(Athene cunicularia)*	SC
Grasshopper sparrow *(Ammodramus savannarum)*	Sensitive - Vulnerable (SV)
Loggerhead shrike *(Lanius ludovicianus)*	SV
Long-billed curlew *(Numenius americanus)*	SV
Sage sparrow *(Amphispiza belli)*	SC
Swainson's hawk *(Buteo swainsoni)*	SV
Mammals	
Fringed myotis *(M. thysanodes)*	SV
Pallid bat *(Antrozus pallidis)*	SV
Silver-haired bat *(Lasionycteris noctivagans)*	SV
White-tailed jackrabbit *(Lepus townsendii)*	SV
Reptiles	
Northern sagebrush lizard *(Sceloparus graciosus graciosus)*	SV

Potential Impacts to State Sensitive Species

Potential impacts to State Sensitive wildlife species during facility construction and operation facility impacts, as evaluated in the Final Order on ASC, could include increased morality of bird and bat species from wind turbine collision; grassland bird displacement from habitat loss; mortality risk from vehicle and equipment collision; and, noise-related disturbances during critical life stages (breeding and nesting). In RFA4, the certificate holder explains that Phase 2 facility components would be sited mostly on Category 6 habitat, the lowest quality for wildlife species.

The certificate holder requests to administratively amend Conditions 91, 92, 95, 96, and 97 as presented in Attachment A of this order. Based on the administrative nature of these condition amendments, the proposed changes are not presented in this section. The Department recommends that the Council find that the requested condition amendments would not

substantially change the intent of the previously imposed conditions and the conditions as requested.

Additional conditions imposed under the Council's Soil Protection and Threatened and Endangered Species standards, as described in Section III.ID., *Soil Protection* and III.I. *Threatened and Endangered Species* of this order, would also minimize potential impacts to State Sensitive species during construction and operation of the proposed Phase 2 facility.

As discussed above in Section III.D. *Soil Protection,* Condition 44, requires the certificate holder to restore all areas temporarily disturbed by facility maintenance or repair activities using the same methods and monitoring procedures as described in the final Revegetation Plan. In Exhibit P of RFA4, the certificate holder recommends that Condition 44 be deleted. The certificate holder explains that Condition 44 is not required as a mandatory condition prescribed in OAR 345-027-0020 or 345-027-0023, and that it duplicates the language of Condition 92. The Department agrees that Condition 44 is not a mandatory condition, however, disagrees with the certificate holder's interpretation that the requirements of Condition 44 are duplicated in condition 92. Condition 44 is applicable during facility operations, whereas Condition 92 applies to areas temporarily disturbed by facility construction.

Council previously imposed the following conditions under the Fish and Wildlife Habitat standard that would apply during construction and operation of the proposed Phase 2 facility, requiring that the certificate holder implement measures and practices to avoid and minimize potential impacts to State Sensitive species. Previously imposed conditions are summarized below:

- Condition 94 requires that the certificate conduct pre-construction Washington ground squirrel surveys, and requires that survey results be provided to the Department and ODFW for review and coordination to ensure adequate protection of the species
- Conditions 95 require the certificate holder to conduct pre-construction plant surveys, wildlife surveys, avian use surveys, and raptor nest surveys
- Condition 96 requires avoidance of construction impacts to raptors during the nesting season
- Condition 97 requires avoidance of construction impacts to the BLM Horn Butte Wildlife Area during the nesting season of the long-billed curlew
- Condition 98 restricts the location of construction activities
- Condition 99 addresses facility design measures to reduce potential adverse effects to avian species
- Condition 100 requires the certificate holder to instruct personnel about sensitive species, exclusion areas, permit requirements and other environmental issues

<u>Mammals</u>

In Exhibit P of RFA4, based upon acoustic bat surveys completed in 2010, three special-status bat species could be impacted by facility construction or operation. The certificate holder

explains that these bat species occupy forested habitats during breeding season, and that there is little forested habitat in the region, and that while bats were observed during the 2010 surveying, the Phase 2 site boundary does not contain any forested habitat. Phase 2 construction is not expected to result in significant adverse impacts on the three bat species listed above in Table 7, as suitable foraging habitat and water sources are limited within the Phase 2 site boundary, and because construction activities generally occur during daylight hours, when bats are generally absent.[88]

The certificate holder explains that the primary impact to bats during Phase 2 facility operation will be direct mortality from turbine collision. Furthermore, construction of the solar array and other related and supporting facility components are not expected to pose a risk to bats, due to their lower overall heights and stationary nature. As proposed, the larger wind turbines considered for use at Phase 2 could result in an increased risk of bats colliding with wind turbines compared to Phase 1 turbines currently being installed, however, the certificate holder explains that any change to potential impacts is difficult to estimate because little is known about the flight heights of the observed special-status bat species. Plus, if the larger turbine models are chosen at Phase 2, it is anticipated there will be fewer turbines to collide with, which may reduce exposure. It is expected that any differences in bat impacts as a result of the proposed turbine model changes may be undetectable compared to the assessment conducted for the Phase 1 facility, previously approved by Council.

In the Final Order on the ASC, Council explains that facility operation could have an adverse impact on bat species, due to interaction with wind turbines, guy-wires, and transmission lines (or other vehicles or other equipment) and imposed conditions to mitigate for any potential operational impacts to bats. Council imposed condition 91 requiring the certificate holder to conduct both short term and long term wildlife monitoring, as described in the Wildlife Monitoring and Mitigation Plan (WMMP), during facility operation. In RFA4, the certificate holder proposes additional mitigation to minimize potential impacts to the three observed special-status bat species. In RFA4, the certificate holder states that Phase 2 turbines would be sited at least 656 feet (200 meters) from the breaks of Rock Creek canyon, in an effort to reduce potential bat mortality. The following recommended condition the Department recommends Council impose would apply to any final design or configuration in which the certificate holder proposes to construct Phase 2 wind turbines. The recommended condition, Condition 119 is as follows:

Recommended Condition 119:
<u>For any Phase 2 final facility design in which the certificate holder proposes to construct wind turbines within the Phase 2 site boundary expansion, the certificate holder shall maintain a minimum distance of 656 feet (200 meters), measured from the centerline of the turbine tower to the nearest edge of the breaks of Rock Creek Canyon. Prior to construction, the certificate holder shall provide the Department and ODFW evidence of compliance with this condition in the form of a map. The Department, in consultation with</u>

[88] MWPAMD4 Exhibit P, p.P-42 and P-43 2019-04-05

ODFW, shall review and approve compliance with this condition prior to beginning construction of any Phase 2 design scenario which includes wind turbines.

While the white-tailed jackrabbit was observed during the 2010 special-status wildlife surveying, the certificate holder explains that there is a low risk of potential impacts to the white-tailed jackrabbit. Suitable habitat for the white-tailed jackrabbits includes high-quality grasslands and shrub-step. The Phase 2 facility would impact very few acres of this habitat type, if any. If impacts to such habitat occur, mitigation is required consistent with the HMP and the EFSC Fish and Wildlife Habitat standard.

Avian Species

The certificate holder states that there are a number of state-sensitive bird species with potential to occur in the site boundary, or within 5 miles of the site boundary. Seven state-sensitive avian species were observed during the certificate holder's avian use surveys (conducted from 2008-2010), Special-Status wildlife surveys in March 2008, or during field surveys conducted in 2009, and 2010 in the Phase 2 site boundary by a previous owner of the facility. The seven state-sensitive avian species identified are as follows: ferruginous hawk, western burrowing owl, grasshopper sparrow, loggerhead shrike, long-billed curlew, sagebrush sparrow, and the Swainson's hawk.

Facility construction could impact nesting habitat for ground-nesting species, and foraging habitat for all avian species. As mentioned above, the Council previously imposed Condition 91, which requires the certificate holder to adhere to the requirements of a Wildlife Monitoring and Mitigation Plan (WMMP). In RFA4, the certificate holder submitted a draft WMMP for the proposed Phase 2 of the facility, which was provided to ODFW for comment and review. The Phase 2 WMMP was based on the approved Phase 1 WMMP, which was prepared in consultation with ODFW. Council also previously imposed Condition 96, which requires the certificate holder to avoid construction activities within a 1,300-foot buffer around potentially active nest sites of raptors during the nesting season. Considering the generally low quality of habitat to be impacted by the facility (Category 6), significant adverse impacts to state sensitive avian species would not be expected. In accordance with the Council's Fish and Wildlife Habitat standard and the ODFW Fish and Wildlife Mitigation Policy, the certificate holder will provide compensatory mitigation for impacted habitat according to a Habitat Mitigation Plan; as attached to this order as Attachment D.

Reptiles

In RFA4, the certificate holder identified one state-sensitive reptile species, the Northern sagebrush lizard, with the potential to occur within the facility site boundary. The certificate holder indicates that while suitable habitat may occur within the facility site boundary (Woodland Juniper), Table P-3 of RFA4 states that no Woodland Juniper habitat is present in the proposed site boundary expansion for Phase 2. Furthermore, no Northern sagebrush lizards have been documented within the site boundary during previous wildlife surveys, and that potential impacts to the Northern sagebrush lizard would be mitigated by shifting facility components out of higher-quality habitat, and into Category 6 habitat.

Plants

While the Oregon Department of Agriculture does not classify plant species as "sensitive," it does classify plant species as "threatened," "endangered," or "candidate" for listing. Potential facility impacts to threatened or endangered plant species is included in Section III.I below. Based on the literature review conducted as part of RFA4, there were candidate plant species identified that could occur within the Phase 2 analysis area; however, no such species were identified during field surveys, and the facility would be sited almost exclusively on Category 6 land, active agriculture, which would not be expected to provide habitat for rare plant species.

The Department recommends that the Council continue to find that subject to the previously imposed and amended plants, wildlife and habitat protection conditions, as well as additional recommended conditions, impacts from the construction and operation of Phase 2 would be mitigated consistent with the EFSC Fish and Wildlife Habitat standard and ODFW's Fish and Wildlife Habitat mitigation policy; and that the facility, with proposed changes, continues to comply with the EFSC Fish and Wildlife Habitat standard.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that facility, with proposed changes, complies with the Council's Fish and Wildlife Habitat standard.

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

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

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

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

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

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

Findings of Fact

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of the proposed facility are not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the proposed facility is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission.[89]

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

Surveys and Results

In order to identify endangered and threatened species that could occur within the analysis area, the certificate holder conducted searches of the Oregon Biodiversity Information Center (ORBIC) and U.S. Fish and Wildlife Service database records of threatened and endangered plant and wildlife species within the analysis area. The certificate holder also consulted with ODFW regarding potential occurrences of threatened and endangered species in the analysis area. Based on the database and literature review and consultation with ODFW, the certificate holder identified six state threatened and endangered species with the potential to occur with the analysis area. [90]

From this list, the certificate holder assessed whether there was potentially suitable habitat with the site boundary and analysis area for these species, and determined that habitat for only two state-listed threatened or endangered species has the potential to occur in the site boundary – Washington ground squirrel, and Laurent's milk-vetch. As part of the request for amendment, the certificate holder conducted field surveys for habitat and occurrences of these two species. The certificate holder also conducted field surveys for two plant species that are currently candidates for listed as threatened or endangered, but are not currently listed as such. These are the sessile mousetail and dwarf evening primrose. There are no state-listed threatened or endangered avian species with the potential to occur within the analysis area. [91]

Field surveys were conducted by the certificate holder for the three plant species in May 2017 in areas of the site boundary with potential habitat for the species where facility components are planned to be located. Surveys were not conducted in active agriculture land, which is not

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

[90] MWPAMD4. ASC Exhibit Q, p. Q-4, Q-5.

[91] MWPAMD4. ASC Exhibit Q, p. Q-8.

potential habitat and which is considered Category 6 habitat. The proposed solar array and battery storage system are both proposed entirely on active agriculture land. The surveys were timed appropriately for the bloom period of the species. No evidence of the three species, Laurent's milk-vetch, sessile mousetail, or dwarf evening primrose was found during the field surveys. As evidence in the record, the certificate holder also referenced field surveys for rare plants species conducted in 2006, 2009, and 2010 in the Phase 2 site boundary by a previous owner of the facility; those surveys also did not identified rare plants.[92]

Protocol-level field surveys were conducted by the certificate holder for Washington ground squirrel, the only state-listed threatened or endangered wildlife species with the potential to occur in the site boundary, in spring 2017 in areas of the site boundary with potential habitat for Washington ground squirrel and where facility components are planned to be located. As with rare plants, the certificate holder submitted evidence in the record of additional field surveys for Washington ground squirrel conducted by the previous Phase 2 project developer, conducted in 2008 and 2010.[93]

As reported in Exhibit Q, field surveys document Washington ground squirrel habitat in the northern portion of the Phase 1 site boundary, very near to the Phase 2 site boundary. As such, the facility was redesigned to remove facility components from that area in order to avoid Washington ground squirrel habitat. Field surveys of the remainder of the site boundary did not document active Washington ground squirrel habitat.[94]

The site boundary and surrounding area is highly fragmented, consisting mostly of active agriculture as well as roads and other development features including the Phase 1 facility construction, and there is limited connectivity between areas of actual and potential Washington ground squirrel habitat that is not interrupted by development features such as roads or active agriculture, which forms a barrier to movement of the species and a "break" in habitat.

Potential Impacts to Identified Threatened and Endangered Species

<u>Wildlife – Washington Ground Squirrel</u>

As described above, the only state-listed threatened or endangered wildlife species with the potential to occur in the Phase 2 site boundary is Washington ground squirrel. Based on 2017 protocol surveys for Washington ground squirrel, the Phase 2 facility was redesigned to avoid active Washington ground squirrel colonies and Category 1 habitat. As such, the Phase 2 facility is not expected to impact Washington ground squirrels or their habitats. It is noted in Exhibit Q that Design Scenario A is anticipated to permanently disturb approximately 2.63 acres of non-active agriculture; and while this area is not currently known to support Washington ground

[92] MWPAMD4. ASC Exhibit Q, p. Q-8, Q-9.
[93] MWPAMD4. ASC Exhibit Q, p. Q-10.
[94] Id.

squirrel, it has the potential to be colonized by the species.[95] Existing site certificate Condition 94 requires pre-construction protocol surveys for Washington ground squirrels. As the majority of the Phase 2 site boundary and areas where facility components are planned to be located is active agriculture (Category 6 habitat), it is not anticipated that Washington ground squirrels will be found, but if so, Condition 94 and 95 require that all areas of Category 1 habitat are avoided. Finally, the Wildlife Monitoring and Mitigation Plan (WMMP) for the Montague facility requires post-construction monitoring and reporting of Washington ground squirrel in areas of the facility site boundary near identified colonies.

Additionally, while there is known use of the Phase 2 and Phase 1 facility areas by Washington ground squirrel, it is important to note that, based on pre-construction field surveys for the Phase 1 site required by site certificate Conditions 94 and 95, the Phase 1 facility was redesigned prior to beginning construction because of the presence of active Washington ground squirrel colonies. Both conditions 95 and 95 will continue to apply to the Phase 2 facility, and if Washington ground squirrel is found during the pre-construction surveys, the facility would need to be designed to avoid Category 1 habitat and comply with the Threatened and Endangered Species standard.

Plants

As described above, no evidence of Laurent's milk-vetch, sessile mousetail, or dwarf evening primrose was found during Phase 2 2017 field surveys. The Department notes that the sessile mousetail and dwarf evening primrose are listed as candidates, but are not formally listed as threatened or endangered, and as such the EFSC Threatened and Endangered Species standard does not apply to those two plants.

Existing site certificate Condition 95(b) requires that the certificate holder conduct a pre-construction field survey for threatened and endangered species, which will include the Laurent's milk-vetch. If presence of the species is found, the certificate holder must consult with the Department, as well as the Oregon Department of Agriculture, to ensure continued compliance with the EFSC Threatened and Endangered Species standard which could include avoidance of the species or other types of mitigation.

Subject to compliance with existing site certificate conditions, and based on the analysis presented here and the information in the record, the Department recommends that the Council find that the Phase 2 facility is unlikely to adversely affect threatened or endangered wildlife or plant species, and that the design, construction, and operation of the facility are not

[95] MWPAPP4. ASC Exhibit Q, p. Q-10, Q-13.

likely to cause a significant reduction in the likelihood of survival or recovery of threatened or endangered wildlife or plant species

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the existing site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, complies with the Council's Threatened and Endangered Species standard.

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

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

Findings of Fact

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

The analysis area for the Scenic Resources standard, is the area within and extending 10-miles from the site boundary. Because RFA 4 includes a proposed site boundary expansion for Phase 2, the analysis area for the facility, with proposed changes is larger than previously analyzed. The expanded analysis area is mainly to the south and southwest of the facility. The land use and management plans that the certificate holder reviewed in Exhibit R of RFA4 are represented in Table R-1 of Exhibit R. There are no scenic resources protected by tribal plans within the analysis area.[96]

The proposed solar array and battery storage system are not expected to be visible from any designated Scenic Resource, and as such are not further discussed in this section. Further discussion of potential impacts from the solar arrays along state Highway 19 is included in Section III.M. *Public Services* of this order.

[96] MWPAAMD4Doc Exhibit R, p. R-6

In order to reduce potential visual impacts, including impacts to Scenic Resources, Council previously imposed Conditions 102 through 105; these conditions will continue to apply to Phase 2.

Condition 102 was imposed to minimize visual impacts from facility component finish, vegetative clearing and facility signage; Condition 103 to minimize visual impacts from the substation and O&M buildings; Condition 104 to minimize visual impacts from nighttime lighting. In RFA4, the certificate holder represented that it would implement the same measures for the proposed Phase 2 facility components. In RFA4, the certificate holder suggests amending Condition 103 to include the proposed substation and buildings/containers associated with the battery storage system. The Department agrees with the proposed amended condition language, and recommends that Council amend Condition 103 as follows:

> **Recommended amended Condition 103:** The certificate holder shall design and construct the O&M buildings, <u>substation, and buildings and containers associated with battery storage</u> 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.

<u>Applicable Land Use Plans</u>

The EFSC Scenic Resources standard requires an analysis of the proposed facility's potential visual 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." The analysis area of 10 miles includes parts of three Oregon counties (Gilliam, Sherman, and Morrow), one Washington County (Klickitat), two Oregon municipalities (Arlington and Ione), land administered by the Oregon Department of Transportation (ODOT), land administered by the Oregon Parks and Recreation Department, and land administered by the Bureau of Land Management and U.S. Fish & Wildlife Service. The analysis area includes both the existing Phase 1 site boundary and the proposed Phase 2 site boundary. The Klickitat County is approximately 9 miles from the closest point of the Phase 2 site boundary and across the Columbia River, and as such impacts to Scenic Resources in that county from the Phase 2 facility are unlikely, however, the analysis is included in this section. The city of Arlington is approximately 7 miles, and Sherman County border is approximately 6 miles, from the closest point of the Phase 2 site boundary. The certificate holder evaluated the following land use and management plans to determine whether scenic resources were identified as significant or important:

- Gilliam County Comprehensive Plan and County Zoning and Land Development Ordinance (Amended 2017)
- Morrow County Comprehensive Land Use Plan (Amended 2013)
- Sherman County Comprehensive Land Use Plan (Amended 2007)
- Klickitat County Comprehensive Plan (Amended 1979)

- Klickitat County Energy Overlay Zone Ordinance: Natural Resources/Energy Comprehensive Plan (Amended 2005)
- Roosevelt Community Subarea Plan (1990)
- City of Arlington Comprehensive Plan, June 2003 (amended 2015)
- City of Ione Comprehensive Plan (1987)
- Cottonwood Canyon State Park Comprehensive Plan (OPRD, 2011)
- Columbia Basin Wildlife Areas Management Plan
- Omnibus Oregon Wild and Scenic Rivers Act of 1988 (WSA, 1988); Public Law 100-557, 102 STAT. 2782; 16 *United States Code* 1271.
- John Day River Basin Record of Decision and Resource Management Plan (2015)
- Oregon Trail Comprehensive and Management Use Plan, Oregon National Historic Trail (1999)
- Lewis and Clark National Historic Trail, Comprehensive Plan for Management and Use (NPS, 1982)

In RFA4, the certificate holder explains that the proposed site boundary expansion results in an expansion of the analysis area to the southwest, consequently the analysis area includes one new resource not previously evaluated in the Montague original final order or subsequent amendments, Cottonwood Canyon State Park. The park is approximately 6 miles from the Phase 2 site boundary.

The certificate holder did not identify an applicable land use and management plan for the Blue Mountain Scenic Byway in RFA4. However, the *1999 Oregon Highway Plan: Including Amendments November 1999 through May 2015 (ODOT),* would apply to the byway, and as such, was relied upon in the Department's evaluation below.

The Council previously evaluated the impacts to scenic resources in the Final Order on the ASC, Final Order on Amendment 1, Final Order on Amendment 2, and Final Order on Amendment 3. These Final Orders discussed the potential visual impacts to resources in the City of Arlington (OR), the City of Ione (OR), Gilliam County (OR), Morrow County (OR), Sherman County (OR), Klickitat County (WA), the John Day River Wildlife Refuge, Willow Creek Wildlife Area, John Day River, Horn Butte Wildlife Area, Oregon National Historic Trail, and the Lewis and Clark National Historic Trail. These resources are again evaluated in Phase 2. As noted above, most of these Scenic Resources are north of, and closer to, the Phase 1 facility site boundary, but are none the less included in the evaluation of the proposed Phase 2 facility components below.

Visual Features of the Phase 2 facility

As proposed, Phase 2 components could result in visual impacts to scenic resources and values within the analysis area. The proposed components include: wind turbines with a maximum blade tip height of 597 feet; Up to approximately 1,189 acres of permanent vegetation disturbance from the construction and operation of the proposed solar array (Design Scenario C) which includes solar array structures with a maximum tilt height of 15 feet; battery storage

systems extending 20-feet in height; and 230 kV transmission line structures with a maximum height of 100 feet. The wind turbines, at nearly 600 feet, would be the most prominent visual feature on the landscape of the proposed facility.

When Council previously evaluated the Scenic Resources Standard in the Final Order on the ASC, and subsequent Amendment requests (AMD1 through AMD3), the tallest component of the facility were the wind towers. In the Final Order on the ASC, Council approved wind turbines with a maximum blade tip height ranging from 389 feet up to 492 feet tall. The turbines currently being installed at the Phase 1 facility are approximately 492 feet in height.

The tallest components proposed in RFA4 are also the turbine towers, which would be up to a maximum blade tip height of 597 feet. Within the Phase 2 proposed site boundary expansion, the certificate holder's maximum turbine layout (Design Scenario A) includes the construction of up to 81 wind turbine towers. As mentioned above, the certificate holder's Design Scenario B request would use turbines up to 597 feet tall, but if these taller turbines are used, fewer turbines are proposed to be constructed.

While it is possible that the solar array and battery storage system will be visible from identified Scenic Resources, nearly every Scenic Resource is to the north of the Phase 2 site boundary. Phase 1 is under construction, and when complete, will consist of 56 wind turbines each approximately 492 feet in height. In order to see the solar array and battery storage, a viewer from the Scenic Resource locations that are north of the Phase 2 facility would need to "look through" the Phase 1 facility wind turbines and other facility components, including the 230 kV gen-tie transmission line. Cottonwood Canyon State Park is the one Scenic Resource located closer to the Phase 2 facility site boundary than Phase 1, but as described further below, the solar array and battery system components are very low profile compared to wind turbines and are unlikely to be visible from the park.

Loss of Vegetation

Construction of the Phase 2 facility would result in temporary and permanent vegetation loss. Temporary vegetation loss would be restored through the certificate holder's implementation of a final, Phase 2 Habitat Mitigation and Revegetation Plan, to be reviewed and approved by the Department prior to Phase 2 construction, in accordance with recommended amended Condition 93. Operation of the facility, with proposed changes, would result in permanent vegetation loss from the footprint of facility components. Based on compliance with Conditions 93 and 105, and the distance of proposed facility components from the nearest identified scenic resource, the Department recommends that the Council find that visual impacts from

temporary and permanent vegetation loss would not be likely to result in a significant adverse impact at the significant or important scenic resources identified within the analysis area.

Facility Structures

To evaluate potential visual impacts of the wind turbines and the 230 kV transmission line structures at scenic resources identified as significant or important within the analysis area, the certificate holder provided a "zone of visual influence" analysis. The results of turbine ZVI were presented in Figures R-1 through R-3 of the RFA. The results of the transmission line ZVI were presented in Figure R-4. The proposed solar array and battery storage system are not expected to be visible from any designated Scenic Resource, and as such are not further discussed in this section. The ZVI conducted by the certificate holder in November 2018, included both Phase 1 and Phase 2 wind turbines. The certificate holder assessed a design configuration that combines the maximum turbine layout of Design Scenario A with the proposed maximum turbine heights of Design Scenario B that would result in the greatest visual impact. This scenario presents a "greater than worst case," as the number of turbines (up to 81) proposed under Design Scenario A would not be built using Design Scenario B turbines (up to 597 feet height).

The ZVI modeling conducted does not account for screening from vegetation or structures that might block the line-of-sight between a viewpoint and the turbine towers. The model also does not account for factors such as weather conditions, haze or background landscape that might obscure visibility. The analysis considers a turbine to be "visible" if any part of a turbine or transmission structure is within a line-of-sight, based on the maximum blade tip or transmission structure height. The results of the analysis are illustrated by color-coded maps, showing the approximate density of turbine towers or structures visible from any angle in the landscape within the 10 mile analysis area.

Based on review of the above-referenced land use and management plans, the certificate holder identified rock outcroppings in Gilliam County, rock outcroppings and trees in Sherman County, the John Day River and corridor, City of Arlington comprehensive plan components including "scenic views and vast open space," Cottonwood Canyon State Park, Blue Mountain Scenic Byway, and two sites (Fourmile Canyon Interpretive Site and the McDonald/John Day River Crossing) of the Oregon National Historic Trail as potentially significant or important scenic resources within the analysis area of the Phase 1 and Phase 2 facility components.

<u>Gilliam and Sherman Counties</u>

Rock outcroppings in both Gilliam and Sherman County, identified as important features and characteristics within each of their respective counties comprehensive plans, would not directly be impacted by Phase 2. Based on review of the Gilliam County Comprehensive Plan and County Zoning and Land Development Ordinance (Amended 2017), and the Sherman County Comprehensive Land Use Plan (Amended 2007), only the rock outcroppings marking the "rim and walls of steep canyon slopes" were characterized as important features of the County's landscape, but no specific rim or wall of steep canyon slope is identified. The nearest rock

outcroppings marking the rim of the steep canyon slopes of Gilliam County are approximately 7 miles from the proposed amended site boundary. Rock outcroppings in Sherman County are even further removed from the amended site boundary, and are located more than 7 miles away. Based on distance from the proposed Phase 2 components, the Department recommends that the Council find that the facility including both Phase 1 and 2 facility components, is not likely to have a significant impact on viewing rock outcroppings in Gilliam and Sherman County's, and would not result in a significant adverse effect on the identified scenic resources. Gilliam County submitted a comment letter in support of the Phase 2 facility and did not mention adverse visual impacts to rock outcroppings.[97] Sherman County did not comment on the record of the Phase 2 facility.

Morrow County and City of Ione

The Phase 2 facility boundary is approximately 5.5 miles from Morrow County and 14 miles to Ione. Neither the Morrow County Comprehensive Plan or the Ione comprehensive plan identify specific scenic resources or values. The Morrow County Comprehensive Plan specifically states that the "the county has not designated any sites or areas as being particularly high in scenic-resource value." As such, no additional analysis is necessary.[98]

City of Arlington

Arlington is approximately 7 miles from the closest point of the Phase 2 site boundary. In Exhibit R of RFA4, the certificate holder confirms that there have been no changes in the City of Arlington's policies regarding scenic resources since the last Council review of the Montague facility. The scenic resources addressed in the Goal 5 discussion of the city's comprehensive plan remain the Open Space, Scenic and Historic Areas, and Natural resources, specifically identifying the "Horse Heaven Hills on the Washington side of the Columbia River, and vast areas of open space within sight of almost every house in the town… [and] the views outside the City of Arlington to the east, west, and north […].". The Council previously evaluated the impacts of the facility in the Final Order on the ASC, and determined that the scenic views identified in the Comprehensive Plan are the views towards the Columbia River and away from the Montague facility site (to the east, west, and north). Because the Phase 2 facility site boundary expansion would be even further removed from the City of Arlington (proposed expansion is southwest of the approved facility site boundary), and based on the fact that Council previously found that the approved facility was not likely to have a significant adverse effect on the identified scenic resources in Arlington, the Department recommends that Council find that the design, construction, and operation of the facility, with proposed changes, is not likely to result in a significant adverse impact to the Scenic resources and values identified as significant or important in the City of Arlington Comprehensive Plan (2015).

John Day River and Corridor

The John Day River and associated river canyon are approximately 5.5 miles from the Phase 2 site boundary. Based on the analysis presented in RFA 4, no Phase 2 facility components would

[97] MWPAMD4DocXX Special Advisory Group GCo Comments 2019-02-20
[98] MWPAPPDocXX. RFA Exhibit R, R-9.

be visible from the river. The ZVI analysis suggests that it is possible that a small, limited area along the canyon wall and rim may have some visibility of Phase 2 turbines, but these areas are distant from the facility, and not readily accessible by the public. As such, the Department recommends that Council find that the design, construction, and operation of the facility, with proposed changes, is not likely to result in a significant adverse impact to John Day River and River Corridor.[99]

Cottonwood Canyon State Park

Cottonwood Canyon State Park is a state park located on the John Day River, previously unevaluated by Council during its review of the original ASC or subsequent amendments. As mentioned above, Phase 2 components would be located closer to the Park than the approved Phase 1 components. The park is located approximately 6 miles from the closest point of the Phase 2 site boundary. The park's management plan has a stated goal of preserving and enhancing the scenic character of Cottonwood Canyon. No Phase 2 facility components will be visible from the John Day River or other important areas of the park. Based on the ZVI analysis, some turbines may be visible at higher elevations on ridges of the park, but it is not clear if these areas are accessible to the public, and regardless, the areas are approximately 7.5 miles from the nearest potential turbine location. As such, the Department recommends that Council find that the design, construction, and operation of the facility, with proposed changes, is not likely to result in a significant adverse impact to John Day River and River Corridor.[100]

The Blue Mountain Scenic Byway

The Blue Mountain Scenic Byway is an approximately 130-mile designation along State Route 74 that traverses through the Blue Mountains of Northeastern Oregon. The certificate holder explains that the Blue Mountain Scenic Byway was designated by the U.S. Forest Service in 1989 as a National Forest Scenic Byway, and designated by the Oregon Department of Transportation (ODOT) as an Oregon State Scenic Byway in 1997.[101] At its closest point, the Blue Mountain Scenic Byway is approximately 3 miles to the west of the approved Phase 1 facility, and approximately 5 miles from the proposed Phase 2 Site Boundary expansion. The certificate holder's revised ZVI analysis for the proposed Phase 2 wind turbines indicates that the proposed wind turbines will be visible from a short segment, less than 1 mile in length, at a location that is approximately 12 miles away from the closest proposed turbine. Not only is this section of the byway outside of the scenic resources analysis area, but considering the distance of the proposed Phase 2 components from the highway, and the fact that the views of the facility, with proposed changes would be limited, the Department recommends that the Council find that the construction and operation of the facility, with proposed changes would not result in any significant adverse impacts to the Blue Mountain Scenic Byway.[102]

[99] MWPAPP. RFA Exhibit R, R-12 to R-14 2019-04-05
[100] MWPAMD4 Exhibit R, R-11 2019-04-05
[101] MWPAMD4 Exhibit R, R-14 2019-04-05
[102] Id.

Oregon National Historic Trail

The Oregon National Historic Trail (ONHT) passes through six states and covers 2,130 miles. The applicable federal land management plan is the *Comprehensive Management and Use Plan* (CMP) adopted by the National Park Service in 1999. The certificate holder identified two sites along the ONHT, within the scenic resource analysis area, that are managed for their historical significance. The two sites; Fourmile Canyon Interpretive Site, and the McDonald/John Day River Crossing. Of the two identified sites, the Fourmile Canyon Interpretive site is the closest in proximity to the facility, with proposed changes. Because the Fourmile Canyon Interpretive site is located less than a mile from the approved site boundary, and because the site directs viewers towards the southernmost trail segment extending up an adjacent foothill located to the west, Council imposed condition 105 in the Final Order on the ASC. As imposed, Condition 105 restricts the certificate holder's ability to site turbine and meteorological towers within a minimum of 1,000 feet from the centerline of the line-of-sight of the Fourmile interpretive site. The certificate holder explains that no proposed Phase 2 components will be closer to the Fourmile interpretive site than components Council has previously approved, and that existing Condition 105 will continue to apply to the proposed Phase 2 components. The facility, with proposed changes is not expected to result in significant adverse impacts to the Fourmile Canyon Interpretive site.[103]

The second identified site along the ONHT, within the scenic resources analysis area is the McDonald/John Day River Crossing. The McDonald/John Day River Crossing is located approximately 5 miles to the west of the proposed Site Boundary Expansion, within the river canyon on the John Day River. Phase 2 facility is unlikely to be visible at the McDonald/John Day River Crossing.[104]

Based on the analysis presented here and the information in the record, the Department recommends that the Council find that the design, construction, and operation of the facility, with proposed changes, is not likely to result in a significant adverse impact to the 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.

Conclusion of Law

Based on the foregoing findings of fact and conclusions of law, the Department recommends that the Council find that the facility, with proposed changes, complies with the Council's Scenic Resources standard.

[103] MWPAMD4 Exhibit R, p.R-14 through R-15 2019-04-05
[104] Id.

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

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

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

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

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

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

Findings of Fact

Section (1) of the Historic, Cultural and Archaeological Resources standard generally requires the Council to find that a proposed facility or facility, with proposed changes, is not likely to result in significant adverse impacts to identified historic, cultural, or archaeological resources. Under Section (2), the Council may issue a site certificate for a wind or solar power facility without making findings of compliance with this section. However, the Council may impose site certificate conditions based on the requirements of this standard.[105]

The analysis area for the Historic, Cultural and Archaeological Resources standard includes the area within the proposed amended site boundary. The analysis area is within the ceded lands and traditional use area of the Confederated Tribes of the Warm Springs Indian Reservation and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR).

Description of Discovery Measures

The certificate holder conducted desktop and field surveys, and provided funding to the CTUIR for a traditional use survey, to inform the proposed Phase 2 impact assessment under the Council's Historic, Cultural and Archaeological Resources standard. In RFA4, the certificate holder also incorporates by reference previous desktop and fieldwork conducted for the Baseline Wind Project, a withdrawn EFSC facility with leased area adjacent to the previously approved Montague Wind Power facility site boundary proposed for inclusion within the

[105] The site boundary does not encompass public lands; therefore, OAR 345-022-0090(1)(c) is not applicable.

amended site boundary, and previous Council proceedings for the Montague Wind Power Facility site certificate and subsequent site certificate amendments.

In October 2018, the certificate holder's consultant, CH2M Hill Engineers, Inc. (CH2M), reviewed the Oregon State Historic Preservation Office's (SHPO) Archeological Records Remote Access (OARRA) database to identify previously recorded cultural resources and previous cultural resource investigations conducted within and extending 1-mile of the proposed amended site boundary. Four cartographic reviews were conducted from 2010 through 2017, including review of General Land Office (GLO), historical U.S. Geological Survey (USGS) quad maps, and Metsker maps prior to fieldwork. Seven separate field surveys were conducted within (parts of) the analysis area from 2010 through 2018, including two field surveys each in 2017 and 2018.

The proposed Phase 2 micrositing corridor includes approximately 8,981 acres, as represented in Figure 3, *Site Boundary and Micrositing Corridor* in Section II.A. *Requested Amendment* of this order. Pedestrian surveys were conducted for the area within the proposed amended micrositing corridor. In 2017 and 2018, the certificate holder conducted pedestrian surveys encompassing 1,138 acres within the previously approved and proposed micrositing corridor. In 2011, pedestrian surveys were conducted to inform the proposed Baseline Wind Project ASC, but that encompassed approximately 8,113 acres of the proposed micrositing corridor, which the certificate holder incorporates and relies upon. The field surveys were generally conducted within 500 feet of planned and alternate wind turbine locations, within 500 feet of the proposed 230 kV transmission line route (i.e., 1,000-foot corridor), and within 150 feet of roads and electrical collector lines (i.e., 300-foot corridor). Each pedestrian field survey used linear transects spaced between 20- and 30-meter (66- and 98-foot) intervals. Surveys were guided by the use of Trimble Geo 7x handheld Global Positioning System devices (or equivalent) loaded with facility GIS data to identify the survey areas.

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

Desktop survey identified 15 previous cultural resource investigations within 1-mile of the analysis area, 2 of which cross the site boundary. Thirty-two cultural resources were previously recorded within 1-mile of the analysis area, comprising 14 isolates, 10 archaeological sites, 5 built environment properties, 1 National Registry of Historic Places (NRHP)-eligible Historic Property of Religious and Cultural Significance to Indian Tribes (HPRCSIT), and two potentially NRHP-eligible HPRCSITs. Within the analysis area, 9 resources were identified including 1 archaeological site (35GM306), 5 built environment properties and 3 HPRCSITs.

The cartographic review identified that with the exception of several roads, no Donation Land Claims, homes, or other improvements were shown on any of the GLO maps pertaining to the analysis area. No information could be located concerning the other roads. The 1916 USGS Arlington, Oregon 1:125,000 quad map identified several roads and structures evident on Shutler Flats. Historical Metsker maps were also reviewed for the analysis area and identified

several ranches including the J. Bottemiller Ranch, L. W. Childs Ranch, and A. M. Cannon Ranch within the analysis area.

In addition to the 9 identified resources described above, the Department incorporates by reference the certificate holder's previous identification of the presumed alignment of the Oregon National Historic Trail (ONHT) as an archeological site within the analysis area, including two visually intact remnants and one historic site.[106]

National Registry of Historic Places – Eligibility Status

Archeological Site

The archeological site (35GM306) is a historic debris scatter within the analysis area, previously identified and evaluated by the certificate holder. The certificate holder recommended that the archeological site not be eligible for NRHP listing. In 2012, SHPO concurred with the recommendation. Therefore, because the site is not NRHP eligible or likely NRHP eligible under the standard, this archeological site and potential impacts are not further discussed in this order.

The ONHT is the emigrant route used from 1841 to about 1869 from Independence, Missouri to the Oregon Territory, with sections of the approximate route that intersect the previously approved site boundary. Most visible remnants of the ONHT have been destroyed by agriculture or overlain with modern transportation facilities. Two discontiguous, visually intact remnants were recorded within the Phase 1 site boundary, where wagon ruts may be seen. The ONHT is NRHP eligible. Therefore, potential impacts from proposed Phase 2 facility construction and operation are evaluated in this order.

Built Environment Properties

The 5 built environment properties include: Weatherford Barn; 68040 Highway 19 farmstead; 69180 Weatherford Road farmstead; 69064 Weatherford Road property; and 69398 Berthold Road farmstead.

The Weatherford Barn is a single structure located in an agricultural field north of Bottemiller Road and west of Oregon Highway 19. It was constructed in 1880 and is reportedly the oldest barn in the county. In a March 1, 2019 letter, SHPO concurred that the Weatherford Barn was eligible for NRHP listing based on the historic significance of its association with agriculture and the integrity of the property, including location, setting, design, materials, workmanship, feeling and association, to convey the historic significance. Therefore potential impacts from proposed Phase 2 facility construction and operation are evaluated in this order.

[106] MWPAPPDoc1. ASC Exhibit S.

The farmstead complex located at 68040 Highway 19 includes two residential buildings, a garage, a shed, three storage buildings, a collection of silos, and three Quonset huts. One residence dates to the early twentieth century and the other is a mid-century ranch-style house. In RFA4 Exhibit S, the certificate holder recommended that this built environment property not be NRHP eligible. In a March 1, 2019 comment letter, SHPO concurred that this farmstead complex is not NRHP-eligible. Therefore, because the site is not NRHP eligible or likely NRHP eligible under the standard, this built environment property and potential impacts are not further discussed in this order.

The farmstead complex located at 69180 Weatherford Road consists of six buildings and structures: a mobile home, three silos, a Quonset hut, and a small shed located on the west side of Weatherford Road. The county assessor provides dates of construction for the silos as 1926, 1931, and 1991, and the Quonset hut dates to 1971. In RFA4 Exhibit S, the certificate holder recommended that this built environment property not be NRHP eligible. In a March 1, 2019 comment letter, SHPO concurred that this farmstead complex is not NRHP-eligible. Therefore, because the site is not NRHP eligible or likely NRHP eligible under the standard, this built environment property and potential impacts are not further discussed in this order.

The property at 69064 Weatherford Road consists of a collection of farm buildings with no residence. The complex includes a barn, grain elevator, and associated grain silos, three outbuildings, and a chicken coop. County assessor records identify the barn and grain elevator as constructed in 1941, and the largest outbuilding, an equipment storage shed, as built in 1971. Two of the silos were constructed in 1936 and one in 1981. In RFA4 Exhibit S, the certificate holder recommended that this built environment property not be NRHP eligible. In a March 1, 2019 comment letter, SHPO concurred that this farmstead complex is not NRHP-eligible. Therefore, because the site is not NRHP eligible or likely NRHP eligible under the standard, this built environment property and potential impacts are not further discussed in this order.

The farmstead complex located at 69398 Berthold Road consists of a collection of farm buildings, including a residence, a detached garage, a grain elevator and silo, an outbuilding, a barn, and a shed. The property was originally documented in 2010 as a part of the Baseline surveys (Ragsdale et al., 2011). The form was updated in 2013; however, it was not submitted to SHPO. According to county assessor's records, the oldest resource on the property is a silo constructed in 1925. The residence reportedly dates to 1962, but appears older. The outbuildings date to the 1940s and 1950s. In RFA4 Exhibit S, the certificate holder recommended that this built environment property not be NRHP eligible. In a March 1, 2019 comment letter, SHPO indicated that because a sufficient comparative analysis of other agricultural properties in the region was not provided, the agency was unable to concur with the certificate holder's recommendation and recommended that the farmstead complex be considered likely NRHP-eligible. However, SHPO further clarified that proposed Phase 2 facility components would not have a significant adverse impact on the farmstead complex based on proposed Phase 2 facility component location and distance to the built environment property.

Historic Property of Religious and Cultural Significance to Indian Tribes

Tiqaxtiqax is a 56,573 acre HPRCSIT within the analysis area that includes contributing sites of shrub-steppe environments related to cultural practices deemed significant by the CTUIR. The district includes contributing sites related to the seasonal round of the CTUIR and is home to the First Foods gathering areas essential to both the culture and religion of CTUIR. It is where the people held ceremonies to welcome the early-season roots back, to thank both the Creator and the plants for returning, and serves as an essential part in upholding the cultural law of *tamanwit.* In August 2015, the United State Department of the Interior determined this HPRCSIT NRHP-eligible. As described in RFA4, the location and character of the HPRCSIT are not disclosed in this order.[107] However, potential impacts from proposed Phase 2 facility construction and operation to this property are evaluated in this order.

CTUIR identified two HPRCSIT's, *Alaɔála* and *Ulíkš,* within the analysis area that the CTUIR considers likely NHRP eligible.[108] The certificate holder describes that, as of July 2018, information about these two HPRSCIT's was not available in SHPO's OARRA database. The certificate holder, however, reviewed CTUIR's placename atlas *Čáw Pawá Láakni: They Are Not Forgotten* and confirmed that the two HPRCSIT's recommended by CTUIR as likely NRHP-eligible would overlap areas within the proposed Phase 2 site boundary, and were noted as staging areas and basecamps for root gathering. In a March 29, 2019 comment letter, CTUIR commented on *Alaɔála* and *Ulíkš* and describes that these HPRCSITs were seasonal camps used by CTUIR to access adjacent plant harvesting and hunting areas, and that the HPRCSITs are linked together, physically, by a network of trails. As described in RFA4, the location and character of the HPRCSITs are not disclosed in this order. However, potential impacts from proposed Phase 2 facility construction and operation to this property are evaluated in this order.

Potential Impacts to Historic and Cultural Resources; Archeological Sites

Potential impacts are evaluated for the resources described above as NRHP-listed or likely eligible for NRHP listing, including the ONHT intact remnants, the Weatherford Barn and 3 HPRCSITs within the analysis area. Potential impacts include direct and indirect impacts. Direct impacts could include temporary and permanent disturbance to the resource; indirect impacts could include impacts from facility noise and visibility to integrity of the resource – integrity aspects include location, setting, design, materials, workmanship, feeling, and association.[109]

Based on review of RFA4 Exhibit S, the certificate holder proposes to avoid direct impacts to ONHT intact remnants and the Weatherford Barn through facility design and not siting proposed Phase 2 facility components directly on or near these resources. Previously imposed conditions, Condition 46 and 47, require that the certificate holder impose a 200-foot buffer

[107] MWPAMD4. Request for Amendment 4 Exhibit S. 2019-04-05.
[108] MWPAMD4. RFA4 Tribal Gov Comment. CTUIR 2019-03-26.
[109] National Register Bulletin: How to Apply the National Register Criteria for Evaluation

and flagging for any historic, cultural or archeological resources; and, ensure that construction personnel avoid presumed alignments of the ONHT and not locate any facility components on visible remnants of the ONHT. The requirements of these conditions would continue to apply to proposed Phase 2 facility components and the historic and cultural resources identified in RFA4.

Impact Evaluation for the Weatherford Barn

Proposed Phase 2 facility components could result in impacts to the integrity aspects of the Weatherford Barn, including setting, feeling and association. As described above, SHPO confirmed that the Weatherford Barn currently retains integrity of location, design, setting, materials, and association. Based on the location of the Weatherford Barn, the closest proposed Phase 2 facility components to the resource would include the proposed solar array, located 300-feet south, and the proposed collector substation, located 550-feet east. In addition, the proposed solar array would occupy up to 1,189 acres and would be approximately 1-mile wide.[110]

Based on the proximity of proposed Phase 2 facility components and size of the area to be occupied by the proposed solar array, SHPO considers that the integrity aspects of the Weatherford Barn would be greatly altered by proposed Phase 2 facility components. Specifically, SHPO describes that the location and presence of proposed Phase 2 facility components would result in a significant adverse impact to the setting (physical environment of the property), feeling (historic sense of the property) and association (link with agriculture) of the Weatherford Barn.[111]

SHPO recommended three mitigation options the agency considered acceptable to reduce impacts below a level of significance, including a requirement that the certificate holder: conduct a reconnaissance level survey of barns in Gilliam County or neighboring counties; partner with a third-party to fund a barn rehabilitation grant for the community; or, partner with a local historic society to develop a historic barn exhibit. In RFA4 Exhibit S, the certificate holder accepts the recommended mitigation options and provides a draft Historical Resource Mitigation Plan (HRMP) provided as Attachment G of this order, which includes a proposed scope for each of the recommended mitigation options. The draft HRMP proposes an additional mitigation option of an alternative layout for the facility components within proximity to the Weatherford Barn – where, if agreed upon through consultation with SHPO and the Department, a setback restriction could also reduce potential adverse impacts below a level of significance. Based on SHPO's recommended mitigation and the certificate holders draft HRMP, the Department recommends Council amend Condition 47 as follows:

[110] MWPAMD4. RFA 4 Exhibit S. Attachment S-9.
[111] MWPAMD4. RFA Reviewing Agency Comment SHPO. 2019-03-01.

Recommended Amended Condition 47: Before beginning construction, the certificate holder shall:

(a) Label all identified historic, cultural or archeological resource sites on construction maps and drawings as "no entry" areas. If construction activities will occur within 200 feet of an identified site, the certificate holder shall flag a 30-meter no entry buffer around the site. 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 or to operational farmsteads. [Final Order on ASC]

(b) <u>Finalize the Phase 2 Historical Resource Mitigation Plan, provided in Attachment H of the Final Order on Request for Amendment 4, including selection of mitigation option and confirmation of implementation schedule. [AMD4]</u>

Impact Evaluation for HPRCSITs

Potential impacts from proposed Phase 2 facility components to the HPRCSITs described above could include direct and indirect impacts. While an impact assessment is typically provided by a certificate holder, because the 3 identified HPRCSITs are protected under Council's standard based on the historic and religious importance to the ongoing cultural identity of the CTUIR, the impact assessment was provided by CTUIR.[112]

Based on a review of proposed Phase 2 facility component locations compared to both the physical location and integrity aspects of *Alaɔála* and *Ulíkš,* on behalf of CTUIR, Archeologist Shawn Steinmetz stated that significant adverse impacts to *Alaɔála* and *Ulíkš* would occur. Based on the site boundaries of *Alaɔála* and *Ulíkš*, proposed Phase 2 facility components would result in direct physical impacts.[113]

Based on integrity aspects of *Alaɔála* and *Ulíkš*, as described above, CTUIR concluded that the proposed Phase 2 facility components would result in significant adverse impacts to its design, setting, feeling and association. Specifically, construction and operation of proposed Phase 2 facility components including roads, transmission line, and other energy facility infrastructure would generate noise and change the existing visual character of the surrounding area. CTUIR expressed that these potential noise and visual impacts would create an audible intrusion and constant disturbance that would forever impact the ongoing use, stories, traditions, and the belief system that values the two HPRCSITs.

During review of pRFA4, Teara Farrow Ferman Cultural Resources Protection Program – Program Manager commented on behalf of CTUIR and stated that proposed Phase 2 facility

[112] MWPAMD4 RFA4 Tribal Gov Comment Letter CTUIR 2019-03-26.

[113] MWPAMD4 RFA4 Tribal Gov Comment Letter CTUIR 2019-03-26. In a comment letter, Shawn Steinmetz with CTUIR describes that direct impacts would occur in the following location: T.1 S., R. 22 E., Sections 5, 6, 7, and 8; T.1 S., R. 21 E., Sections 1, 2, 11 and 12; T.1 N., R. 21 E., Sections 22, 25, 26, 27, 28, 34, 35, and 36; T.1 N., R. 20 E., Sections 1, 2, 3, 11 and 12.

components would result in adverse impacts to *Tiqaxtiqax*, the third HPRCSIT referenced above. Based on the site boundary of *Tiqaxtiqax*, which overlaps the previously approved site boundary but is outside of the proposed amended site boundary, impacts would be limited to the integrity aspects of the HPRCSIT, assumed to be similar to those identified by CTUIR for *Alaɔála* and *Ulíkš.*[114]

To reduce potential significant adverse impacts to the 3 HPRCSITs - *Alaɔála, Ulíkš and Tiqaxtiqax*, CTUIR recommends mitigation in the form of cultural monitoring during ground disturbing activities that would penetrate the ground at depths of 12 inches or greater. The CTUIR explains that use of a cultural resource monitor would assure the community that inadvertent discoveries of resources or remains of ancestors that used the HPRCSITs would be handled appropriately. Therefore, based on CTUIR's recommendations and to minimize potentially significant, adverse impacts to the three identified HPRCSITs, the Department recommends Council amend Condition 50 as follows:

Recommended Amended Condition 50: <u>During construction,</u> the certificate holder shall:

(a) Ensure that a qualified archeologist, as defined in OAR 736-051-0070, instructs construction personnel in the identification of cultural materials and avoidance of accidental damage to identified resource site.

(b) <u>Employ a qualified cultural resource monitor to conduct monitoring of ground disturbance at depths of 12 inches or greater. The qualifications of the selected cultural resources monitor shall be reviewed and approved by the Department, in consultation with the CTUIR Cultural Resources Protection Program. In the selection of the cultural resources monitor to be employed during construction, preference shall be given to citizens of the CTUIR. Ground disturbance at depths 12 inches or greater shall not occur without the presence of the approved cultural resources monitor. If any cultural resources are identified during monitoring activities, the steps outlined in the Inadvertent Discovery Plan, as provided in Attachment H of the Final Order on Amendment 4 should be followed. The certificate holder shall report to the Department in its semi-annual report a description of the ground disturbing activities that occurred during the reporting period, dates cultural monitoring occurred, and shall include copies of monitoring forms completed by the cultural resource monitor. [AMD4]</u>

Based upon the analysis presented above and subject to compliance with existing conditions and recommended amended conditions, the Department recommends that Council find that the proposed Phase 2 facility components would not be likely to result in significant adverse

[114] MWPAMD4. RFA4 Tribal Gov Comment CTUIR 2019-03-26. In a comment on RFA4, Shawn Steimetz describes that CTUIR and the certificate holder are currently negotiating additional mitigation for potential impacts to *Tiqaxtiqax* and therefore did not provide specific comments related to this HPRCSIT. Because Teara Farrow Ferman of CTUIR previously commented on potential adverse impacts to *Tiqaxtiqax* from proposed Phase 2 facility components, and because the referenced mitigation negotiations have not yet been executed, the Department incorporates the applicable analysis into the order for Council's review.

impacts to resources protected by the Council's Historic, Cultural and Archaeological Resources standard.

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, the Department recommends that the Council find that the facility, with proposed changes, complies with the Council's Historic, Cultural, and Archeological Resources standard.

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

> *(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*
>
> > *(a) Any special designation or management of the location;*
> > *(b) The degree of demand;*
> > *(c) Outstanding or unusual qualities;*
> > *(d) Availability or rareness;*
> > *(e) Irreplaceability or irretrievability of the opportunity.*
> > ***[115]

Findings of Fact

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

The certificate holder evaluates impacts to important recreational opportunities based on the potential of construction or operation of the facility, with proposed changes, to result in any of the following: direct or indirect loss of a recreational opportunity, excessive noise, increased traffic, and visual impacts of facility structures or plumes. In RFA4, the certificate holder

[115] The proposed facility is not a special criteria facility under OAR 345-0015-0310; therefore, OAR 345-022-0100(2) is not applicable.

provided information about recreational opportunities in Exhibit T. The analysis area for the Recreation standard is the area within and extending five miles from the site boundary.

To analyze RFA4 against this standard, the Council must first evaluate whether an identified recreational opportunity is important. The Council must then evaluate whether the design, construction or operation of the facility could adversely impact the identified important recreational opportunity. If the facility could adversely impact the resource, then the Council must consider the significance of the possible impact.

Recreational Opportunities within the Analysis Area

In accordance with OAR 345-001-0010(59)(d), and consistent with the study area boundary, the analysis area for recreational opportunities is the area within and extending 5 miles from the proposed amended site boundary. In the *Final Order on the ASC*, *Final Order on Amendment 1*, *Final Order on Amendment 2,* and *Final Order on Amendment 3,* Council found that the design, construction and operation of Phase 1 of the Montague facility, taking into account mitigation and conditions stated in the orders, were not likely to result in significant adverse impacts to

recreational opportunities in the analysis area. Within the analysis area, the certificate holder identified twenty-three recreational opportunities as presented in Table 8 below. Fourteen of the identified twenty-three recreational opportunities were previously identified and considered by Council, two of which were considered important.[116]

Table 8: Recreational Opportunities within the Analysis Area and Distance from Proposed Amended Site Boundary

Recreational Opportunity	Approximate Distance and Direction from the Proposed Amended Site Boundary	Considered Important (per OAR 345-022-0100)	Recreational opportunity previously evaluated by Council
Oregon National Historic Trail (ONHT)	Within the Proposed Amended Site Boundary	No	Yes
Horn Butte Wildlife Area[23]	0 miles	No	No
BLM-administered lands	0-5 miles	No	No
Rock Creek	<1 mile	No	No
ONHT Fourmile Canyon Interpretive Site	<1 mile	Yes	Yes
ONHT Historic Markers	<1 and 1 mile	No	Yes
Willow Creek	3 miles	No	No
Port of Arlington Park and Marina[2]	3 miles	No	Yes
Earl Snell Memorial Park	3 miles	No	Yes
Alkali Park	3 miles	No	Yes
City Park	3 miles	No	Yes
China Creek Golf Course	3 miles	No	Yes
Arlington State Park	3 miles	No	Yes
Blue Mountain Scenic Byway	3 miles	Yes	No
Roosevelt Park[1]	4 miles	No	Yes
John Day Wildlife Refuge	4 miles	Yes	No
Lewis and Clark National Historic Trail (LCNHT)	4 miles	No	Yes
John Day River	5 miles	Yes	No
Rock Creek Day Use Area	5 miles	No	No
John Day Hilderbrand State Park	5 miles	No	Yes

Table 8: Recreational Opportunities within the Analysis Area and Distance from Proposed Amended Site Boundary

Recreational Opportunity	Approximate Distance and Direction from the Proposed Amended Site Boundary	Considered Important (per OAR 345-022-0100)	Recreational opportunity previously evaluated by Council
Cottonwood Canyon State Park[3]	5 miles	Yes	No
Lewis and Clark Trail Scenic Byway[1]	5 miles	No	No
ONHT McDonald and John Day Crossing Interpretive Site[2]	5 miles	Yes	Yes

Notes:
1. These two recreational opportunities are located in Washington state
2. Both the Port of Arlington and the Horn Butte Wildlife Area were previously evaluated by Council in the *Final Order of the ASC*, however, their management plans have been revised since Council's 2010 findings, and are revisited in RFA4.
3. In the *Final Order on the ASC*, Council evaluated both the Horn Butte Wildlife Area and Cottonwood Canyon State Park as a protected area, but never as a recreational opportunity. The Horn Butte Wildlife Refuge was also evaluated as a scenic resource in the *Final Order of the ASC*.

As presented above in Table 8, *Recreational Opportunities within the Analysis Area and Distance from Proposed Amended Site Boundary,* fourteen of the identified recreational opportunities were previously evaluated by Council. In RFA4, the certificate holder identified ten recreational opportunities that were not previously evaluated by Council. Of the ten "new" recreational opportunities, the certificate holder determined that four, as listed below, should be considered important, per OAR 345-022-0100.

- John Day River
- Cottonwood Canyon State Park
- John Day Wildlife Refuge
- Blue Mountain Scenic Byway

The certificate holder determined that the following six "new" recreational opportunities, having not previously been evaluated by council, should not be considered important recreational opportunities;

- Horn Butte Wildlife Area
- BLM-administered lands
- Rock Creek
- Willow Creek
- Rock Creek Day Use Area

[116] The two recreational opportunities that Council found to be important, per OAR 345-022-0100, were the Oregon National Historic Trail (ONHT) McDonald and John Day Crossing interpretive site, and the ONHT Fourmile Canyon interpretive site.

- Lewis and Clark Trail Scenic Byway

The Department concurs with the certificate holder's determination, and recommends that Council not consider the six identified recreational opportunities listed above, to be considered important, per OAR 345-022-0100.

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

Potential Direct or Indirect Loss of Recreational Opportunity

Direct Loss

A direct loss to a recreational opportunity occurs when construction or operation of the facility, with proposed changes would impact a recreational opportunity by directly altering the resource so that it no longer exists in its current state. The facility, which is located entirely on private property, would not be located on or within any of the important recreational opportunities identified above. Therefore, the Department recommends that the Council find that the facility, with proposed changes, would not result in direct loss of any of the important recreational opportunities identified as important.

Indirect Loss

Similar to the assessment of direct loss, indirect loss would result if construction or operation of the facility, with proposed changes, would impact a recreational opportunity by indirectly altering the resource or some component of it. To evaluate indirect loss associated resulting from the construction and operation of RFA4, the Department considers potential noise, traffic and visual impacts to the above mentioned important recreational opportunities.

Potential Noise Impacts

The Council previously found that noise resulting from construction and operation of the facility would not be audible at the two important recreational opportunities within the analysis area of the Phase 1 facility. As explained in Exhibit T of RFA4, and as discussed below in Section III.Q.1. *Noise Control Regulation: OAR 340-035-0035*, noise levels associated with the construction of the facility, with proposed changes, would not affect the certificate holder's ability to comply with existing Site Certificate Conditions managing potential noise impacts. The nearest important recreational opportunity to the facility, with proposed changes, is the ONHT Fourmile Canyon interpretative site. In the Final Order on the ASC, Council found that based on the findings made, and the conditions imposed, the facility, as approved was not likely to result

in a significant adverse impact to any important recreational opportunity in the analysis area.[117] The interpretive site is closer to the Phase 1 site boundary, and as such, it is not expected that Phase 2 would substantially contribute an adverse impact to the resource. The next nearest recreational opportunity identified in the evaluation of RFA4 is the Blue Mountain Scenic Byway, a 145 mile byway, designated in 1997 by the Oregon Department of Transportation as an Oregon State Scenic Byway. The certificate holder explains that although there are many sites of interest and recreational opportunities along the 145 mile byway, none occur within the 11-mile portion of the byway that is within the analysis area.

Due to the linear nature of construction activities, noise levels would decrease based on distance due to attenuation (rate of 6 dBA per doubling of distance) as construction of access roads and wind turbines progress farther from noise sensitive receptor locations. Council previously imposed Condition 106 requiring that, during construction, combustion engine-powered equipment be equipped with exhaust mufflers; operation of noisiest construction equipment be restricted to daylight hours; and requires that the certificate holder establish a noise complaint response system, including a system for the certificate holder to receive and resolve noise complaints. Phase 2 construction activities would be required to comply with the requirements of Condition 106.

Potential Traffic Impacts

The construction and operation of the facility, with proposed changes, would generate traffic, and could potentially impact traffic safety within the analysis area. However, Council previously evaluated traffic safety of the approved facility in the Public Services section of the Final Order on the ASC, and imposed five conditions (Condition's 28, 73, 74, 81, and 42) to mitigate impacts on traffic safety from the facility, and determined that based on commitments made by the certificate holder, and subject to condition compliance, construction and operation of the facility is not likely to result in any significant adverse impacts on traffic safety.

In RFA4, the certificate holder states that the proposed construction transportation routes to be used for Phase 2, will be the same as those used to access the approved facility.[118] Furthermore, the certificate holder explains that the construction of Phase 2 facility components will not significantly change the level of traffic, transportation routes, or road conditions from what Council has previously evaluated and approved for the Phase 1 components.[119]

In the *Final Order on the ASC*, Council found that operation of the facility would not significantly increase traffic within the analysis area.[120] However, after evaluating the certificate holder's estimated construction vehicle trips, and proposed transportation routes (both a primary route

[117] MWPAPPDoc157-5 MWP Final Order. p.78
[118] MWPAMD4 Exhibit U, p.U-11
[119] MWPAMD4 Exhibit T, p.T-16
[120] MWPAPPDoc157-5 MWP Final Order, p.122

and two secondary routes), Council imposed Conditions 73 and 81, requiring the certificate holder to implement measures to reduce traffic impacts and limit truck traffic to designated and existing and improved road surfaces. The requirements of these conditions would continue to apply to proposed Phase 2 facility components.

Potential Visual Impacts

Proposed Phase 2 components, which could result in visual impacts at protected areas within the analysis area include: wind turbines with a maximum blade tip height of 597 feet; approximately 1,189 acres of permanent vegetation disturbance, which includes a solar array 15-feet in height; battery storage systems extending 20-feet in height; and 230 kV transmission line structures.

The certificate holder states that the ZVI analysis of Exhibit R demonstrates that Phase 2 facility components would not be visible from the two previously identified important recreational opportunities; the ONHT McDonald and the John Day Crossing interpretive site. Furthermore, the ZVI analysis indicates that the four important recreational opportunities identified (but not previously considered by Council) in RFA4 would be visible.[121] The Department notes that the Blue Mountain Scenic Byway, was not previously evaluated by Council as a recreational opportunity. Although portions of the scenic byway are located 3 miles east of the facility, the certificate holder indicates that Phase 2 components would only be visible from a portion of the byway less than a mile long, and 12 miles away from the nearest Phase 2 component. At 12 miles away, the visible Phase 2 components are not likely to result in a significant adverse impact to the recreational opportunities along the Blue Mountain Scenic Byway.

Conclusions of Law

Based on the foregoing recommended findings of fact, and subject to compliance with existing site certificate conditions, the Department recommends that the Council find that the facility, as amended, would comply with the Council's Recreation standard.

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

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1).*

[121] MWPAMD4 Exhibit R, Figures R-1, R-2, R-3, and R-4 2019-04-05

However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.
*****

Findings of Fact

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

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

Potential impacts to public and private service providers were evaluated based on assumptions for number of construction and operational workers, population shifts, and use of transportation routes. As described in RFA4, construction of proposed Phase 2 facility components is estimated to utilize up to 450 workers per day during peak construction activities and up to 200 workers per day on average, for up to 18 months. Operation of proposed Phase 2 facility components is estimated to utilize 10 to 30 workers.

Sewers and Sewage Treatment

Construction of proposed Phase 2 facility components would generate sanitary waste but would utilize onsite portable toilets and would not result in use of public or private sewers. The certificate holder describes that portable toilets would be pumped regularly and disposed of by a licensed contractor at a local treatment facility. The certificate holder does not estimate the quantity of sanitary waste generated during construction nor describe the existing capacity of public or private sewage treatment providers to support the evaluation of potential impacts, but relies on its third-party contractor for sanitary waste handling and disposal. While sewage treatment providers may experience increased throughput during construction of proposed Phase 2 facility components, the certificate holder is required to ensure its contractors obtain applicable permits and comply with applicable rules and regulations (Condition 28), including those necessary for sanitary waste disposal within the surrounding area. Therefore, based on compliance with existing conditions and because construction related activities would be short-term, the Department recommends Council find that potential construction-related impacts of

proposed Phase 2 facility components on the ability of private or public providers to provide sewage treatment would not be likely to result in significant adverse impacts.

Operation of proposed Phase 2 facility components would generate sanitary waste at the proposed O&M building. The proposed O&M building would be served by an onsite sewage disposal system, and would not result in use of public or private sewers. While not specifically addressed in RFA4, the Department assumes that the onsite sewage disposal system would be periodically pumped and transported to a sewage treatment facility. Given the relatively low number of estimated permanent workers associated with Phase 2, ranging from 10 to 30, the Department recommends Council find that potential operational impacts of Phase 2 on the ability of private or public providers to provide sewage treatment would not be likely to result in significant adverse impacts.

Water

Construction of proposed Phase 2 facility components would require up to approximately 36.8 million gallons of water total, or an estimated maximum of 120,000 gallons per day, for dust control and to maintain compaction on constructed access roads.[122] The certificate holder represents that construction-related water would either be purchased from the City of Arlington or obtained through a new or existing well and a third-party limited water use license. If construction-related water is obtained through a limited water use license obtained by a third-party contractor, potential impacts to private or public providers of water service would not occur.

To support review of potential impacts to public and private providers of water service, the certificate holder provides a 2018 letter from City of Arlington confirming sufficient capacity to provide up to 40 million gallons of water during construction. Based on the 2018 letter from City of Arlington, as provided in RFA4 Exhibit U, and potential use of an onsite well, the Department recommends Council find that construction of Phase 2 facility components would not be likely to result in significant adverse impacts on the ability of public or private providers of water to deliver services.

Operation of proposed Phase 2 facility components would require up to approximately 430,000 gallons of water per year for solar panel washing and up to 5,000 gallons per year to serve sanitary uses at the proposed Phase 2 O&M building. The certificate holder represents that solar panel washwater, if necessary, would either be purchased from the City of Arlington or obtained through a new or existing well and a third-party existing or new water right. Operational water use served by an onsite, permit-exempt well at the proposed Phase 2 O&M building and obtained through a new or existing water right would not result in impacts on the ability of public or private providers of water to deliver services.

[122] In RFA4 Exhibit U, the certificate holder describes that up to 36.8 million gallons of water total would be required during construction of both Phase 1 and Phase 2. However, because RFA4 is specific to proposed Phase 2 facility components, the Department references to Phase 2 only.

In the event solar panel washwater is purchased from the City of Arlington, the certificate holder provides a 2018 letter from City of Arlington confirming sufficient capacity to provide up to 500,000 gallons of water per year during operation. Based on the 2018 letter from City of Arlington, as provided in RFA4 Exhibit U, and potential water use under a new or existing water right, the Department recommends Council find that operation of proposed Phase 2 facility components would not be likely to result in significant adverse impacts on the ability of public or private providers of water to deliver services.

Stormwater Drainage

Construction and operation of proposed Phase 2 would not rely on public or private stormwater drainage infrastructure. Therefore, the Department recommends Council find that the construction and operation of proposed Phase 2 would not impact public and private providers of stormwater drainage.

Solid Waste Management

As explained in RFA4 Exhibit V, the types of solid waste and wastewater generated during Phase 2 facility construction, operation, and retirement and the procedures and practices used to handle these materials, would largely be similar to those identified in the Council's earlier findings on waste minimization.

In RFA4, the certificate holder represents that during operation, batteries associated with the battery storage system would be replaced every 7 years. The handling and replacement of batteries would follow guidelines in 49 Code of Federal Regulations (CFR) 173.185 Department of Transportation Pipeline and Hazardous Material Administration. 49 CFR 173.185 includes requirements for prevention of dangerous evolution of heat; prevention of short circuits; prevention of damage to terminals; and, prevention of contact with other batteries or conductive materials. Because the 49 CFR 173.185 guidelines are related to management of waste, and based on the certificate holder's representation, the Department recommends Council amend condition 112 to include both lithium-ion, and flow batteries in (e), and impose Condition 116, as represented above in Section III.B. Organizational Expertise.

Traffic Safety

As described in Section III.A. *General Standard of Review*, the certificate holder anticipates an 18 months construction schedule for Phase 2, however, the Department recommends Council grant construction commencement and completion deadlines based upon three and six years following the date of Council approval.

In RFA4, the certificate holder proclaims that as with any large construction project, there would be a considerable amount of truck traffic during the construction of Phase 2.[123] To evaluate potential traffic impacts within the Public Services analysis area during facility construction, peak daily trip generation is estimated at 180 roundtrips per day over an approximately 9-month period.

The Department does not expect the addition of an energy storage system to likely result in a significant adverse impact to traffic safety. The certificate holder notes that Code of Federal Regulations 49 CFR 173.185 pertains to Lithium Ion batteries by regulating the "dangerous evolution of heat," short circuits, damage to terminals, and battery contact with conductive materials. As such, the Department acknowledges the transportation of Lithium Ion batteries could impact traffic if not handled properly.

The Council previously imposed Conditions 71 and 75, which confines any improvements and upgrades that may be necessary during construction to existing state and county public road right-or-ways, and the repair of any damage to county roads caused by construction of the facility. Council also previously imposed Conditions 73 and 81, to mitigate traffic impacts from the construction and operation of the facility. Condition 73 requires the certificate holder to implement measures to reduce traffic impacts during construction of the facility, whereas Condition 81 requires the certificate holder to avoid soil compaction, to the extent practicable, by limiting truck traffic to improved road surfaces. The Department recommends updates to Condition 75 to clarify the process for maintaining county roads, and for repairing county roads if the Phase 2 facility construction is determined to have caused unusual damage or wear.

> **Recommended Amended Condition 75**
> The certificate holder shall cooperate with the Gilliam County Road Department ~~and with the Morrow 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. <u>Submittal to the Department of an executed Road Use Agreement with Gilliam County shall constitute evidence of compliance with this condition.</u> 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. If required by ~~Morrow County or~~ Gilliam County, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility. <u>If construction of a phase of the facility will utilize county roads in counties other than Gilliam County, the certificate holder shall coordinate with the Department and the respective county road departments regarding the implementation of a similar Road Use Agreement. [AMD4]</u>

The risks associated with the transportation of components of the battery storage system would be minimized by requiring the transportation of batteries to and from the facility, be performed by a licensed waste handler. In Exhibit V, the certificate holder indicates that both

[123] MWPAMD4 Exhibit U, p.U-6 2019-04-05

battery technologies (Lithium Ion and Flow) will produce incidental waste from repair or replacement, and that the battery components will be recycled or disposed of at a permitted facility throughout operations and facility retirement.[124] As presented in Section III.B., *Organizational Expertise*, Condition 116 requires the certificate holder to provide evidence that the transportation and disposal of battery and battery waste complies with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185, prior to and during construction.

The Department recommends that the Council find that the facility, as amended, would not present a significant adverse impact to traffic, based on the certificate holder's compliance with preexisting conditions, the proposed amended condition, and with 49 CFR 173.185.

Air Traffic

Within the Public Services analysis area, the Arlington Municipal Airport, operated by the city of Arlington in Gilliam County, is the only public airport providing access for general aviation. The airport is located approximately 8.5 miles from the Phase 2 facility components, and as such, it is not expected that wind turbines or other facility components would interfere with airport operations. In Exhibit R, *Scenic Resources*, the certificate holder explains that in accordance with FAA Interim Policy for review of solar energy systems projects on federally obligated airports (78 Federal Register [FR] 63276), a glare analysis was conducted for the flight path of the Arlington Municipal Airport. The glare analysis holder included their glare analysis in Exhibit R of RFA4 as Attachment R-2, which concludes that the solar array is unlikely to cause a significant glare issue to the flight pattern into or out of the Arlington Municipal Airport.

Police Protection

Police services for the facility site would be provided by the Gilliam County Sheriff's Office. If Phase 2 were to be constructed, and depending on the Design Scenario chosen, potential impacts to police protection would be the same, if not less than those previously analyzed in the *Final Order on the ASC*, *Final Order on Amendment 1, Final Order on Amendment 2, and Final Order on Amendment 3*. The certificate holder explains in RFA4 that because Phase 2 constitutes only half of the originally approved facility, the maximum number of people onsite during peak months may be lower than previously estimated. Furthermore, though unlikely, if construction activities of Phase 1 and Phase 2 were to overlap, the total maximum of people onsite at a given time would not exceed the estimates previously analyzed.

Council previously imposed Condition 78 requiring the certificate holder to both provide onsite security during construction and operation of the facility, and establish and maintain communication with the local law enforcement personnel. Although the certificate holder indicates that the requirements of Condition 78 would continue to apply to the proposed Phase 2, the Department recommends that the condition be amended to remove the requirements of

[124] MWPAMD4 Exhibit V, p. V-2

on-site security during facility operation. As required by Condition 77, the Health and Safety Plan will include important telephone numbers and the location of on-site fire extinguishers and nearby hospitals. The Department recommends that Condition 77 be amended to include the location of the Gilliam County Sheriff's Office and the office locations of the backup law enforcement services (Oregon State Police Eastern Region, with offices in Arlington, Condon, Pendleton, and Milton-Freewater). As represented in Attachment U-1 of RFA4 Exhibit U, the Gilliam County Sheriff's Office commented that the area in which the proposed Phase 2 is to be developed, is in a relatively low crime area of their County. As such, the Sheriff's office indicates that they will respond appropriately, and as necessary to all complaints that come from the facility. As discussed in the below section under Fire Protection, the Department recommends amending the below condition to specify an applicant representation of developing a fire contingency plan as well as include an applicant proposal of inviting local fire departments to train in tower rescues. The Department recommends that the Council make the following changes to Conditions 77 and 78:

Recommended Amended Condition 77:
During operation of the facility, the certificate holder shall develop and implement a site health and safety plan that informs employees and others on-site about first aid techniques and what to do in case of an emergency, including a contingency plan in a fire emergency, and that includes important telephone numbers and the locations of on-site fire extinguishers, ~~and~~ nearby hospitals, Gilliam County Sheriff's Office and the office locations of the backup law enforcement services. The certificate holder shall ensure that operations personnel are trained and equipped for tower rescue. If the certificate holder conducts an annual emergency drill or performs tower rescue training at the facility, the North Gilliam County Rural Fire Protection District and the Arlington Fire Department will be invited to observe. [AMD4]

Recommended Amended Condition 78:

(a) During construction ~~and operation~~ of the facility, the certificate holder shall provide ~~for~~ on-site security within the facility site boundary, and shall establish good communications between on-site security personnel and the Gilliam County Sheriff's Office by establishing a communication protocol between the security personnel and the Sherriff's office. The communication protocol shall be sent to the Department prior to construction.

(b) 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. The list shall also be sent to the Department. [AMD4]

Fire Protection

Construction and operation of the facility, including the proposed changes in Phase 2, may present a risk of ground fire. The risk of fire from the Phase 2 components, and the potential to impact fire prevention service providers, is primarily from the accidental ignition of a grass fire within the analysis area. The ground cover under the solar array would consist of mowed

vegetative cover consistent with the adjacent Category 6 habitat and adjacent agricultural land uses. However, the certificate holder maintains that the risk of fire associated with the solar array components is not substantially different from the fire risks associated with the construction and operation of wind facilities.

In RFA4, the certificate holder describes that the presence of a battery storage system may pose an additional threat of igniting a grass fire within the analysis area, however, this threat would be minimized by existing and additional mitigation measures. The applicant describes that the battery systems are designed to minimize the potential for fires to spread between battery modules from external fires and the enclosures have external fire protection to contain the heat and flames if an incident occurs internally. In the unlikely event that there is a fire ignited within a battery storage container, gas agents, such as carbon dioxide, may be used to reduce or mitigate flammability in the battery enclosure until ventilation or cooling strategies, or both, will be implemented.

To address applicant representations of mitigation measures to reduce any potential impact on fire service providers, the Department recommends Council add Conditions 116 and 118, and amend Condition 77. Condition 116 addresses the transportation and disposal of the battery facilities and Condition 118 outlines that the certificate holder evidence its insurance coverage for events, including fires. The Department also recommends the Council amend Condition 77, discussed above in Police Protection, to specify that the operational site health and safety plan that informs employees what to do in case of an emergency, including a contingency plan in a fire emergency. The amended Condition 77 also stipulates that the certificate holder conducts an annual emergency drill or performs tower rescue training at the facility, the North Gilliam County Rural Fire Protection District and the Arlington Fire Department will be invited to observe.

The Department recommends that the Council find that the facility, as amended, would not present a significant adverse impact to fire protection service.

Housing, Schools, and Healthcare

The Department does not expect construction or operation of proposed Phase 2 facility components to result in a significant adverse impact to providers of housing, school, or healthcare. The certificate holder states that approximately 30 percent of the construction workers are expected to be local workers from Gilliam County.

Based on the information provided by the certificate holder, and subject to compliance with the existing and recommended site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, are not likely to result in significant adverse impacts to the ability of public and private providers within the analysis area to provide the identified services.

Conclusions of Law

Based on the foregoing analysis, and subject to the existing and amended conditions in the site certificate, the Department recommends that the Council find that the facility continues to comply with the Council's Public Services standard.

III.N. 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.*
> *****

Findings of Fact

The Waste Minimization Standard requires the Council to find that the Certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated would be managed to minimally impact surrounding and adjacent areas. Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind facility without making findings regarding the Waste Minimization standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

Solid Waste

The construction of each of the three proposed Phase 2 Design Scenarios would generate solid waste. While the certificate holder explains that the types of solid waste generated from Phase 2 during construction and operation would be largely similar to the types of solid waste that Council previous made findings on, the proposed solar array and battery storage system would introduce new materials into the facility, thus resulting in the introduction of new types of waste during construction.

As explained in RFA 4 Exhibit G, Phase 2 construction materials would include rock, gravel, water, concrete, steel, and assorted electrical equipment. The certificate holder claims that construction waste could include hazardous materials, including unused solvents; vehicle and equipment fluids and components (e.g., used oil, used hydraulic fluids, spent fluids, oily rags, and spent lead acid or nickel-cadmium batteries).

In Exhibit U of RFA4, the certificate holder represents that the construction of Phase 2 would not change the type and quantity of onsite waste generated during construction and operation, and Montague would still able to use the adjacent Columbia Ridge Landfill for disposed of solid wastes. During facility operation, the battery storage system may generate incidental waste during repair or replacement of electrical equipment, and periodic replacement of the batteries (every 6-7 years for lithium-ion modules, and every 20 years for flow batteries). The certificate holder explains that the use of a battery storage system will introduce new industrial materials, and if a lithium-ion system is selected (rather than a flow battery), the new industrial materials introduced may include hazardous materials. Furthermore, Exhibit G of RFA 4 states that regardless of type of battery storage system (lithium-ion or flow), the batteries will have integrated safety systems that monitor battery performance, detect malfunctions, and implement response measures. As previously mentioned, both battery systems, would require replacement during facility operation. When the battery modules require replacement, the facility operator will disconnect and de-energize the battery system prior to removal, and package the batteries for transport to a licensed disposal facility where they will either be recycled or properly disposed of. In Exhibit V of RFA 4, the certificate holder identifies Waste Management's Columbia Ridge Landfill as a licensed landfill that accepts municipal solid waste, industrial wastes, and special wastes. The Waste Management Chemical Waste Management facility on Cedar Springs Lane (near Arlington) is a licensed facility capable of providing industrial and hazardous waste services for Montague Phase 2.

Council previously imposed Conditions 111 and 112 requiring that, during construction and operation, the certificate holder develop and implement a solid waste management plan. In addition to the previously imposed conditions, Condition 116 as described in Section III.B *Organizational Expertise* of this order, would minimize potential health and safety impacts during onsite handling and transport of battery and battery waste during facility construction and operation.

Wastewater

The construction of all three proposed Phase 2 Design Scenarios would generate minor quantities of wastewater. The certificate holder asserts the only wastewater expected to be generated during construction would result from concrete washouts and sewage collected in portable toilets. The certificate holder explains in Exhibit V that the rinse water from concrete delivery truck washout will be handled in accordance with a prior agreement with DEQ, and construction of the Facility will be subject to the NPDES permit and its associated erosion and

sediment control plan.[125] Portable toilets would be managed by a third-party contractor in accordance with standard procedures.

In the *Final Order of the ASC*, Council imposed Condition 80, which requires the certificate holder to conduct construction activities in accordance with a NPDES 1200-C Stormwater permit, ensuring appropriate on-site handling of Stormwater and measures to reduce erosion. The NPDES 1200-C permit requires the development and implementation of an erosion and sediment control plan (ESCP), including BMPs for controlling erosion during construction. The certificate holder maintains an existing National Pollutant Discharge Elimination System 1200-C (NPDES 1200-C) construction permit and its associated erosion and sediment control plan.

During operations, wastewater would be primarily generated from solar panel washing, and sanitation at the O&M building. If the solar array were to be constructed, periodic washing of the solar modules may occur. The certificate holder states that solar array may be washed twice annually, and that the washwater used would not be heated or include detergents, and would not be expected to cause an impact to soils. As discussed above in Section III.D. *Soil Protection*, any washwater released to the ground would be allowed to evaporate and infiltrate. If equipment cleaning (including solar array washing) during facility operations becomes necessary, the facility's third-party contractor would need to obtain a Department of Environmental Quality (DEQ) General Water Pollution Control Facilities Permit (WPCF 1700-B) for washwater discharge of equipment cleaning. The WPCF-1700-B permit covers equipment cleaning activities that discharge washwater by means of evaporation, seepage, or irrigation, including both fixed and mobile washing operations. To accommodate the integration of new technology and components previously unevaluated by Council (solar array and battery storage), and to ensure compliance with WPCF 1700-B requirements, the Department recommends that Council amend Condition 87 as follows:

Recommended Amended Condition 87:

i. During facility operation, if blade-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.

ii. <u>During facility operation, if solar array washing becomes necessary, the certificate holder shall provide to the Department a copy of the Oregon Department of Environmental Quality a WPCF 1700-B permit to the certificate holder's third-party contractor.</u>

[125] In Exhibit V of the ASC, the certificate holder explains that the method of concrete water washout management, of which DEQ was consulted and approved, includes washing concrete truck chutes at each foundation site to prevent the concrete from hardening within the chutes. When washed, the resulting concrete washwater would be washed out, and into a dedicated concrete washout area located at each completed turbine foundation (constructed and located in a corner of the foundation excavation. The Soil used to construct the washout area berms would be buried along with waste concrete solids, as part of the turbine foundation backfill.

As proposed, amended Conditions 29 and 87 would apply to the facility if a WPCF 1700-B permit is determined to be necessary for Phase 2 facility operations. As discussed in the Section III.B Organizational Expertise section of this order, amended Condition 29 would, require the certificate holder to provide the Department copies of all obtained third party permits, and provide copies of compliance recordkeeping as required by third-party permits in semi-annual reports.

Consistent with previously imposed Condition 110, the onsite septic system at the Phase 2 O&M building will have a discharge capacity of less than 2,500 gallons per day, and would be licensed and constructed in accordance with state law. The certificate holder clarifies that Phase 1 operations will utilize the existing Leaning Juniper IIB (LJIIb) O&M building, as approved by the Department on May 22, 2017, in the Change Request 2 Department Determination.[126] The certificate holder will abide by the terms and conditions of the LJIIb Site Certificate, when using the O&M building, including LJIIb site certificate condition 97, which mirrors the existing Montague Condition 110, limiting the discharge capacity of the O&M building to 2,500 gallons per day.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0120(2), the Department recommends that the Council include the conditions listed above in the site certificate to address the Council's Waste Minimization Standard.

III.O. Division 23 Standards

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

III.P. Division 24 Standards

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

III.P.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:

[126] MWPOPSDoc85 Change Request 2 (O&M LJIIb) Determination Letter 2017-05-22, p. 4.

(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.

Findings of Fact

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

The Council addressed the Public Health and Safety standard for Wind Facilities in the *Final Order on the ASC*, *Final Order on Amendment 1*, *Final Order on Amendment 2,* and *Final Order on Amendment 3*. The Council imposed several conditions in the *Final Order on the Application* and found that the certificate holder could design, construct, and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further found 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.

In RFA4, the certificate holder affirms that the wind energy facility components will be substantially similar to those previously approved by the Council and that the larger turbine dimensions proposed would not affect Montague's ability to comply with the previously approved site certificate conditions. The proposed larger turbines would increase the maximum blade tip height from 492 feet (150 meters) to 597 feet (182 meters).

The *Final Order on the ASC* explained that Condition 27, specifically the requirements limiting the maximum blade tip height, was imposed to satisfy the requirements of the Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010). Therefore, the certificate holder explains in RFA4 that the installation of larger turbines will not impact Montague's ability to exclude members of the public from close proximity to the turbine blades and electrical equipment, and to comply with the Council's Cumulative Effects Standard for Wind Energy Facilities (*cumulative effects standard for wind facilities is discussed in Section III.P.2 of this DPO*). As presented in Section III.A. *General Standard of Review*, Condition 27 requires that the certificate holder design, construct, operate, and retire the facility substantially as described in the site certificate.

Condition 42 establishes setback requirements for turbines, including a setback distance of at least 1,320 feet from residences and 110 percent of maximum blade tip height (656.7 feet for the tallest, proposed turbine) from public roads. This condition will continue to apply to Phase 2.

The Department recommends that Council finds that the certificate holder continues to have the ability to design, construct, and operate the facility, as amended, to exclude members of the public from close proximity to the turbine blades and electrical equipment.

Potential Public Health and Safety Impacts from Proximity to Turbine Blades and Electrical Equipment

The Department relies upon the knowledge, experience, and input of the Oregon Department of Aviation (ODA) when assessing a wind facility's impacts to navigable airspace. In its comment letter, ODA determined that the they do not object with conditions to the construction described in [RFA4]…and that their determination was with respect to the safe and efficient use of the navigable airspace by aircraft and to the safety of persons and property on the ground.[127]

For aviation safety, ODA recommended that marking and lighting be installed and maintained in accordance with FAA Advisory Circular AC70/7460-1L. In the *Final Order on the ASC*, Council imposed condition 104(a), which requires the certificate holder to use the minimum turbine tower lighting required or recommended by the Federal Aviation Administration (FAA).

The facility, with proposed changes, would be located entirely on private property. This would restrict public access to turbine and other facility component locations, including the battery storage systems. To exclude members of the public from close proximity to the facility and electrical equipment, including substations, Council adopted site certificate Condition 69. Site certificate Condition 69 safeguards against public entry to areas where there is electrical equipment by requiring the certificate holder to install fencing and locks. To ensure that the access by the public to the additional electrical requirement associated with the battery storage systems and the solar array, the Department recommends that Council amend Condition 69, to ensure that both the battery storage system and solar array are enclosed in facing and protected with locks.

> **Recommended Amended Condition 69:**
> To protect the public from electrical hazards, the certificate holder shall enclose the facility substations<u>, solar array, and battery storage systems</u> with appropriate fencing and locked gates. [<u>AMD4</u>]

Condition 64 requires the certificate holder to submit a Notice of Proposed Construction or Alteration to the FAA and to the Oregon Department of Aviation for each turbine location when the final design configuration of the facility is known. Because the FAA and ODA determinations

[127] MWPAMD4Doc ODA Determination Letter 2018-11-16

are valid for 18 months, and Phase 2 construction may not be complete by the time the determination expires (18 months after determination was issued), the certificate holder may be obligated to renew their determinations. As such, the Department recommends that Council amend Condition 64 to clarify that hazard determinations from the FAA and ODA be maintained throughout the construction of Phase 2.

Recommended Amended Condition 64:

Before beginning construction of:

i. Phase 1 the certificate holder shall,…

ii. Phase 2, 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 to determine if the structure(s) are a hazard to air navigation and aviation safety. The certificate holder shall promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation. The FAA and ODA evaluation and determinations are valid for 18 months (per OAR 738-070-0180), once issued. The certificate holder shall maintain current hazard determinations on file commensurate with construction timelines. [AMD4]

Potential impacts from structural failure of the tower or blades and safety devices and testing procedures to warn of impending failure

In the *Final Order on the ASC*, Council imposed Condition 27, specifying construction requirements for the approved facility. The requirements included a limit to the minimum above-ground blade tip clearance, total number of turbines at the facility, and maximum blade tip height restrictions, in order to satisfy the requirements of the Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010). As mentioned above in III.A. *General Standard of Review*, the Department recommends that Council amend Condition 27 to incorporate specific construction requirements for Phase 2 components. Condition 58 requires that the certificate holder 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.

As mentioned above in III.E. *Land Use*, existing Condition 42 establishes setback requirements for turbines, including a setback distance of at least 1,320 feet from residences and 110 percent of maximum blade tip height (656.7 feet for the tallest, proposed turbine) from public roads. The requirements of this condition will continue to apply to Phase 2.

Based on the forgoing analysis, and subject to compliance with the existing and recommended modified condition, the Department recommends the Council find that the certificate holder can design, construct and operate the facility, with proposed changes, to exclude members of the

public from the close proximity to the turbine blades and electrical equipment. Additionally, based on the previous analysis and conditions within the site certificate, the Department recommends the Council find that the certificate holder can continue 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.

Conclusions of Law

Based on the reasoning above, and subject to compliance with the existing and amended Public Health and Safety standard conditions, the Department recommends that Council find that the facility, as amended, would continue to comply with the Council's Public Health and Safety standards for wind energy facilities.

III.P.2. Cumulative Effects Standard for Wind Energy Facilities [OAR 345-024-0015]

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

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

Findings of Fact

The Wind Energy Facility Cumulative Effects standard requires the certificate holder to use practicable measures in designing and constructing a facility to reduce the cumulative adverse environmental effects in the vicinity. The standard does not require the Council to find that the facility would have no cumulative environmental impacts. Instead, the Council must find that the applicant (certificate holder) is able to use "practicable measures" in the design and construction of the facility to reduce the cumulative effects.

The Council addressed the Cumulative Effects standard for wind facilities in the *Final Order on the ASC*, *Final Order on Amendment 1*, *Final Order on Amendment 2*, and *Final Order on*

Amendment 3 and found that the proposed design, construction, and operation of the facility would minimize cumulative adverse environmental effects in the vicinity through compliance with the requirements of the Council's Siting Standards for Wind Energy Facilities. 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.

The facility, with proposed changes included in RFA4 would 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 facility.

Potential cumulative adverse environmental effects resulting from the construction and operation of the facility, with proposed changes, from access roads, transmission lines and substations, lighting, visual features, and wildlife protection are discussed below.

Access Roads

OAR 345-024-0015(1) encourages the use of existing roads for facility site access, minimizing the amount of land used for new roads, and locating new roads in such a manner that reduces adverse environmental impacts.

As approved, the Montague Facility is to include up to approximately 71 miles of new access roads. The certificate holder explains that the construction and operation of Phase 1 would require approximately 32.2 miles of new access roads, and proposes that Phase 2 would require the construction of up to approximately 21.5 miles of new access roads, with a combined total for Phase 1 and Phase 2 access roads of 53.7 miles. The combined total as proposed, would require approximately 17. 3 miles less than what was originally approved in the *Final Order on the ASC*. The certificate holder relies on the analysis conducted in the *Final Order on the ASC*, *Final Order on Amendment 1*, *Final Order on Amendment 2*, and the *Final Order on Amendment 3* in that, the facility would be located entirely on private property. Subject to compliance with existing site certificate conditions, the Department recommends that the Council find that the certificate holder continues to demonstrate that it can reduce cumulative adverse environmental effects in the vicinity by designing the components of the facility, with proposed changes, to minimize the adverse impacts of access roads.

Transmission Lines and Substations

OAR 345-024-0015(2) and (3) encourages wind facilities to utilize underground transmission lines, combine transmission line routes and minimize the number of new substations.

Council previously approved up to 19 miles of aboveground, single circuit 230-kV transmission line in the Final Order on the ASC. As described in RFA4, the Departments determination on Change request 3 (which rerouted the Phase 1 transmission line to avoid Washington Ground

Squirrel (WGS) Category 1 habitat), approved for a reduction in total length of the 230-kV line from 19 miles to 10.8 miles. For Phase 2, the certificate holder proposes to construct an additional 3.0 miles of 230-kV line to connect the proposed Phase 2 substation to the approved Phase 1 substation.[128] The width of both the approved Phase 1 transmission line corridor and the proposed Phase 2 transmission line corridor is ½ mile, or ¼ mile per side of the transmission line, consistent with the OAR 345-001-0010(13) definition of "corridor."

In the final order on the ASC, Council imposed Condition 89, which addressed reasonable steps to reduce or manage human exposure to electric and magnetic fields. Some of the steps include a 200 foot construction set back requirement from any residence or other occupied structure, measured from the centerline of a proposed transmission line. 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.

Subject to compliance with existing site certificate conditions, the Department recommends that the Council find that the certificate holder continues to demonstrate that it can reduce cumulative adverse environmental effects in the vicinitry by designing the components of the facility, with proposed changes, to minimize the adverse impacts of transmission lines and substations.

Wildlife Protection

As provided in Sections III.H, Fish and Wildlife Habitat and III.I, Threatened and Endangered Species of this order, the wind turbines, solar array, and battery storage systems would be located within the proposed micrositing corridor. These facility components would be constructed in predominantly Category 6 habitat and would be subject to the existing site certificate conditions.

Visual Features

Exhibit R in the RFA4, and Section III.J., *Scenic Resources* of this order provide a more detailed discussion of visual impacts, mitigation measures, and existing site certificate conditions to minimize the visual impacts of the facility, with proposed changes. Per Condition 102, the certificate holder is required to uniformly paint turbine towers, nacelles, and rotors in a neutral white color; paint the substation structures in a low-reflectivity neutral color to blend with the surrounding landscape;

RFA4 describes the battery storage building enclosure footprint as approximately 467 feet in length by 600 feet in width (100 MW). Additionally, RFA4 Section 3.2 states that the battery storage system would be 20 feet in height and centrally located within the proposed amended

[128] In Exhibit DD of RFA4, the certificate holder notes that the development of Phase 2 would not increase the number of collector substations approved for the Montague Wind facility. In the *Final Order of the ASC*, Council approved the construction of up to two substations. In RFA4, the certificate holder proposes to construct one substation per development phase of the facility (Phase 1 and Phase 2).

site boundary area, therefore, there visual impacts from the battery storage system would be unlikely.

Lighting

Other than lighting on structures subject to the requirements of the Federal Aviation Administration or the Oregon Department of Aviation site certificate, Condition 104 reduces the visual impacts associated with lighting facility structures, which would include the battery storage systems. In Section III.J. *Scenic Resources* of this order, the Department recommends modifying this condition to add the battery storage systems.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the site certificate conditions, the Council finds that the facility, with proposed changes, would comply with the Council's Cumulative Effects Standards for Wind Energy Facilities.

III.P.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.*

Findings of Fact

The Siting Standards for Transmission Lines address issues associated with alternating current electric fields and induced currents generated by high-voltage transmission lines. OAR 345-024-0090(1) sets a limit for electric fields from transmission lines of not more than 9 kV per meter at one meter above the ground surface in areas that are accessible to the public. Section (2) requires implementation of measures to reduce the risk of induced current.

Electric Fields

Electric fields around transmission lines are produced by the presence of an electric charge, measured as voltage, on the energized conductor. Electric field strength is directly proportional to the line's voltage; increased voltage produces a stronger electric field. In the *Final Order on the ASC, Final Order on Amendment 1, Final Order on Amendment 2, and Final Order on Amendment 3*, the Council found that the certificate holder could design, construct, and

operate the proposed transmission lines so that alternating current electric fields do not exceed 9kV per meter at one meter above the ground surface in areas accessible to the public.

In Exhibit AA of RFA4, the certificate holder modeled electric fields, and magnetic fields within the boundaries of the proposed transmission line corridor and micrositing corridor. The model utilizes a methodology developed by the Bonneville Power Administration and the EMF estimates are computed for a height of 1 meter aboveground. The outputs used for calculating the EMF strengths are assumed to be typical peak-load outputs from the generators and are therefore higher than the nominal outputs. As shown in Figures AA-6, AA-8, AA-10 and AA-12 of Exhibit AA, the maximum modeled electric fields modeled for the proposed overhead 230-kV transmission line and 34.5-kV collector lines is approximately 2.7 kV/m. With a modeled maximum of 2.7 kV/m, the proposed transmission and collector lines would remain below the 9-kV per meter threshold set forth in OAR 345-024-0090(1). Therefore, based on the certificate holder's modeling, the Council finds that the proposed overhead 230-kV transmission line and the 34.5-kV overhead collector lines would not exceed 9-kV per meter at one meter above ground level.

Induced Voltage and Current

In the *Final Order on the ASC, Final Order on Amendment 1, Final Order on Amendment 2, and Final Order on Amendment 3*, the Council found that the certificate holder could construct, and operate the proposed transmission lines so that induced currents resulting from the transmission lines would be as low as reasonably achievable. Council adopted Condition 17 into the site certificate, which reflected the requirements of Mandatory Condition OAR 345-0027-0023(4). Mandatory Condition OAR 345-0027-0023(4) required the certificate holder to both; (1) design, construct and operate transmission lines in accordance with requirements of the National Electrical Safety Code, and (2) develop and implement a program during operations to ensure structures that could become inadvertently charged are grounded or bonded throughout the life of the facility. In subsequent amendments to the site certificate, Condition 17 has been amended to reflect current requirements of the mandatory condition. As presented in Exhibit AA of RFA4, the certificate holder describes that induced currents from the proposed 34.5 kV interconnection transmission line would be as low as reasonably achievable.

Because the language from Condition 17 emanates from site-specific conditions contained at Oregon Administrative Rule 345-025-0010(4), and references requirements of the National Electric Safety Code (NESC) as approved on June 3, 2011, which are outdated, the Department proposes to administratively remove Condition 17 from the site certificate. The most current version of the NESC standards was published in 2017. Additionally, OAR 345-025-0010 states that "The Council *may* include the following conditions, as appropriate, in the site certificate…" (emphasis added). As such, this is not a mandatory condition, and there is no reason to require the certificate holder to demonstrate compliance with an outdated 2011 NESC standard as well as the 2017 NESC standard. In summary, given that the certificate holder must comply with

current NESC standards during facility construction and operation, the Department recommends the removal of Condition 17 below:

Recommended Deleted Condition 17: [DELETED] ~~OAR 35-027-0023(4):~~

~~(a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code approved on June 3, 2011, by the American National Standards Institute, and~~

~~(b) The certificate holder shall 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.~~ [AMD3, AMD4]

Conclusions of Law

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

III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the facility, with proposed changes, 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 water rights.

III.Q.1. Noise Control Regulation: OAR 340-035-0035

(1) Standards and Regulations:

*****

(b) New Noise Sources:

*****

(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or

L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

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

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

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with windspeed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

(IV) For purposes of determining whether a proposed wind energy facility would satisfy the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are predicted assuming that all of the proposed wind facility's turbines are operating between cut-in speed and the wind speed corresponding to the maximum sound power level established by IEC 61400-11 (version 2002-12). These predictions must be compared to the highest of either the

assumed ambient noise level of 26 dBA or to the actual ambient background L10 and L50 noise level, if measured. The facility complies with the noise ambient background standard if this comparison shows that the increase in noise is not more than 10 dBA over this entire range of wind speeds.

(V) For purposes of determining whether an operating wind energy facility complies with the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are measured when the facility's nearest wind turbine is operating over the entire range of wind speeds between cut-in speed and the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled. The facility complies with the noise ambient background standard if the increase in noise over either the assumed ambient noise level of 26 dBA or to the actual ambient background L10 and L50 noise level, if measured, is not more than 10 dBA over this entire range of wind speeds.

(VI) For purposes of determining whether a proposed wind energy facility would satisfy the Table 8 standards, noise levels at the appropriate measurement point are predicted by using the turbine's maximum sound power level following procedures established by IEC 61400-11 (version 2002-12), and assuming that all of the proposed wind facility's turbines are operating at the maximum sound power level.

(VII) For purposes of determining whether an operating wind energy facility satisfies the Table 8 standards, noise generated by the energy facility is measured at the appropriate measurement point when the facility's nearest wind turbine is operating at the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled.

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<u>Findings of Fact</u>

OAR 340-035-0035 provides the Oregon Department of Environmental Quality (DEQ) noise rules for industry and commence, which have been adopted by Council as the compliance requirements for EFSC-jurisdictional energy facilities.

The noise impact analysis area includes the area within and extending 1-mile from the proposed amended site boundary; however, for RFA4, the certificate holder evaluates potential

noise impacts from the facility, with proposed changes, to noise sensitive properties located within 2-miles of the proposed amended site boundary.[129]

Noise Standards

The DEQ noise rules set noise limits for new industrial or commercial noise sources based upon whether those sources would be developed on a previously used or unused industrial or commercial site. Pursuant to OAR 340-035-0015(47), a "previously unused industrial or commercial site" is defined as property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property. There is no evidence in the record that the facility site has been in industrial or commercial use at any time during the last 20 years, therefore the site is considered a previously unused site and evaluated per the requirements of OAR 340-035-0035(1)(b)(B).

The requirements of OAR 340-035-0035(1)(b)(B)(ii), as provided above, apply to noise levels of new industrial or commercial noise sources on previously unused industrial or commercial sites; the requirements of OAR 340-035-0035(1)(b)(B)(iii) apply to noise levels generated by a "wind energy facility."[130] The facility, as approved, would include a 404 MW facility with up to 269 wind turbines. Phase 2 of the facility would include wind turbines, or a mix of wind turbines, a solar array and battery storage system. DEQ's industrial and commercial noise standards differ for general industrial and commercial noise sources and for an industrial and commercial noise source that is a wind energy facility. DEQ rules do not define "wind energy facility" but reference a predictive noise analysis methodology for wind energy facilities that evaluates maximum noise levels at noise sensitive receptors assuming operation of all wind turbines between cut-in speed and maximum sound power level wind speed, and does not address a methodology for evaluating other potential noise sources. Therefore, because the certificate holder proposes, in addition to a new wind turbine type, a solar array and battery storage which have noise generating components that are not addressed in DEQ's noise rules for wind energy facilities, the Department recommends Council apply the requirements of both OAR 345-035-0035(1)(b)(B)(ii) and –(iii) to the facility, with proposed changes.

Noise generated by a wind energy facility or a new industrial or commercial source located on a previously unused site must comply with two standards: the "ambient noise degradation standard" and the "maximum allowable noise standard." Under the ambient noise degradation standard, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA. For a wind energy facility, this evaluation is based on a predictive noise analysis assuming wind turbines are operating "between cut-in speed and the wind speed corresponding to the maximum sound power level" and may assume

[129] OAR 340-35-0015(38) defines Noise Sensitive Property as "real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner."
[130] OAR 340-035-0035(1)(b)(A).

an ambient hourly L50 noise level of 26 dBA or based on measured ambient hourly noise levels at the receiver in accordance with the procedures specified in the regulation. For a new industrial or commercial source, this evaluation is based on all noises generated or indirectly caused or attributable to that source including all of its related activities and measured ambient hourly noise levels.

To demonstrate compliance with the ambient noise degradation standard, noise generated during facility operation must not cause the hourly L50 noise level at any noise-sensitive property to exceed 10 dBA above ambient or assumed ambient, in this case, 36 dBA. For a wind energy facility, OAR 340-035-0035(1)(b)(B)(iii)(III) relieves the certificate holder from having to show compliance with the ambient noise degradation standard "if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located" (a "noise waiver"). The option to obtain a noise waiver is not available for new industrial or commercial noise sources that are not wind generating facilities.

Under the maximum allowable noise standard at OAR 340-035-0035(1)(b)(B)(i), both new industrial or commercial noise sources and wind energy facilities may not exceed the noise levels specified in the noise rules, as represented in Table 9, *Statistical Noise Limits for Industrial and Commercial Noise Sources* below.

Table 9: Statistical Noise Limits for Industrial and Commercial Noise Sources

Statistical Descriptor[1]	Maximum Permissible Hourly Statistical Noise Levels (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L50	55	50
L10	60	55
L1	75	60

Notes:
1. The hourly L50, L10 and L1 noise levels are defined as the noise levels equaled or exceeded 50 percent, 10 percent, and 1 percent of the hour, respectively.

Source: OAR 340-035-0035, Table 8

Potential Noise Impacts

Potential noise impacts from construction and operation of the facility, with proposed changes, within the 2-mile analysis area are presented below.

Construction

OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities; however, an evaluation of construction-related noise is presented in accordance with OAR Chapter 345 Division 21 information requirements and to inform the construction-related noise analysis

required under the Council's Protected Areas and Recreation standards. In RFA4, the certificate holder affirms that construction of the facility, with proposed changes, would not result in changes to previously evaluated construction activities.

As evaluated in the ASC Exhibit X, construction phases of the facility, as approved, would include clearing, excavation, foundation, erection and finishing. Typical construction equipment and predicted sound pressure levels at specific distances would include but is not limited to: air compressor (81 dBA at 50 ft), backhoe (85 dBA at 50 ft), pile driver (101 dBA at 50 ft), grader (85 dBA at 50 ft), loader (79 dBA at 50 ft), saw (78 dBA at 50 ft), and trucks (91 dBA at 50 ft). Predicted sound pressure levels from construction phases would result range from 90 to 60 dBA at 50 and 1,500 feet, respectively. Due the linear nature of construction activities, noise levels would decrease based on distance due to attenuation (rate of 6 dBA per doubling of distance) as construction of access roads and wind turbines progress farther from noise sensitive receptor locations. Council previously imposed Condition 106 requiring that, during construction, combustion engine-powered equipment be equipped with exhaust mufflers; operation of noisiest construction equipment be restricted to daylight hours; and requires that the certificate holder establish a noise complaint response system, including a system for the certificate holder to receive and resolve noise complaints. Phase 2 construction activities would be required to comply with the requirements of Condition 106.

Operations

Operation of the facility, with proposed changes, would generate noise from wind turbines, transformers and inverters associated with a solar array, and inverters and cooling systems associated with battery storage systems. In RFA4, the certificate holder provides a noise analysis of the facility, with proposed changes, including the sources and sound power levels for Phase 1 and Design Scenarios A, B, and C; these are presented in *Table 10, Modeled Noise Sources – Phase 1 and Phase 2*.

Table 10: Modeled Noise Sources – Phase 1 and Phase 2 (A, B or C)

Noise Source	Phase 1	Phase 2 Scenarios			Maximum Sound Power Level at Source (dBA)[2]
		A	B	C	
	No. of Sources				
Wind Turbine[1]	2	-	-	-	110.5
	46	-	-	-	110.2
	-	-	48	-	110
	-	70	-	-	109.2
	3	-	-	-	108.1*
	-	11	-	-	107.7*
	5	-	-	-	107.5*
Substation Transformer	2	2	2	2	98
Battery Storage System[3] (Per 10 MW centroid)	-	10	10	10	102.2
Solar Array Inverter	-	-	-	102	95.5
Notes:					

Table 10: Modeled Noise Sources – Phase 1 and Phase 2 (A, B or C)

Noise Source	Phase 1	Phase 2 Scenarios			Maximum Sound Power Level at Source (dBA)[2]
		A	B	C	
	No. of Sources				

4. Maximum sound power levels include 2 dBA to account for uncertainty, consistent with manufacturer specifications.
5. Maximum sound power levels were provided to the Department under separate confidential cover under ORS 192.501(2).
6. Sounds levels of the battery storage system include noise generating sources such as HVAC and inverters.

*Includes noise reduction from serrated trailing edge blades.

As described in RFA4 Exhibit X, a sound power level (commonly abbreviated as PW_L or L_w) is analogous to the wattage of a light bulb; it is a measure of the acoustical energy emitted by the source and is, therefore, independent of distance. A sound pressure level is analogous to the brightness or intensity of light experienced at a specific distance from a source and is measured directly with a sound-level meter. Sound pressure levels always should be specified with a location or distance from the noise source. Sound power level data are used in acoustic models to predict sound pressure levels. This is because sound power levels take into account the size of the acoustical source and account for the total acoustical energy emitted by the source. The decrease in sound level caused by distance from any single sound source normally follows the inverse square law; that is, the sound pressure level changes in inverse proportion to the square of the distance from the sound source. In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than approximately the largest dimension of the noise-emitting surface, the sound pressure level from a single source of sound drops off at a rate of 6 dB with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate will also vary based on terrain conditions and the presence of obstructions in the sound's propagation path. These factors are considered in the development of the acoustical model.[131]

Noise Modeling Results and Compliance with Regulations

For its analysis, the certificate holder evaluates Phase 1 and Phase 2 noise sources, as presented in Table 6, *Modeled Noise Sources – Phase 1 and Phase 2*, and uses the International Organization for Standardization 9613-2 (ISO 9613-2), Acoustics—Sound Attenuation During Propagation Outdoors Part 2: General Method of Calculation (1996) implemented by CADNA/A (Version 2019 [build: 167:4905]) by DataKustik GmbH of Munich, Germany to make the predictions of peak noise levels at noise-sensitive properties within the 2-mile analysis area. The CADNA/A program accounts for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions. Results of the noise analysis are presented graphically on noise contour maps identifying facility component

[131] MWPAMD4. Request for Amendment 4, Exhibit X. 2019-04-05.

locations and noise sensitive receptors within 2-miles of the proposed amended site boundary, identifying the boundaries of 36 and 50 dBA noise contours.

Ambient Noise Degradation Standard

The ambient noise degradation standard requires a demonstration that noise generated during facility operation must not cause the hourly L50 noise level at any noise-sensitive property to exceed 10 dBA above ambient or, in this case, 36 dBA. Based upon the certificate holder's noise analysis and noise contour maps, which were requested be treated as trade secrets under ORS 192.501(1), Design Scenario A, B and C are predicted to exceed the ambient noise degradation standard of 36 dBA, at many noise sensitive receptors. In accordance with OAR 340-035-0035(1)(b)(iii)(III) the noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 6, above), if the person who owns the noise sensitive property executes a legally effective easement or real covenant. Council previously imposed Condition 107, as described below, requiring that based on a pre-construction final design noise analysis, the certificate holder provide to the Department copies of executed easements or real covenants to demonstrate compliance with the noise control regulation for noise increases of 10 dBA or more at identified noise sensitive receptors.

Therefore, to demonstrate compliance with the DEQ noise rules during operation of proposed Phase 2, the certificate holder must either negotiate and execute legally effective easements or real covenants with the affected property owners authorizing the facility to increase the ambient statistical noise levels more than 10 dBA; or, in the alternative, the certificate holder must change the layout, utilize noise reducing technology such as serrated trailing edge blades, operate wind turbines in a reduced power function operating mode, or reduce the number of noise generating facility-components to reduce the noise levels to levels that would not exceed the ambient noise degradation limit. As discussed below, site certificate Condition 107 requires that the certificate holder, prior to construction, provide evidence of receipt of noise waivers from the owners noise sensitive properties where the ambient noise degradation standard is exceeded.

Predicted noise levels of the proposed solar array and battery storage system, when considered independent of the wind energy facility, would result in a maximum increase in ambient noise level of 3 dBA at the nearest sensitive property, described by the certificate holder as a de minimis contribution to the overall predicted noise levels.[132] Therefore, even if the proposed solar array and battery storage systems were evaluated as a new industrial or commercial noise source under the noise control regulation, separately from the wind energy facility, it can be concluded that noise levels would not exceed the ambient noise degradation standard or the maximum allowable noise standard, as the noise levels are predominately contributed by wind turbine operations from Phase 1 and Phase 2 Design Scenarios A and B.

[132] MWPAMD4. Request for Amendment 4, Exhibit X, Table X-4. 2019-01-15.

Maximum Allowable Standard

The maximum allowable noise standard requires a demonstration that noise generated during facility operation must not exceed the hourly statistical noise level of 50 dBA. Modeling results for Phase 2 Design Scenario A and B indicate a potential exceedance of the maximum allowable noise standard, 50 dBA, at a few noise sensitive receptors. Design Scenario C is not expected to exceed 50 dBA at any noise sensitive receptor locations. Council previously imposed Condition 107 requiring that, prior to construction, the certificate holder submit to the Department a noise assessment based on final facility design and layout, using the maximum sound power level for substation transformers and wind turbines. The condition further requires that noise waivers necessary at noise sensitive receptor locations, where the ambient degradation noise level is exceeded, be secured and provided to the Department.

The Department recommends Council amend Condition 107 to require that if the pre-construction noise analysis identifies noise sensitive properties within 1 dBA of maximum allowable noise standard, the certificate holder conduct noise monitoring during the first year of operation to confirm compliance with the noise regulation, as follows:

Recommended Amended Condition 107: The certificate holder shall provide to the Department ~~Before beginning construction, the certificate holder shall provide to the Department~~:

i. Prior to Phase 1 construction:
   a. Information that identifies the final design locations of (all turbines, to be built at the facility…
ii. For Phase 2 of the facility:
   a. Prior to construction, a noise analysis that includes the following Information:

      Final design locations of all Phase 1 and Phase 2 noise generating facility components (all wind turbines; substation transformers; inverters and transformers associated with the photovoltaic solar array; and inverters and cooling systems associated with battery storage system).

      The maximum sound power level for the Phase 2 substation transformers; inverters and transformers associated with the photovoltaic solar array; inverters and cooling systems associated with battery storage system; and the maximum sound power level and octave band data for the Phase 2 wind turbines selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the Department.

      The results of noise analysis of Phase 1 and Phase 2 components according to the final design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B)(iii) (IV) and (VI) demonstrating to the satisfaction of the Department that the total noise generated by the facility (including the noise from wind turbines, substation transformers, inverters and transformers

associated with the photovoltaic solar array; inverters and cooling systems associated with battery storage system) would meet the ambient degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties.

For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the 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: include a legal description of the burdened property (the noise-sensitive property); be recorded in the real property records of the county; expressly benefit the certificate holder; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.

b. During operation, if the results of the pre-construction final noise analysis submitted per Condition 107(ii) identify that modeled noise levels are predicted to be within 1 dBA of the ambient degradation standard (10 dBA) for noise sensitive properties where noise waivers were not obtained, or within 1 dBA of the maximum allowable noise standard (50 dBA) for any noise sensitive property, the certificate holder shall monitor and record actual statistical noise levels at these noise sensitive properties to verify that Phase 2 facility components are operating in compliance with the noise control regulation. The monitoring plan must be reviewed and approved by the Department prior to implementation.

If, during monitoring, the ambient degradation standard (10 dBA) or maximum allowable noise standard (50 dBA) are exceeded at any noise sensitive property, the certificate holder shall submit to the Department its mitigation proposal demonstrating the measures to be utilized to lower noise levels and achieve compliance with the applicable noise standard. The mitigation proposal shall be reviewed and approved by the Department.
[Final Order on ASC; AMD4]

Corona Effect

The corona effect (corona) is audible noise that emits from transmission lines caused from the partial electrical breakdown of the insulating properties of air around the conductors of a transmission line. Heat and energy are dissipated in a small volume near the surface of the conductors, part of this energy is in the form of small local pressure changes that result in audible noise. Corona-generated audible noise is characterized by a low hum, hissing, frying, or

crackling sound. Corona is a function of transmission line voltage, altitude, conductor diameter, condition of the conductor, suspension hardware and specific damp weather conditions. The proposed 3-mile 230 kV transmission segment could generate random corona radiation during wet weather as a result of rain drops on the wire or to a lesser amount in dry weather as a result of dust, insects, or sharp points on the conductors or suspension hardwire.

In RFA4 Exhibit AA, the certificate holder identifies four noise sensitive properties with the proposed 3-mile 230 kV transmission line corridor, located within 200 feet of the outer boundary of the 0.5-mile in width transmission line corridor. Based on an audible corona noise calculation with rainy conditions, corona noise generated by the proposed 3-mile 230 kV transmission line at 80 feet would exceed the ambient degradation standard (L50 = 36.2). The certificate holder describes that the proposed 3-mile 230 kV transmission line segment would be setback a distance of 200 feet from noise sensitive properties, in compliance with Condition 89. At 200 feet, audible L50 corona noise with rainy conditions would be approximately 31.8 dBA and therefore would not exceed the ambient degradation standard or maximum allowable standard.

Conclusions of Law

Based on the foregoing findings, the Department recommends that the Council find that the facility, with proposed changes, would comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

III.Q.2. Removal-Fill

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state."[133] The Council, in consultation with DSL, must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued. The analysis area for wetlands and other waters of the state is the area within the site boundary.

Findings of Fact

The Council addressed the removal-fill law in Section IV.S of the *Final Order on the Application* and found that the Phase 1 facility does not require a removal-fill permit. During the review of the ASC, Department of State Lands reviewed the wetland delineation report and provided a concurrence letter, in which DSL agreed with the wetland delineation report and classifications.

In RFA4, the certificate holder states that there are no previously delineated wetlands within the Phase 2 analysis area. No wetlands were observed during the 2017 and 2018 field investigations of the Phase 2 analysis area. The wetland delineation reports were submitted to

[133] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.

DSL for review, and on March 6, 2019, DSL concurred with the two wetland delineation reports provided for RFA4.[134] There are no wetlands in areas where Phase 2 facility components could be located. There are three streams that would be crossed by collector lines between wind turbine strings, either by boring under the streams or by overhead crossings. In either scenario, no impacts to the streams are expected to occur.[135]

The Phase 2 facility does not require a removal-fill permit. If any facility design changes such that a removal-fill permit is necessary, it would require a site certificate amendment to evaluate the permit request. The existing site certificate contains a number of conditions that protect wetlands and waters of the state, specifically Conditions 80 through 87. These conditions will continue to apply to the Phase 2 facility. The Department recommends minor administrative changes to Conditions 83, 84, and 87. These changes are included in the draft amended site certificate, Attachment A of this order.

Therefore, the Department recommends the Council find that the facility, with proposed changes, maintains compliance with the removal-fill law and the certificate holder is not currently required to obtain a removal-fill permit.

Conclusions of Law

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

III.Q.3. Water Rights

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the facility would comply with these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires that if a facility needs a groundwater permit, surface water permit, or water right transfer, that a decision on authorizing such a permit rests with the Council.

Findings of Fact

As explained in Exhibit O of RFA4, construction of the Phase 2 facility is anticipated to require less water than was previously expected to be necessary for the Phase 1 facility alone. During construction water would be used for dust suppression during construction, for concrete used in turbine foundations and solar array foundations, and as a concrete pad for the battery storage system. Table O-1, Exhibit O, lists conservative estimates of water anticipated to be

[134] MWPAMD4Doc Reviewing Agency WD2018-0660final 2019-03-07; MWPAMD4 DSL Wetland Delineation Concurrence Confirmation 2019-03-06.
[135] MWPAMD4 Exhibit J, p. J-1. 2019-04-05.

necessary during facility construction. The "worst case" scenario for water is Design Scenario B, which is estimated to need 18.3 million gallons of water during construction.

During operation, the Phase 2 facility may need water for washing the solar array, however, as described in Exhibit O, advances in robotic cleaning techniques of solar arrays may reduce the need for water to clean panels. Table O-2 of Exhibit O shows anticipated water use during Phase 2 facility operation, with the "worst case" scenario as Scenario C, if water is used for solar panel washing. If water is used for panel washing, the certificate holder states that it would not use solvents or cleaning chemicals.

During both facility construction and operation minor quantities of water will be necessary for potable purposes. During operation, water will be supplied at the O&M building via an OWRD permit-exempt well in accordance with existing site certificate Condition 86.

In RFA4 Exhibit O, the certificate holder states that if the Phase 1 construction maximum estimated water usage were to be combined with the Phase 2 maximum estimated water usage, the resulting total would be slightly less than the estimated total water needed for construction during the original ASC review, or 36,800,000 gallons.[136] The certificate holder anticipates purchasing water from the City of Arlington for construction purposes, and provided a letter (attachment O-1, Exhibit O) from the City of Arlington, Public Works Superintendent, stating that the city could provide up to 40,000,000 gallons for construction and 500,000 gallons per year.

As described in *Soil Protection* section of this order, if the solar array is built and if the certificate holder washes the panels, the run-off water from washing is subject to a DEQ-issued WPCF permit 1700-B. WPCF permits are state-issued permits and would be under control of an EFSC-issued site certificate; however, the certificate holder states in RFA4 Exhibit E that if a WPCF permit is necessary, it would be secured by a third-party contractor, which is allowed in accordance with OAR 345-022-022-0110(3) and (4). Recommended amended Condition 80 would require the certificate holder to provide the Department a copy of the WPCF permit secured by the third-party contractor prior to washing solar panels.

Based on the findings presented here, the Department recommends that the Council find that the certificate holder can provide adequate water for construction and operation of the facility, with proposed changes, and does not need a groundwater permit, surface water permit, or water right transfer. If such a permit is required by the certificate holder at a later time, a site certificate amendment would be required to review and consider such a permit application.

[136] MWPAMD4. Request for Amendment 4 Exhibit O, O-5. 2019-04-05.

Conclusions of Law

Based on the foregoing findings of fact, the Department recommends that the Council conclude that the facility, with proposed changes, does not need a groundwater permit, surface water permit, or water right transfer.

IV. PROPOSED CONCLUSIONS AND ORDER

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

1. The proposed facility modifications included in Request for Amendment 4 of the Montague Wind Power Facility site certificate complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The proposed facility modifications included in Request for Amendment 4 of the Montague Wind Power Facility site certificate complies with the standards adopted by the Council pursuant to ORS 469.501.

3. The proposed facility modifications included in Request for Amendment 4 of the Montague Wind Power Facility site certificate complies with all other Oregon statutes and administrative rules identified in the project order as applicable to the issuance of a site certificate for the facility.

Accordingly, the Department recommends that the Council find that the proposed facility modifications included in Request for Amendment 4 of the Montague Wind Power Facility site certificate complies with the General Standard of Review (OAR 345-022-0000). The Department recommends that the Council find, based on a preponderance of the evidence on the record, that the site certificate may be amended as requested.

Proposed Order

The Department recommends that the Council approve Amendment 4 of the Montague Wind Power Facility site certificate.

Issued this 5th day of April, 2019

The OREGON DEPARTMENT OF ENERGY

By: _____
Todd Cornett, Assistant Director
Oregon Department of Energy, Energy Facility Siting Division

Attachments:
Attachment A: Draft Amended Site Certificate
Attachment B: Reviewing Agency Comments on preliminary RFA4
Attachment C: [Reserved for Draft Proposed Order Comments/Index]
Attachment D: Draft Habitat Mitigation Plan
Attachment E: Draft Revegetation Plan
Attachment F: Draft Wildlife Monitoring and Management Plan
Attachment G: Draft Historical Resource Mitigation Plan
Attachment H: Inadvertent Discovery Plan

Notice of the Right to Appeal

[Text to be added to Final Order]

Attachment A: Draft Amended Site Certificate

ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

~~Third~~ Fourth Amended Site Certificate

for the

Montague Wind Power Facility

~~July 2017~~Month Day, 2019

The Oregon Energy Facility Siting Council

~~THIRD~~ FOURTH ~~AMENDED SITE CERTIFICATE~~

~~FOR THE MONTAGUE WIND POWER FACILITY~~

I. INTRODUCTION

The Oregon Energy Facility Siting Council (Council) issues this site certificate for the Montague Wind Power Facility (the facility) in the manner authorized under ORS Chapter 469. This site certificate is a binding agreement between the State of Oregon (State), acting through the Council, and Montague Wind Power Facility LLC (certificate holder) authorizing the certificate holder to construct and operate the facility in Gilliam County, Oregon. [Amendment #3] The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: (a) the Final Order on the Application for Site Certificate for the Montague Wind Power Facility issued on September 10, 2010 (hereafter, Final Order on the Application), (b) the Final Order on Amendment #1 issued on June 21, 2013; and, (c) the Final Order on Amendment #2 issued on December 4, 2015; ~~and~~ (d) the Final Order on Amendment #3 issued on July 11, 2017; and (e) the Final Order on Amendment #4 issued on DATE. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) this ~~Third~~ Fourth Amended Site Certificate, (2) the Final Order on Amendment #4, (3) the Final Order on Amendment #3, (~~3~~4) the Final Order on Amendment #2, (~~4~~5) the Final Order on Amendment #1, (~~5~~6) the Final Order on the Application, and (~~6~~7) the record of the proceedings that led to the Final Order on the Application, the Final Order on Amendment #1, and the Final Order on Amendment #2. [Amendment #2]

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.

II. SITE CERTIFICATION

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~~ and photovoltaic (PV) solar energy facility ~~facility~~, together with certain related or supporting facilities, at the site in Gilliam County, Oregon, as described in Section III of this site certificate. ORS 469.401(1). [ASC; AMD4]

2. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in effect on the date that termination is sought or 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).

3. This site certificate does not address, and is not binding with respect to, matters that were not addressed in the Final Order on the Application, Final Order on Amendment #1 ~~and~~ Final Order on Amendment #2, ~~and~~ Final Order on Amendment #3, and Final Order on Amendment #4. Such matters include, but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges and 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. 469.503(3). [ASC; AMD1; AMD2~~Amendment #3~~AMD3; AMD4]

4. 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).

5. 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).

6. 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).

7. 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).

8. 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).

9. 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.

10. 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. [AMD2]

III. DESCRIPTION

1. The Facility

(a) The Energy Facility

The energy facility is an electric power generating plant with an average electric generating capacity of up to 134.7 megawatts and a peak generating capacity of not more than 404 megawatts that produces power from wind and solar energy. The facility consists of not more than 269 wind turbines. ~~The maximum peak generating capacity of each turbine is not more than 3.0 megawatts.~~ The energy facility is described further in the Final Order on the Application, Final Order on Amendment #1, Final Order on Amendment #2, ~~and~~ Final Order on Amendment #3, and Final Order on Amendment #4.

The solar array may be sited on a maximum of 1,189 acres, and would generate up to approximately 202 megawatts. The array would be composed of solar modules, which are themselves composed of either mono-crystalline or poly-crystalline cells. In addition to the solar modules, the array would also include a

tracker system to allow the solar modules to follow the path of the sun throughout the day; cables; inverters; and transformers. The solar array would be connected to the power collection system described below.

(b) Related or Supporting Facilities

The facility includes the following related or supporting facilities described below and in greater detail in the Final Order on the Application, Final Order on Amendment #1, Final Order on Amendment #2, and Final Order on Amendment #3:

- Power collection system
- Control system
- Substations and 230-kV transmission lines
- Battery storage
- Meteorological towers
- Operations and maintenance facilities
- Access roads
- Public roadway modifications
- Temporary construction areas

Power Collection System

A power collection system operating at 34.5 kilovolts (kV) transports power from each turbine to a collector substation. To the extent practicable, the collection system is installed underground at a depth of at least three fed. Not more than 27 miles of the collector system is installed aboveground.

Control System

A fiber optic communications network links the wind turbines to a central computer at the O&M buildings. A Supervisory, Control and Data Acquisition (SCA DA) system collects operating and performance data from each wind turbine and from the facility as a whole and allows remote operation of the wind turbines.

Substations and 230-kV Transmission Lines

The facility includes two collector substations. An aboveground, single-circuit 230-kV transmission line connects the ~~western~~ Phase 2 substation to the ~~central~~ Phase 1 substation. An aboveground, single-circuit 230-kV transmission line connects the central substation to the 500-kV Slatt-Buckley transmission line owned by the Bonneville Power Administration (BPA) at the Slatt substation.

Battery Storage

A battery storage system, capable of storing up to 100 MW of wind or solar energy generated by the Facility, is used to stabilize the wind or solar resource through dispatching of energy stored in the battery system. The battery system is placed in a series of containers, or a similarly sized building, located near the Phase 2 substation.

The battery system would be composed of either lithium-ion (Li-ion) batteries or a flow battery. Lithium-ion batteries are a solid-state rechargeable battery utilizing lithium ions in an electrolyte. Flow batteries are composed of a variety of different technologies; however, all flow batteries dispatch electricity by allowing the migration of electrons from a positive ion tank to a negative ion tank. The electrons migrate between solutions via a membrane.

Meteorological Towers

The facility includes up to eight permanent meteorological towers.

Operations and Maintenance Facilities

The facility includes one or two operations and maintenance (O&M) facilities. An on-site well at each O&M facility supplies water for use during facility operation. Sewage is discharged to an on-site septic system.

Access Roads

The facility includes access roads to provide access to the turbine strings, solar array, battery storage system and other related or supporting components.

Public Roadway Modifications

The certificate holder may construct improvements to existing state and county public roads that are necessary for construction of the facility. These modifications would be confined to the existing road rights-of-way and would be undertaken with the approval of the Gilliam County Road Department or the Oregon Department of Transportation, depending on the location of the improvement.

Temporary Construction Areas

During construction, the facility includes temporary laydown areas used to stage construction and store supplies and equipment. Construction crane paths are used to move construction cranes between turbine strings.

2. Location of the Facility

The facility is located south of Arlington, in Gilliam County, Oregon. The facility is located on private land subject to easements or lease agreements with landowners.

IV. CONDITIONS REQUIRED BY COUNCIL RULES

This section lists conditions required by OAR 345-027-0020 (Mandatory Conditions in Site Certificates), OAR 345-027-0023 (Site Specific Conditions), OAR 345-027-0028 (Monitoring Conditions) and OAR Chapter 345, Division 26 (Construction and Operation Rules for Facilities). These conditions should be read together with the specific facility conditions listed in Section V to ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to protect the public health and safety. In these conditions the definitions in OAR 345-001-0010 apply.

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this section and in Section V 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.

In addition to these conditions, the site certificate holder is subject to all conditions and requirements contained in the rules of the Council and in local ordinances and state law in effect on the date the certificate is executed. Under ORS 469.401(2), upon a clear showing of a significant threat to the 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.

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.

1 OAR 345-025-0006 ~~027-0020~~(1): The Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27.

2 OAR 345-025-0006 ~~027-0020~~(2): 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.

3 OAR 345-025-0006 ~~027-0020~~(3): 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.

4 OAR 345-025-0006 ~~027-0020~~(4): The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate. (See Conditions 24 and 25.)

5 OAR 345-025-0006 ~~027-0020~~(5): Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:

(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.

6 OAR 345-025-0006 ~~027-0020~~(6): If the ~~Council requires mitigation based on an affirmative finding under any standards of Division 22 or Division 24 of this chapter, 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 ~~shall consult with affected state agencies and local governments designated by the Council and shall develop specific mitigation plans consistent with Council findings under the relevant standards. The certificate holder must submit the mitigation plans to the Department and receive Department approval before beginning construction or, as appropriate, operation of the facility~~. [AMD4]

7 OAR 345-025-0006 ~~027-0020~~(7): 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.

8 OAR 345-025-0006 ~~027-0020~~(8): Before beginning construction of the facility or a phase of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit, in a form and amount satisfactory to the Council to restore the site or a portion of the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility or the phase of the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility or a phase of the facility. (See Condition 32.) [AMD4]

9 OAR 345-025-0006 ~~027-0020~~(9): The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful,

non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.

10 OAR 345-025-0006 ~~027-0020~~(10): The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant.

11 OAR 345-025-0006 ~~027-0020~~(11): Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.

12 OAR 345-025-0006 ~~027-0020~~(12): The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading, cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. For coastal sites, this also includes tsunami hazards and seismically-induced coastal ~~inundation, fault displacement and~~ subsidence.

13 OAR 345-025-0006 ~~027-0020~~(13): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division ~~and~~ to propose and implement corrective or mitigation actions.

14 OAR 345-025-0006 ~~027-0020~~(14): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.

15 OAR 345-025-0006 ~~027-0020~~(15): 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.

16 OAR 345-025-0006 ~~027-0020~~(16): 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. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-027-0020(8) 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.

17 [Deleted]~~OAR 35-027-0023(4):~~

(a) ~~The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code approved on June 3, 2011, by the American National Standards Institute, and~~

(b) ~~The certificate holder shall 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.~~ [Amendment 3, Amendment 4]

18 OAR 345-~~027-0023~~025-0010(5): ~~If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.~~ The certificate holder is authorized to construct a 230 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor is ½-mile in width and extends approximately 14 miles from the Phase 1 collector substation to Phase 2 collector substation to BPA's Slatt Substation as presented in Figure 1 of the site certificate.
[OAR 345-025-0010(5); ASC; AMD4]

19 OAR 345-027-0028: 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 OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local governments.

(c) For each monitoring program described in OAR 345-027-0028(1) and (2), 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

20 OAR 345-026-0048: 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.

21 OAR 345-026-0080: The certificate holder shall 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 OAR 345-026-0080.

(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 OAR 345-026-0080. The Council Secretary and the certificate holder may, by mutual agreement, change the reporting date.

(iii) To the extent that information required by OAR 345-026-0080 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

(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.

(vii) ....

22 OAR 345-026-0105: 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.

23 OAR 345-026-0170: The certificate holder shall notify the Department of Energy 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; or

(c) There is any fatal injury at the facility.

V. SPECIFIC FACILITY CONDITIONS

The conditions listed in this section include conditions based on representations in the site certificate application and supporting record. The Council deems these representations to be binding commitments made by the applicant. These conditions are required under OAR 345-027-0020(10) 025-0006. The certificate holder must comply with these conditions in addition to the conditions listed in Section IV. This section includes other specific facility conditions the Council finds necessary to ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to protect public health and safety. For conditions that require subsequent review and approval of a future action, ORS 469.402 authorizes the Council to delegate the future review and approval to the Department if, in the Council's discretion, the delegation is warranted under the circumstances of the case.

1. Certificate Administration Conditions

24 The certificate holder shall:

i. bBegin construction of Phase 1 of the facility by September 14, 2017. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030-0085 or any successor rule in effect at the time the request for extension is submitted. [Amendment #2]

ii. Begin construction of Phase 2 of the facility by [SPECIFIC DATE TO BE INCLUDED INFINAL ORDER AND SITE CERTIFICATE]. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030 0085 or any successor rule in effect at the time the request for extension is submitted. [Amendment #4]

25 The certificate holder shall:

i. cComplete construction of Phase 1 of the facility by September 14, 2020. 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 345-027-0030-0085 or any successor rule in effect at the time the request for extension is submitted. [Amendment #2]

ii. The certificate holder shall complete construction of Phase 2 of the facility by September 14, 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~~ 0085 or any successor rule in effect at the time the request for extension is submitted. [AMD4]

26 Before beginning construction of the facility, the certificate holder shall notify the Department whether the turbines identified as H1, H2, H3, H4, L8, L9, L10, L11 and L12 on Figure C-3a of the site certificate application will be built as part of the Montague Wind Power Facility or whether the turbines will be built as part of the Leaning Juniper II Wind Power Facility.

27 The certificate holder shall construct a facility substantially as described in the site certificate and may select turbines of any type, subject to the following restrictions and compliance with all other site certificate conditions. 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.

i. For Phase 1 facility components:

(a) The total number of turbines ~~at the facility~~ must not exceed 81~~269~~ turbines.

~~(b) The combined peak generating capacity of the facility must not exceed 404 megawatts and the peak generating capacity of any individual turbine must not exceed 3.6 megawatts.~~

(c) The turbine hub height must not exceed 100 meters and the maximum blade tip height must not exceed 150 meters.

(d) The minimum blade tip clearance must be 14 meters above ground. [Amendment #3]

~~(e) The certificate holder shall request an amendment of the site certificate to increase the combined peak generating capacity of the facility beyond 404 megawatts, to increase the number of wind turbines to more than 269 wind turbines or to install wind turbines with a hub height greater than 100 meters, a blade tip height greater than 150 meters or a blade tip clearance less than 14 meters above ground. [Amendment #3]~~

ii. For Phase 2 facility components:

(a) The total number of turbines must not exceed 81 turbines.

(b) The turbine hub height must not exceed 351 feet (107 meters) and the maximum blade tip height must not exceed 597 feet (182 meters).The minimum aboveground blade tip clearance must be 46 feet (14 meters).

[Final Order on ASC; AMD3; AMD4]

28 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.

29 Before beginning construction, the certificate holder shall:

i. For Phase 1, provide confirmation to the Department that the construction contractor or other third party has obtained all necessary permits or approvals and shall provide to the Department proof of agreements between the certificate holder and the third party regarding access to the resources or services secured by the permits or approvals.

ii. For Phase 2, submit to the Department and Gilliam County a list of third-party permits to be obtained or that have been obtained.

a. The certificate holder shall submit to the Department copies of all obtained third party permits.

b. Provide to the Department in semi-annual reports pursuant to OAR 345-026-0080, copies of compliance recordkeeping as required by third-party permits normally governed by the site certificate (e.g. Type I Administrative Review Conditional Use Permit for Temporary Batch Plant; Air Contaminant Discharge Permit for Batch Plant; Limited Water Use License; Water Right; Water Pollution Control Facilities Permit(s)). [AMD4]

30 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 ~~24~~ 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.

31 Before beginning construction but no more than two years before beginning construction and after considering all micrositing factors, the certificate holder shall provide to the Department, to the Oregon Department of Fish and Wildlife (ODFW) and to the Planning Director of Gilliam 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 and permanent habitat impact by habitat category and subtype, similar to Table 6 in the Final Order on the Application. The detailed maps of the facility site shall indicate the habitat categories of all areas that would be affected during construction (similar to Figures P-8a through P-8d in the site certificate application). In classifying the affected habitat into habitat categories, the certificate holder shall consult with the 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.

32 i. Before beginning construction of Phase 1 of the facility, 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 is either $21.511 million (3rd Quarter 2010 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in (b).

a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected by applying the unit costs and general costs illustrated in Table 2 in the *Final Order on the Application* and calculating the financial assurance amount as described in that

order, adjusted to the date of issuance as described in (b) and subject to approval by the Department.

i. Adjust the Subtotal component of the bond or letter of credit amount (expressed in ~~mid-2004 dollars~~ 3rd Quarter 2017 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 ~~average of the 2nd Quarter and~~ 3rd Quarter ~~2004~~ 2017 index values (to represent mid-2004 dollars) 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 mid-2004 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.

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:

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 under Condition 21.

f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

ii. Before beginning construction of Phase 2 of the facility, 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 bond or letter of credit will be issued for Phase 2 in an amount that is either $10.429 million (1st Quarter 2019 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in (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 both the-battery storage or turbine types selected by applying the unit costs and general costs illustrated in Table 5 of the *Final Order on Amendment 4* and calculating the financial assurance amount as described in that order, adjusted to the date of issuance as described in (b) and subject to approval by the Department. The certificate holder may adjust the amount of the bond or letter of credit under (a) if opting to construct only a portion of the facility.

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 mid-2004 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 average of the 2nd Quarter and 3rd Quarter-2004 index values (to represent mid-2004 dollars) 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 mid-2004 dollars to present value.

c. 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 mid-2004 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 average of the 2nd Quarter and 3rd Quarter-2004index values (to represent mid-2004 dollars) 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 mid-2004 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, add 20 percent of the adjusted Gross Cost of the Solar Generation and Battery Storage System (ii) and 10 percent of the adjusted Gross Cost of all other facility components(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.

d. The certificate holder shall use a form of bond or letter of credit approved by the Council.

e. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

f. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under Condition 21.

g. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[AMD4]

33 If the certificate holder elects to use a bond to meet the requirements of Condition 32, 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.

34 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.

35 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.

36 To ensure compliance with all site certificate conditions during construction, the certificate holder shall have a full-time, on-site assistant construction manager who is qualified in environmental compliance. The certificate holder shall notify the Department of the name, telephone number and e-mail address of this person.

37 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.

2. Land Use Conditions

38 The certificate holder shall:

i. C~~c~~onsult with area landowners and lessees during construction and operation of Phase 1 of the facility and ~~shall~~ implement measures to reduce and avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs.
ii. Consult with area landowners and lessees during construction and operation of Phase 2 of the facility and implement measures to reduce and avoid any adverse impacts to ongoing farm practices on surrounding lands, including coordination with the landowner of the solar micrositing area to ensure that the final solar array layout does not prevent the landowner from maximizing agricultural production on the land not occupied by the solar array.
[Final Order on ASC; AMD4]

39 The certificate holder shall design and construct:
i. Phase 1 of 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.
ii. Phase 2 of the facility to minimize the permanent impacts to agricultural land, including to the extent practicable, using existing access roads, co-locating facilities, reducing road and transmission line/collector line lengths, and designing facility components to allow ongoing access to agricultural fields.
[Final Order on ASC; AMD4]

40 The certificate holder shall install gates on private access roads in accordance with Gilliam County Zoning Ordinance Section 7.020(T)(4)(d)(6) unless the County has granted a variance to this requirement.

41 Before beginning construction of the facility, the certificate holder shall record in the real property records of Gilliam County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland consistent with GCZO Section 37 7.020(T)(4)(a)(5).

42 The certificate holder shall construct all facility components in compliance with the following setback requirements:

(a) All facility components must be at least 3,520 feet from the property line of properties zoned residential use or designated in the Gilliam County Comprehensive Plan as residential.
(b) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest edge of any public road right-of-way. The certificate holder shall assume a minimum right-of-way width of 60 feet.
(c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest residence existing at the time of tower construction.
(d) Where (a) does not apply, the certificate holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest boundary of the certificate holder's lease area.
(e) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each turbine tower to the nearest edge of any railroad right-of-way or electrical substation.
(f) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each meteorological tower to the nearest edge of any public road right-of-way or railroad right-of-way, the nearest boundary of the certificate holder's lease area or the nearest electrical substation.
(g) The certificate holder shall maintain a minimum distance of 50 feet measured from any facility O&M building to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's lease area.
(h) The certificate holder shall maintain a minimum distance of 50 feet measured from any substation to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's electrical substation easement or, if there is no easement, the nearest boundary of the certificate holder's lease area.
(i) Where (a) does not apply, the certificate holder shall maintain a minimum of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower from any overhead utility line. [Amendment #1]
(j) Where (a) does not apply, the certificate holder shall maintain a minimum of 150 percent of maximum turbine height from blade tip height, measured from the centerline of the turbine tower from federal transmission lines, unless the affected parties agree otherwise. [Amendment #1]
(k) The certificate holder shall maintain a minimum distance of 25 feet measured from the fence line of the solar array to the nearest property line.

(l) The certificate holder shall maintain a minimum distance of 25 feet measured from the front, rear and side yard of the battery storage system site to the nearest property line. [AMD4]

43 During construction and operation of the facility, the certificate holder shall implement a weed control plan approved by the Gilliam County Weed Control Officer or other appropriate County officials to control the introduction and spread of noxious weeds.

44 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 Plan referenced in Condition 92.

45 Within 90 days after beginning operation of the facility or a phase of the facility, the certificate holder shall provide to the Department and to the Gilliam County Planning Department the actual latitude and longitude location or Stateplane NAD 83(91) coordinates of each turbine tower, connecting lines and transmission lines and a summary of as-built changes in the facility compared to the original plan.

46 The certificate holder shall deliver a copy of the annual report required under Condition 21 to the Gilliam County Planning Commission on an annual basis unless specifically discontinued by the County.

3. Cultural Resource Conditions

47 Before beginning construction, the certificate holder shall:
(a) Label all identified historic, cultural or archeological resource sites on construction maps and drawings as "no entry" areas. If construction activities will occur within 200 feet of an identified site, the certificate holder shall flag a 30-meter no entry buffer around the site. 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 or to operational farmsteads. [Final Order on ASC]
(b)Finalize the Phase 2 Historical Resource Mitigation Plan, provided in Attachment H of the Final Order on Request for Amendment 4, including selection of mitigation option and confirmation of implementation schedule. [AMD4]

48 In reference to the alignment of the Oregon Trail described in the Final Order on the Application, the certificate holder shall comply with the following requirements:

(a) The certificate holder shall not locate facility components on visible remnants of the Oregon Trail and shall avoid any construction disturbance to those remnants.

(b) The certificate holder shall not locate facility components on undeveloped land where the trail alignment is marked by existing Oregon-California Trail Association markers.

(c) Before beginning construction, the certificate holder shall provide to the State Historic Preservation Office (SHPO) and the Department documentation of the presumed Oregon Trail alignments within the site boundary.

(d) The certificate holder shall ensure that construction personnel proceed carefully in the vicinity of the presumed alignments of the Oregon Trail. If any physical evidence of the trail is discovered, the certificate holder shall avoid any disturbance to the intact segments by redesign, re-engineering or restricting the area of construction activity and shall flag a 30-meter no-entry buffer around the intact Trail segments. The certificate holder shall promptly notify the SHPO and the Department of the discovery. The certificate holder shall consult with the SHPO and the Department to determine appropriate mitigation measures.

~~44~~49 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 surveyed in 2009 as described in the Final Order on the Application. The certificate holder shall hire qualified personnel to conduct field investigations 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 investigations to the Department and to the Oregon State Historic Preservation Office (SHPO) for review and approval. If any potentially significant historic, cultural or archaeological resources 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 47.

50 During construction, the certificate holder shall:

(a) Ensure that a qualified archeologist, as defined in OAR 736-051-0070, instructs construction personnel in the identification of cultural materials and avoidance of accidental damage to identified resource site.

(b) Employ a qualified cultural resource monitor to conduct monitoring of ground disturbance at depths of 12 inches or greater. The qualifications of the selected cultural resources monitor shall be reviewed and approved by the Department, in consultation with the CTUIR Cultural Resources Protection Program. In the selection of the cultural resources monitor to be employed during construction, preference shall be given to citizens of the CTUIR. Ground disturbance at depths 12 inches or greater shall not occur without the presence of the approved cultural resources monitor. If any cultural resources are identified during monitoring activities, the steps outlined in the Inadvertent Discovery Plan, as provided in Attachment H of the Final Order on Amendment 4 should be followed. The certificate holder shall report to the Department in its semi-annual report a description of the ground disturbing activities that occurred during the reporting period, dates cultural monitoring occurred, and shall include copies of monitoring forms completed by the cultural resource monitor. [AMD4]

51 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 archaeologist can evaluate the significance of the find. The certificate holder shall notify the Department and the Oregon State Historic Preservation Office (SHPO) of the find. If 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

4. Geotechnical Conditions

52 Before beginning construction of:

i. Phase 1 of the facility, the certificate holder shall conduct a site-specific geotechnical investigation…

[Final Order]

ii. Phase 2 of the facility, the certificate holder must: conduct a site-specific geotechnical investigation and shall report its findings to the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department. The report must be submitted to the Department and DOGAMI at least 90 days prior to beginning construction of Phase 2, unless otherwise agreed upon by the Department.

The certificate holder shall conduct the geotechnical investigation in general accordance with current DOGAMI guidelines for engineering geologic reports, and site-specific seismic hazards, and shall include at least the following activities:

a. Reviewing available data from previous geotechnical explorations in the vicinity of the approved and proposed expanded site boundary.

b. Reviewing available geologic information from published sources.

c. Subsurface explorations (including soil borings, test pits, infiltration tests, and possible geophysical testing) at locations of proposed facility components.

d. Collecting additional soil samples for classification and laboratory testing and conducting laboratory tests on selected soil samples, if necessary to comply with DOGAMI guidelines.

[AMD4]

53 The certificate holder shall design and construct the facility in accordance with requirements of the current Oregon Structural Specialty Code ~~(OSSC 2007)~~ and ~~the 2006~~ International Building Code.

54 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.

5. Hazardous Materials, Fire Protection & Public Safety Conditions

55 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.

56 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 buildings. The certificate holder shall instruct employees about proper handling, storage and cleanup of hazardous materials

57 The certificate holder shall construct turbines and pad-mounted transformers on concrete foundations and shall cover the ground within a 10-foot radius with non-flammable material. The certificate holder shall maintain the non-flammable pad area covering during operation of the facility.

58 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.

59 During construction and operation of the facility, the certificate holder shall ensure that the O&M buildings and all service vehicles are equipped with shovels and portable fire extinguishers of a 4A5OBC or equivalent rating.

60 During construction and operation of the facility, the certificate holder shall develop and implement fire safety plans in consultation with the North Gilliam County Rural Fire Protection District to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. 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.

61 Upon the beginning of operation of the facility, the certificate holder shall provide a site plan to the North Gilliam County Rural Fire Protection 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.

62 During construction, the certificate holder shall ensure that construction personnel are trained in fire prevention and response, 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.

63 During operation of the facility, 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.

64 Before beginning construction of:

i. Phase 1, 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. The certificate holder shall promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation.

ii. Phase 2, 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 to determine if the structure(s) are a hazard to air navigation and aviation safety. The certificate holder shall promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation. The FAA and ODA evaluation and determinations are valid for 18 months (per OAR 738-070-0180), once issued. The certificate holder shall maintain current hazard determinations on file commensurate with construction timelines. [AMD4]

65 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.

66 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.

67 During operation of the facility, the certificate holder shall have a 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.

68 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.

69 To protect the public from electrical hazards, the certificate holder shall enclose the facility substations, solar array, and battery storage systems with appropriate fencing and locked gates. [AMD4]

70 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 in a form satisfactory to ODOT and the Department for the location, construction and maintenance of a new approach to State Highway 19 for access to the site south of Tree Lane. The certificate holder shall submit the necessary application in a form satisfactory to ODOT and the

Department for the location, construction and maintenance of transmission lines crossing Highway 19.

71 The certificate holder shall design and construct new access roads and private road improvements to standards approved by the Gilliam County Road Department or, where applicable, the Morrow County Public Works 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 Gilliam County Road Department or, where applicable, the Morrow County Public Works 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 Oregon Department of Transportation (ODOT) standards subject to the approval of ODOT.

72 The certificate holder shall construct access roads with a finished width of up to 20 feet, designed under the direction of a licensed engineer and compacted to meet equipment load requirements.

73 During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, including:

(b) Providing notice to adjacent landowners when heavy construction traffic is anticipated.

(c) Providing appropriate traffic safety signage and warnings.

(d) Requiring flaggers to be at appropriate locations at appropriate times during construction to direct traffic.

(e) Using traffic diversion equipment (such as advance signage and pilot cars) when slow or oversize construction loads are anticipated.

(f) 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.

(g) Encouraging carpooling for the construction workforce.

(h) Including traffic control procedures in contract specifications for construction of the facility.

(i) Keeping Highway 19 free of gravel that tracks out onto the highway at facility access points.

74 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 Gilliam County Road Department or, where applicable, the Morrow County Public Works Department.

75 The certificate holder shall cooperate with the Gilliam County Road Department ~~and with the Morrow 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. Submittal to the Department of an executed Road Use Agreement with Gilliam County shall constitute evidence of compliance with this condition. 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. If required by ~~Morrow County or~~ Gilliam County, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility. If construction of a phase of the facility will utilize county roads in counties other than Gilliam County, the certificate holder shall coordinate with the Department and the respective county road departments regarding the implementation of a similar Road Use Agreement. [AMD4]

76 During construction, the certificate holder shall require that all on-site construction contractors develop and implement a site health and safety plan 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.

77 During operation of the facility, the certificate holder shall develop and implement a site health and safety plan that informs employees and others on-site about first aid techniques and what to do in case of an emergency, including a contingency plan in a fire emergency, and that includes important telephone numbers and the locations of on-site fire extinguishers, ~~and~~ nearby hospitals, Gilliam County Sheriff's Office and the office locations of the backup law enforcement services. The certificate holder shall ensure that operations personnel are trained and equipped for tower rescue. If the certificate holder conducts an annual emergency drill or performs tower rescue training at the facility, the North Gilliam County Rural Fire Protection District and the Arlington Fire Department will be invited to observe. [AMD4]

78

(a) During construction ~~and operation~~ of the facility, the certificate holder shall provide ~~for~~ on-site security within the facility site boundary, and shall establish good communications between on-site security personnel and the Gilliam County Sheriff's Office by establishing a communication protocol between the security personnel and the Sherriff's office. The communication protocol shall be sent to the Department prior to construction.

(b) 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. The list shall also be sent to the Department.

79 The certificate holder shall notify the Department of Energy and the Gilliam County Planning Department within 72 hours of any accidents including mechanical failures on the site associated with construction or operation of the facility that may result in public health and safety concerns

6. Water, Soils, Streams & Wetlands Conditions

80

i. 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 requirements.

ii.

a. Before beginning construction of Phase 2 facility components, the certificate holder shall submit to the Department and Gilliam County Planning Director for review and approval a topsoil management plan including how topsoil will be stripped, stockpiled, and clearly marked in order to maximize topsoil preservation and minimize erosion impacts. [OAR 660-033-0130(38)(f)(B)]. The topsoil management plan may be incorporated into the final Erosion and Sediment Control Plan, required under sub(c) or may be provided to the Department as a separate plan.

b. Prior to beginning facility operation, the certificate holder shall provide the department a copy of a DEQ-approved operational SPCC plan, if determined to be required by DEQ. If an SPCC plan is not required by DEQ, the certificate holder shall prepare and submit to the department for review and approval an operational Spill Prevention and Management plan.

c. During operation, if blade washing and/or solar array washing becomes necessary, the certificate holder shall conduct all equipment washing in compliance with a General Water Pollution Control Permit (WPCF) 1700-C, as issued by DEQ to the site certificate holder's third party contractor. A copy of the permit shall be provided to the Department prior to blade or solar array washing.
[AMD4]

81 During construction, the certificate holder shall limit truck traffic to improved road surfaces to avoid soil compaction, to the extent practicable.

82 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.

83 Before beginning construction of the facility or a phase of the facility, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility or phase of the facility, and the areas that would be disturbed during construction and showing the wetlands and stream channels previously surveyed by CH2M HILL or HDR as described in the Final Order on the Application and the Final Order on Amendment #4. For areas to be disturbed during construction that lie outside of the previously-surveyed areas, the certificate holder shall hire qualified personnel to conduct a pre-construction investigation to determine whether any jurisdictional waters of the State exist in those locations within the proposed expanded site boundary. The certificate holder shall provide a written report on the pre-construction investigation to the Department and the Department of State Lands for approval before beginning construction of the phase. The certificate holder shall ensure that

construction and operation of the facility will have no impact on any jurisdictional water identified in the pre-construction investigation.

84 The certificate holder shall avoid impacts to waters of the state in the following manner:

(a) The certificate holder shall avoid any disturbance to delineated wetlands.

(b) The certificate holder shall construct stream crossings for roads and underground collector lines substantially as described in the Final Order on the Application or the Final Order on Amendment #4. In particular, 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.

(c) The certificate holder shall construct support poles for aboveground lines outside of delineated stream channels and shall avoid in-channel impacts.

85 During facility operation, the certificate holder shall routinely inspect and maintain all facility components including roads, pads (including turbine and battery storage pad), solar array, and trenched areas and, as necessary, maintain or repair erosion and sediment control measures.

86 During facility operation, the certificate holder shall obtain water for on-site uses from on-site wells located near the O&M buildings. The certificate holder shall construct on-site wells subject to compliance with the provisions of ORS 537.765 relating to keeping a well log. The certificate holder shall not use more than 5,000 gallons of water per day from the on-site wells. The certificate holder may use other sources of water for on-site uses subject to prior approval by the Department.

87 During facility operation, if blade-washing or washing of solar panels 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.

7. Transmission Line & EMF Conditions

88 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 27 miles.

89 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) 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.

(c) 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.

(d) Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.

90 In advance of, and during, preparation of detailed design drawings and specifications for 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.

8. Plants, Wildlife & Habitat Protection Conditions

91 Prior to construction of the Facility or a phase of the Facility, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plans (WMMPs), based on the draft WMMP included as Attachment ~~E~~F of the Final Order on Request for Amendment ~~#3~~4, 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. [Amendment #3; AMD4]

92 The certificate holder shall restore areas disturbed by facility construction but not occupied by permanent facility structures according to the methods and monitoring procedures described in the final Revegetation Plans for each phase of the Facility, as approved by the Department in consultation with ODFW. The final Revegetation Plan shall be based on the draft plan that is incorporated as Attachment F in the Final Order on Request for Amendment #3 as amended from time to time. [Amendment #3; AMD4]

93 (a) The certificate holder shall 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 and shall provide a copy of the documentation to the Department. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plans for each phase of the Facility, as approved by the Department in consultation with ODFW. The final Habitat Mitigation Plans shall be based on the draft plan included as Attachment G to the Final Order on Request for Amendment #3 and updated based on Condition 31. The final Habitat Mitigation Plans may be amended from time to time. [Amendment #3, AMD4]

(b) Prior to construction of Phase 2 components, the certificate holder shall finalize and implement the Phase 2 Habitat Mitigation Plan (HMP) included as Attachment XX of the Draft Proposed Order, as approved by ODOE in Consultation with ODFW. Provision 93(b)(A) regarding impacted acreage calculations shall be completed and submitted to the department after construction is complete as described in the condition below.

(A) Within 30 days of completion of construction, the certificate holder shall submit to the department and ODFW an updated HMP Table.

[AMD4]

94 The certificate holder shall determine the boundaries of Category 1 Washington ground squirrel (WGS) habitat based on the locations where the squirrels were found to be active in the most recent WGS survey prior to the beginning of construction in habitat suitable for WGS foraging or burrow establishment ("suitable habitat"). The certificate holder shall hire a qualified professional biologist who has experience in detection of WGS to conduct surveys using a survey protocol approved by the Oregon Department of Fish and Wildlife (ODFW). The biologist shall survey all areas of suitable habitat where permanent facility components would be located or where construction disturbance could occur. Except as provided in (a), the biologist shall conduct the protocol surveys in the active squirrel season (March 1 to May 31) in 2010 and in the active squirrel seasons in subsequent years until the beginning of construction in suitable habitat. The certificate holder shall provide written reports of the surveys to the Department and to ODFW and shall identify the boundaries of Category 1 WGS habitat. The certificate holder shall not begin construction within suitable habitat until the identified boundaries of Category 1 WGS habitat have been approved by the Department. Category 1 WGS habitat includes the areas described in (b) and (c).

(a) The certificate holder may omit the WGS survey in any year if the certificate holder avoids all permanent and temporary disturbance within suitable habitat until a WGS survey has been completed in the following year and the boundaries of Category 1 habitat have been determined and approved based on that survey.

(b) Category 1 WGS habitat includes the area within the perimeter of multiple active WGS burrows plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. If the multiple-burrow area was active in a prior survey year, then Category 1 habitat includes the largest extent of the active burrow area ever recorded (in the current or any prior-year survey), plus a 785-foot buffer.

(c) Category 1 WGS habitat includes the area containing single active burrow detections plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. Category 1 habitat does not include single-burrow areas that were found active in a prior survey year but that are not active in the current survey year.

95 The certificate holder shall implement measures to mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following:

(a) The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.

(b) Before beginning construction, but no more than two years prior to the beginning of construction of a phase of the facility, the certificate holder shall hire a qualified professional biologist to conduct a survey of all areas to be disturbed by construction for threatened and endangered species. The certificate holder shall provide a written report of the survey and a copy of the survey to the Department, the Oregon Department of Fish and Wildlife (ODFW), and the Oregon Department of Agriculture (ODA). 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.

(c) Before beginning construction of a phase of the facility, the certificate holder's qualified professional biologist shall survey the Category 1 Washington ground squirrel habitat to ensure that the sensitive use area is correctly marked with exclusion flagging and avoided during construction. The certificate holder shall maintain the exclusion markings until construction has been completed.

(d) Before beginning construction of a phase of the facility, certificate holder's qualified professional biologist shall complete the avian use studies that began in September 2009 at six plots within or near the facility site as described in the Final Order on the Application. The certificate holder shall provide a written report on the avian use studies to the Department and to ODFW.

(e) Before beginning construction of a phase of the facility, certificate holder's qualified professional biologist shall complete raptor nest surveys within the raptor nest survey area as described in the Final Order on the Application. The purposes of the survey are to identify any sensitive raptor nests near construction areas and to provide baseline information on raptor nest use for analysis as described in the Wildlife Monitoring and Mitigation Plan referenced in Condition 91. The certificate holder shall provide a written report on the raptor nest surveys and the surveys to the Department and to 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.

(f) In the final design layout of the facility, the certificate holder shall locate facility components, access roads and construction areas to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape where practicable.

96 During construction, the certificate holder shall avoid all construction activities within a 1,300-foot buffer around potentially-active nest sites of the following species during the sensitive period, as provided in this condition:

Species	**Sensitive Period**	**Early Release Date**
Swainson's hawk	April 1 to August 15	May 31
Ferruginous hawk	March 15 to August 15	May 31
Burrowing owl	April 1 to August 15	July 15

During the year in which construction occurs, the certificate holder shall use a protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine whether there are any active nests of these species within a half-mile of any areas that would be disturbed during construction. The certificate holder shall begin monitoring potential nest sites by March

15 and shall continue monitoring until at least May 31 to determine whether any potentially-active nest sites become active during the sensitive period.

If any nest site is determined to be unoccupied by the early release date (May 31), then unrestricted construction activities may occur within 1,300 feet of the nest site after that date. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder will flag the boundaries of a 1,300-foot buffer area around the nest site and shall instruct construction personnel to avoid disturbance of the buffer area. During the sensitive period, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) within the buffer area. The certificate holder shall restrict construction traffic within the buffer, except on public roads, to vehicles essential to the limited construction activities allowed within the buffer.

If burrowing owl nests are occupied during the sensitive period, the certificate holder may adjust the 1,300-foot buffer around these nests after consultation with ODFW and subject to the approval of the Department.

The certificate holder shall hire a qualified independent professional biologist to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any non-compliance with this condition. If the biologist observes nest site abandonment or other adverse impact to nesting activity, the certificate holder shall implement appropriate mitigation, in consultation with ODFW and subject to the approval of the Department, unless the adverse impact is clearly shown to have a cause other than construction activity.

The certificate holder may begin or resume construction activities within the buffer area before the ending day of the sensitive period with the approval of ODFW, after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (the young are independent of the core nest site).

97 The certificate holder shall protect the area within 1,300 feet of the BLM Horn Butte Wildlife Area during the long-billed curlew nesting season (March 8 through June 15), as described in this condition. Before beginning construction, the certificate holder shall provide to the Department a map showing the areas of potential construction disturbance in the vicinity of the BLM lands that are part of the Horn Butte Wildlife Area and showing a 1,300-foot buffer from those areas. During the nesting season, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) or allow high levels of construction traffic within the buffer area. The certificate holder shall flag the boundaries of the 1,300-foot buffer area and shall instruct construction personnel to avoid any unnecessary activity within the buffer area. The certificate holder shall restrict construction traffic within the buffer, except on public roads, to vehicles essential to the limited construction activities allowed within the buffer. The certificate holder may engage in construction activities within the buffer area at times other than the nesting season.

98 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 maps to show occlusion 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 constraints maps.

(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.

99 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) Locating turbine towers to avoid areas of increased risk to avian species, such as cliff edges, narrow ridge saddles and gaps between hilltops.

(c) Installing meteorological towers that are non-guyed structures to eliminate the risk of avian collision with guy-wires.

(d) 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.

100 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.

101 The certificate holder shall impose and enforce a construction and operation speed limit of 20 miles per hour throughout the facility site and, during the active squirrel season (March 1 to May 31), a speed limit of 10 miles per hour from one hour before sunset to one hour after sunrise on private roads near known Washington ground squirrel (WGS) colonies. The certificate holder shall ensure that all construction and operations personnel are instructed to watch out for and avoid WGS and other wildlife while driving through the facility site.

9. Visual Effects Conditions

102 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 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 buildings 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.

103 The certificate holder shall design and construct the O&M buildings, substation, and buildings and containers associated with battery storage 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.

104 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) Security lighting at the O&M buildings and at the substations, provided that such lighting is shielded or downward-directed to reduce glare.

(c) Minimum lighting necessary for repairs or emergencies.

(d) Minimum lighting necessary for construction directed to illuminate the work area and shielded or downward-directed to reduce glare.

105 The certificate holder shall maintain a minimum distance of 1,000 feet measured from the centerline of each turbine tower or meteorological tower to the centerline of the line-of-sight from the vantage point of the Fourmile Canyon interpretive site looking toward the visible Oregon Trail ruts (bearing S 89-42-34 W from latitude, longitude: 45.622047, -120.044112) as described in the Final Order on the Application.

10. Noise Control Conditions

106 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.

107 The certificate holder shall provide to the Department ~~Before beginning construction, the certificate holder shall provide to the Department~~:

i. Prior to Phase 1 construction:
   a. Information that identifies the final design locations of (all turbines, to be built at the facility…

ii. For Phase 2 of the facility:

a. Prior to construction, a noise analysis that includes the following Information:

Final design locations of all Phase 1 and Phase 2 noise generating facility components (all wind turbines; substation transformers; inverters and transformers associated with the photovoltaic solar array; and inverters and cooling systems associated with battery storage system).

The maximum sound power level for the Phase 2 substation transformers; inverters and transformers associated with the photovoltaic solar array; inverters and cooling systems associated with battery storage system; and the maximum sound power level and octave band data for the Phase 2 wind turbines selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the Department.

The results of noise analysis of Phase 1 and Phase 2 components according to the final design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B)(iii) (IV) and (VI) demonstrating to the satisfaction of the Department that the total noise generated by the facility (including the noise from wind turbines, substation transformers, inverters and transformers associated with the photovoltaic solar array; inverters and cooling systems associated with battery storage system) would meet the ambient degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties.

For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the 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: include a legal description of the burdened property (the noise-sensitive property); be recorded in the real property records of the county; expressly benefit the certificate holder; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.

b. During operation, if the results of the pre-construction final noise analysis submitted per Condition 107(ii) identify that modeled noise levels are predicted to be within 1 dBA of the ambient degradation standard (10 dBA) for noise sensitive properties where noise waivers were not obtained, or within 1 dBA of the maximum allowable noise standard (50 dBA) for any noise sensitive property, the certificate holder shall monitor and record actual statistical noise levels at these noise sensitive properties to verify that Phase 2 facility components are operating in compliance with the noise control regulation. The monitoring plan must be reviewed and approved by the Department prior to implementation.

If, during monitoring, the ambient degradation standard (10 dBA) or maximum allowable noise standard (50 dBA) are exceeded at any noise sensitive property, the certificate holder shall submit to the Department its mitigation proposal demonstrating

the measures to be utilized to lower noise levels and achieve compliance with the applicable noise standard. The mitigation proposal shall be reviewed and approved by the Department.
[Final Order on ASC; AMD4]

108 During operation of the facility, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall promptly notify the Department of any complaints received regarding facility noise and of any actions taken by the certificate holder to address those complaints. In response to a complaint from the owner of a noise sensitive property regarding noise levels during operation of the facility, the Council may require the certificate holder to monitor and record the statistical noise levels to verify that the certificate holder is operating the facility in compliance with the noise control regulations

11. Waste Management Conditions

109 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.

110 During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&M buildings to licensed on-site septic systems in compliance with State permit requirements. The certificate holder shall design the septic systems for a discharge capacity of less than 2,500 gallons per day.

111 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 waste hauler.

(e) Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lithium-ion, flow, 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 within the foundation excavation, discharging rinse water into foundation holes and burying other concrete waste as part of backfilling the turbine foundation.

112 The certificate holder shall implement a waste management plan during facility 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 lithium-ion, flow, lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes.

VI. CONDITIONS ADDED BY AMENDMENT # 1 OF MONTAGUE

113 ~~The transfer of the First Amended Site Certificate from the certificate holder to Portland General Electric (PGE), the transferee, shall not be effective until PGE executes in closing the form of site certificate naming PGE the certificate holder, which is attached as Attachment B to the Final Order on Amendment #1. Upon closing, the First Amended Site Certificate naming PGE as the certificate holder shall be in full force and effect and the First Amended Site Certificate naming Montague Wind Power LLC as the certificate holder shall be considered rescinded and void in its entirety.~~ Removed by Amendment #2.

114 ~~Should the closing contemplated in Condition 113 not occur within 18 months of the effective date of the First Amended Site Certificate to Montague Wind Power LLC, the Council's transfer approval within the Final Order on Amendment #1 shall be void.~~ Removed by Amendment #2.

115 ~~PGE must provide the Department a copy of the executed First Amended Site Certificate and documentation of the asset purchase agreement within 7 days of closing.~~ Removed by Amendment #2.

VII. CONDITIONS ADDED BY AMENDMENT #4 OF MONTAGUE

116: The certificate holder shall:

a. Prior to and during construction, as applicable, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.

b. Prior to transporting and disposing of battery and battery waste during facility operations, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.

[AMD4]

117 During operations, the certificate holder shall:

a. Upon written notification from the Department, monitor and record the actual statistical noise levels to verify that the facility is in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the Department prior to implementation. The cost of such monitoring, if required, will be borne by the certificate holder.

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

c. If the ambient degradation threshold (10 dBA) at noise sensitive properties that have not agreed to a noise waiver with the certificate holder, or maximum allowable noise level (50 dBA) at any noise sensitive property is measured at any noise sensitive property during monitoring conducted to satisfy (a) or (b) of this condition, the certificate holder shall submit to the Department its mitigation proposal demonstrating the measures to be utilized to lower noise levels and achieve compliance with the applicable noise standard. The mitigation proposal shall be reviewed and approved by the Department. [AMD4]

118 During facility operation, the certificate holder shall:

a. Conduct monthly inspections of the battery storage systems, in accordance with manufacturer specifications. The certificate holder shall maintain documentation of inspections, including any corrective actions, and shall submit copies of inspection documentation in its annual report to the Department.

b. Provide evidence in its annual report to the Department of active property coverage under its commercial business insurance from high loss-catastrophic events, including but not limited to, onsite fire or explosion. [AMD4]

119 For any Phase 2 final facility design in which the certificate holder proposes to construct wind turbines within the Phase 2 site boundary expansion, the certificate holder shall maintain a minimum distance of 656 feet (200 meters), measured from the centerline of the turbine tower to the nearest edge of the breaks of Rock Creek Canyon. Prior to construction, the certificate holder shall provide the Department and ODFW evidence of compliance with this condition in the form of a map. The Department, in consultation with ODFW, shall review and approve compliance with this condition prior to beginning construction of any Phase 2 design scenario which includes wind turbines. [AMD4]

VIII. SUCCESSORS AND ASSIGNS

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

IX. SEVERABILITY AND CONSTRUCTION

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

X. GOVERNING LAW AND FORUM

This 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.

XI. EXECUTION

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

IN WITNESS WHEREOF, this site certificate has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and by Montague Wind Power Facility, LLC.

ENERGY FACILITY SITTING COUNCIL

By: _____

Print: _____

Date: _____

MONTAGUE WIND POWER FACILITY, LLC

By: _____

Print: _____

Date: _____

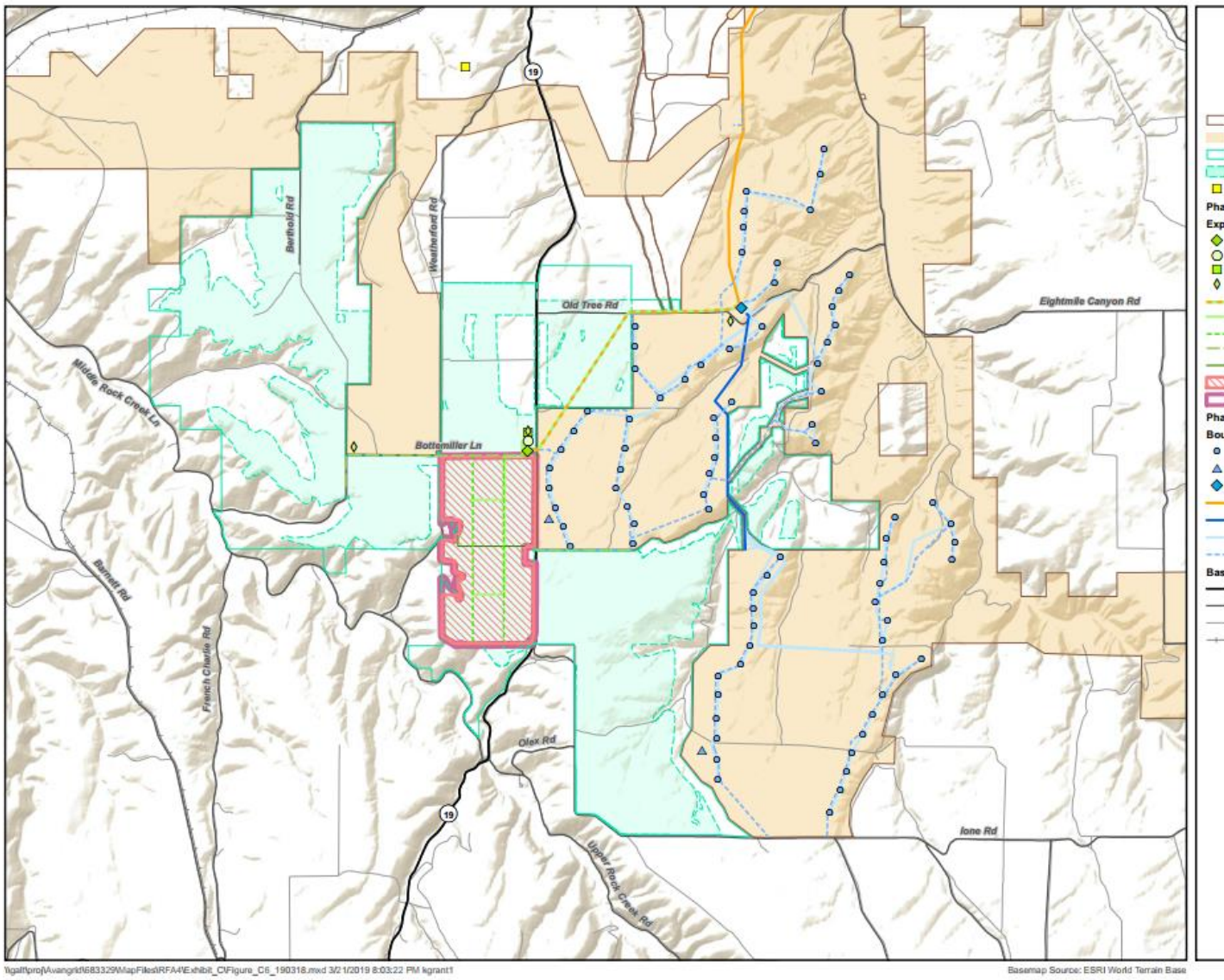
and

By: _____

Print: _____

Date: _____

Figure 1: Site Boundary



Attachment B: Reviewing Agency Comments on preliminary RFA4

Attachment B: Reviewing Agency Comments on preliminary RFA4		
Document Name	**Commenter / Reviewing Agency**	**Date Comment Received**
MWPAMD4 ODOE Response to Michelle Colby 12 questions	Michelle Colby / Gilliam County	1/25/2018
MWPAMD4 Special Advisory Group GCo Comments 2019-02-20	Elizabeth Farrar / Gilliam County Judge	2/20/2019
MWPAMD4 CTUIR review of Montague response 2018-10-08	Teara Farrow Ferman / CTUIR	10/8/2018
MWPAMD4 CTUIR-CRPP RFA4 Comment Letter LETTER 2019-03-26	Shawn Steinmetz / CTUIR	3/26/2019
MWPAMD4 CTWS pRFA review response 2019-01-17	Christian Nauer / Warm Springs Tribe	1/17/2019
MWPAMD4 Reviewing Agency Comments pRFA DLCD 2018-03-01	Tim Murphy / DLCD	3/1/2018
MWPAMD4 Montague Response to DLCD Comment 2018-08-09*	Paul Hicks /CH2M HILL	8/8/2018
MWPAMD4 DLCD complete review of Montague response 2018-10-10	Tim Murphy / DLCD	10/10/2018
MWPAMD4 Reviewing Agency Comments pRFA DOGAMI Wang 2018-07-17	Yumei Wang / DOGAMI	7/17/2018
MWPAMD4 Montague Response to DOGAMI Comments 2018-08-09*	Josh Butler / CH2M HILL	8/7/2018
MWPAMD4 Reviewing Agency Comments pRFA ODFW LETTER 2018-02-28	Steve Cherry & Sarah Reif / ODFW	2/23/2018
MWPAMD4 Montague Response to ODFW Comments 2018-08-09*	Forrest Parsons / CH2M Hill	7/26/2018
MWPAMD4 ODFW review of Montague response 2018-10-08	Steve Cherry / ODFW	10/8/2018
MWPAMD4 ODOT Response (CROOK) 2018-05-30	Geoff Crook / ODOT	5/30/2018
MWPAMD4 ODOT Response (LAPP) 2018-05-30	Thomas Lapp / ODOT	5/30/2018
MWPAMD4 WD2018-0660final 2019-03-07	Daniel Evans / DSL	3/5/2019
MWPAMD4 ODA Determination Letter 2018-11-16	Matt Lawyer / ODA	11/16/2018
MWPAMD4 Reviewing Agency Comments pRFA SHPO (Case No 10-0378) GRIFFIN Letter 2019-01-04	Dennis Griffin / SHPO	1/4/2019
MWPAMD4 SHPO Response Letter Case Nbr SHPO Case No._ 10-0378	Tracy Schwartz / SHPO	3/1/2019

*Documents are submitted by certificate holder to address agency comments

MAY Luke * ODOE

From: MCVEIGH-WALKER Chase * ODOE
Sent: Friday, January 25, 2019 9:00 AM
To: 'Michelle Colby'
Subject: RE: Montague Wind Power Facility Request for Amendment 4 - Request for Special Advisory Group Review
Attachments: Michelle Colby 12 questions 2019-01-25.docx

Good morning Michelle,

Attached to this email, please find my responses to the 12 questions you provided last week. I hope that my responses will help you navigate through the Montague RFA 4 materials. Please let me know if you have any other questions, and/or my responses are confusing.

Thanks,
-Chase

From: Michelle Colby [mailto:michelle.colby@co.gilliam.or.us]
Sent: Monday, January 14, 2019 11:19 AM
To: MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
Subject: RE: Montague Wind Power Facility Request for Amendment 4 - Request for Special Advisory Group Review

Chase –

Good Monday morning. The new members of the county court would like to know if you would be available (in-person or telephonically) to give an overview of Phase II and Amendment No. around 10:00'ish on Wednesday January 23rd?

With that I have a few questions and as Amendment No. 4 is lengthy maybe you can direct me to where in the materials the answer may be found.

1. What criteria is being used for the battery storage? I believe it is being cited as an accessory use, can you direct me to the findings?
2. I believe battery storage connected with a wind facility, especially at this level is not common in the state of Oregon, where might the findings or more specifics on this component be found in the materials?
3. How is battery storage power implemented/distributed? Can it be interrupted as generation?
4. Is there a Goal 3 exception being taken for the solar component? If so, where can the findings be found in the materials?
5. Is there a Goal 3 exception being taken for the battery component? If so, where can the findings be found in the materials?
6. Has the Navy provided final comment on Amendment No. 4? If so, where can the findings be found in the materials?
7. The tower height is proposed to increase to a maximum of 597.1 ft. what is the new blade tip length potential?

8. Is the turbine/nacelle being increased? Or was it always proposed at 4.2 MW engines?
9. I think you used the term 'Mega siting', what does this mean?
10. I think you used the term 'energy corridor', what does this mean?
11. Phase II are there any permanent structures besides the towers and potential solar and battery storage?
12. Is the state requiring the company to make up their mind about which option will be carried out by a certain timeframe?

Sorry about all of the questions, I appreciated any assistance you can provide.

Thank you.

Michelle Colby

Gilliam County
Planning Dept.
221 S. Oregon St., Rm 104
PO Box 427
Condon, OR 97823
Ph. 541.384.2381
Fax 541.384.3304
www.co.gilliam.or.us

From: MCVEIGH-WALKER Chase * ODOE [mailto:Chase.McVeigh-Walker@oregon.gov]
Sent: Wednesday, January 09, 2019 4:05 PM
To: Elizabeth Farrar <elizabeth.farrar@co.gilliam.or.us>; Leslie Wetherell <leslie.wetherell@co.gilliam.or.us>; Sherrie Wilkins <sherrie.wilkins@co.gilliam.or.us>
Cc: Michelle Colby <michelle.colby@co.gilliam.or.us>
Subject: Montague Wind Power Facility Request for Amendment 4 - Request for Special Advisory Group Review

Good afternoon Gilliam County Court (attn.: Michelle Colby),

Earlier this year, the Oregon Department of Energy received preliminary Request for Amendment 4 (pRFA4) of the Montague Wind Power Facility Site Certificate (link provided below). The Montague Wind Power Facility is an approved wind energy facility, located in Gilliam County, with up to 262 wind turbines and a maximum capacity of 404 megawatts. The approved facility is located within a site boundary of approximately 33,717 acres. Because the facility is located within Gilliam County, Gilliam County Court was appointed as a Special Advisory Group (SAG) by the Energy Facility Siting Council (EFSC).

On Monday, December 24, 2018, Montague Wind Power Facility, LLC (the Certificate Holder, or Montague) provided the Department with a Revised preliminary Request for Amendment 4. The revised pRFA incorporates information request responses and amends the turbine model option proposed in "Design Scenario B".

The revised pRFA requests Council's approval for the following primary components: expansion of the site boundary to encompass approximately 13,339 acres; wind turbine relocation and turbine model option modifications; and the addition of both a solar array

and battery storage system to the proposed expanded site boundary. The components included in the amendment request would be located within Gilliam County. The revised pRFA4 requests three (3) varying design scenario's (Scenarios A, B, C). A couple of the turbine model option modifications proposed by Montague for "Design Scenario B" include an increase in the turbine hub height from 295 to 351.1 feet, an increase in blade tip height from 486 to 597.1 feet, and an increase in blade (rotor) diameter from 381 to 492.1 feet. Design Scenarios A and C did not change as a result of the proposed turbine modifications of Scenario B.

We would like to request your review and comment on the amendment by **January 25, 2019** (Please let us know if additional time is needed). In particular, we have the following questions:

- Please confirm whether the above-provided description would trigger the applicability of any other county code provisions that should necessarily be evaluated through the site certificate amendment process.
- Please review the applicable substantive criteria that Montague addressed in the amendment, and determine if all the applicable criteria have been included. If not, please identify those additional criteria that must be assessed by Montague

A Description of the facility and components of the amendment request, including Exhibit K (Land Use), are available on our website at:

http://www.oregon.gov/energy/facilities-safety/facilities/Pages/MWP.aspx

Gilliam County is also encouraged to review and comment on any other exhibits and RFA materials that may be of interest to the County.

Thank you, and please do not hesitate to contact me with any questions.

Regards,
Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, clean, and sustainable energy future.

12 Question from Michelle Colby RE: MWPAMD4

1/25/19

Response to questions related to Battery Storage (Questions 1, 2, 3, and 5)

Montague has proposed the construction of two options of Battery Storage System technologies: "Lithium Ion" or "Flow." Most commonly used for utility-scale battery storage systems, Lithium Ion (Li-ion) batteries are a type of solid state, rechargeable battery that have a typical life-span of 5 to 10 years. Conversely, flow batteries, which refer to any battery where two electrolyte solutions contained in separate tanks create electricity via the migration of electrons from one solution to the other, typically have a lifespan of 10 to 20 years. Both proposed options are not to exceed 100 MW of storage capacity or approximately 6.4 acres of permanent disturbance. The battery storage systems are comprised of individual units the approximate size of a shipping container. Section 3.2.3.1 of the "RFA4 Narrative," Montague provides descriptions of the two proposed battery storage options; Lithium-ion and Flow batteries.

We are not aware of any battery storage systems of this size currently operating in Oregon, though battery storage systems are becoming increasingly common at large-scale renewable energy facilities across the country. In December, EFSC approved the first large scale battery storage system in Oregon, which would be located at the Wheatridge Wind Energy facility in Morrow and Umatilla Counties (Wheatridge is not yet built).

Regarding integration and distribution of power from the battery system, Montague describes in its application: *Montague will use the battery storage system for stabilizing the wind or solar resource through dispatching of either short term (minutes) or long-term (hours) energy stored in the battery system. Battery storage technology can be (1) used to smooth the intermitted generation of wind turbines or solar modules, (2) store energy for later delivery during periods of peak demand, or (3) grid integration services via voltage support, frequency regulations and ramp control.*"

We are currently reviewing other proposals for battery storage systems in a number of counties throughout the State, including Lake County, Umatilla County, Morrow County, Columbia County, and Gilliam County. So far, the only specific criteria identified and included in our review relates to the transportation of Lithium-ion batteries (subject to 49 *Code of Federal Regulations* 173.185 – Department of Transportation Pipeline and Hazardous Material Administration). Montague's analysis on this provision can be found in Section U.7.9 of Exhibit U (Public Services). During our review of the Wheatridge battery system proposal, multiple questions and issues were discussed, mostly concerning transportation, safe handling, fire safety, and eventual disposal of batteries. For Wheatridge, we concluded and our Council agreed that the battery storage system can be safely constructed and operated, in accordance with EFSC standards and state and local rules. We are addressing similar issues with the Montague battery storage system.

We do not believe that the battery storage system in and of itself needs a Goal 3 exception as it is classified as a component of the wind facility, or what is termed a "related or supporting facility" by EFSC rules. As such, we are reviewing the battery system as a component of the conditional use permit review for the wind facility as a commercial utility facility for purposes of generating power for sale. The proposed solar array does require a Goal 3 exception. Montague's proposed demonstration of compliance with land use criteria are found in Exhibit K.

Response to questions related to Wind Turbines (Questions 7, 8, and 9)

Montague is seeking EFSC approval of a range of turbine options, and yes, the tallest would be up to approximately 597 feet total height. Though, Montague has indicated that while it is seeking approval of the taller turbine model option, it may not ultimately select that model for installation. The blade length of the largest turbine would be 246 feet (75 m).

Table 1 of the "RFA4 Narrative" provides a comparison of the approved turbine dimensions, and the dimensions of the proposed design scenario B turbine.

The taller turbine model option would also be able to produce up to 4.2 MW. The smaller turbines would produce 3.6 MW. EFSC does not regulate the specific MW output per turbine, rather, it is the impact of the facility that we are interested in and that typically equates to the a limit on the size and dimensions of the turbine model, but no restrictions on the MW output per turbine.

In our phone call last week, the term I used when describing the amendment request was "micrositing corridor." Council rules allow for an applicant to propose "micrositing corridors," within which energy facility or related and supporting facility components can be constructed. The "micrositing corridor" concept allows an applicant to apply for a site certificate or site certificate amendment prior to establishing final exact facility component locations. As such, an application may represent the location of facility components within a micrositing corridor, and subject to Council review, approval, and conditions, the development can proceed anywhere within the micrositing corridor.

By offering this flexibility, there is a tradeoff. Applicants wishing to utilize the micrositing corridor concept must demonstrate that the proposed facility would meet all applicable Council standards and rules within the entirety of the micrositing corridor as they pertain to the specific facility components proposed for construction within the corridor. This can be a complex endeavor, particularly due to field surveys and impact assessment evaluations that must contemplate a range of component locations. As such, the Department typically sees applications requesting a micrositing corridor approval as narrow "fingers" of land. The "micrositing corridor" concept related to the Montague solar array is further described below.

Response to questions related to the Solar Array (Questions 4 and 10)

Yes, the solar array requires a Goal 3 exception. Exhibit K (Land Use) of RFA4, Montague provides its evaluation of how the proposed amended facility components would comply with the Council's Land Use standard and the Gilliam County land use criteria, and also its proposed reasons for a Goal 3 exception. Section K.7.4 (Page K-65) of Exhibit K is where the evaluation of the Goal 3 Exception for the solar array begins.

Montague is requesting approval to construct the solar array anywhere within a 1,189 acre parcel, what it terms the "solar micrositing area," but the total size of the solar array would not exceed 640 acres. This requested flexibility, as we understand it, is to give Montague time to work with the landowner to best understand the optimum layout based on the landowners preferences. In Section 3.2.2.2 of the RFA4 Narrative, Montague explains their approach to siting the solar array within a "solar micrositing area". As proposed, the "solar micrositing area" would restrict the development of the solar array to a confined area within the larger proposed micrositing corridor. The "micrositing" corridor concept has typically been used for wind facilities, transmission lines, and pipelines, and, in short, allows a developer to demonstrate that it meets all applicable EFSC standards and rules if it were to place its facility components anywhere within a defined area. This would allow a developer to work with a landowner, for example, to "microsite" facility components to best respond to landowner concerns or requests. In

Section K.7.4.1 of Exhibit K, you can find additional information about the solar micrositing array concept. The location of the solar micrositing area within the proposed site boundary expansion can be found on Figure 4 of the RFA4 Narrative. Greater visual representation of the proposed solar array can be found on Figures B-4 through B-6 of Exhibit B. Montague provided a "Supplemental Visual Analysis" as Attachment R-1 of Exhibit R (Scenic Resources), which includes visual simulations of the Solar Array and wind turbines looking North from Highway 19 at Baseline Road, and of the proposed 4.2 MW, 182 meter tall turbines from the Olex community.

For questions 9 and 10, I think that "Mega-siting and energy corridor" were misheard, and the terms I used were ""Micrositing corridor and solar energy micrositing corridor."

Response to Question 6:

The Navy has not yet provided comments on Amendment 4. This is because the Navy is not considered a "reviewing agency," but rather a member of the public, and there has not yet been a public comment period for this amendment. Once the Department issues the DPO, a public comment period will commence, and would be the appropriate time for the Navy to comment on the amendment. Montague may be working with the Navy outside of our process, but that is a question for them.

However, the Oregon Department of Aviation recently conducted an aeronautical study of the proposed construction of the Montague facility wind Turbines (both Phase 1 and Phase 2), and determined that "with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground…[ODA] does not object with conditions to the construction described in [the] proposal." The conditions referenced by the Aviation Department are safety lighting and marking on the wind turbines.

Response to Question 11:

Yes. As proposed, all design scenarios would include wind turbines, a substation, a battery storage system, an O&M building, power collection system (i.e., conduit both above and below ground that moves electricity from the wind turbines, solar array, and batter system to the centralized substation and then distributed out to the grid), meteorological towers, a transmission line, and access roads. Design Scenario C would include a solar array. [See Exhibit B, Sections B.4 and B.5]

Response to Question 12:

Not really. We are currently evaluating all three design scenarios, and in the DPO, will evaluate each scenario, and make findings accordingly. Throughout the application, Montague evaluated the design scenario that it believes would have the greatest potential impact. For a few standards (Protected Areas, Scenic Resources, Fish and Wildlife), the certificate holder used a theoretical "worst case" design scenario in which multiple elements of each design scenario were merged together to form a configuration that would have the greatest impact potential. Although we (the Department) will not force Montague to pick a final design option, if all options are approved by EFSC, there will be conditions of approval that set deadlines for construction commencement and completion. Montague would have to complete construction of the facility by that deadline. For this Amendment, the certificate holder has requested that the construction completion deadline be extended by three years, from September 14, 2020 to September 14, 2023.

County Court
221 S. Oregon St. PO Box 427 Condon, OR 97823
Office: 541.384.6351 Admin: 541.384.3303 Fax: 541.384.3304

February 20, 2019

Chase McVeigh-Walker, Energy Facility Siting Analyst

Oregon Department of Energy

550 Capitol Street. NE, 1st Floor

Salem, OR 97301

RE: Montague Wind Project Amendment No. 4

The Gilliam County Court discussed the proposed Amendment No. 4 to the Montague Wind Project during its regularly scheduled meeting on February 6, 2019. At this time, the Court does not have comment on the specifics of the proposed amendment; however, please keep us informed regarding the release of the Draft Proposed Order.

The Gilliam County Court looks forward to a response to our inquiry, conveyed during our regular meeting, about the Oregon Department of Energy's justification for taking a Goal 3 Exception for the farmland currently being considered for the solar component of the project.

The Court also wishes to thank Chase McVeigh-Walker for taking the time to meet with us on this issue. We request that EFSC continue to work closely with the Gilliam County Planning Department regarding this project as it progresses.

Again, thank you for the opportunity to comment on this important issue.

Sincerely,

Elizabeth A. Farrar

Elizabeth A. Farrar

Gilliam County Judge

Judge Elizabeth Farrar
elizabeth.farrar@co.gilliam.or.us

Commissioner Sherrie Wilkins
sherrie.wilkins@co.gilliam.or.us

Commissioner Leslie Wetherell
leslie.wetherell@co.gilliam.or.us

MCVEIGH-WALKER Chase * ODOE

From: Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>
Sent: Monday, October 8, 2018 2:58 PM
To: MCVEIGH-WALKER Chase * ODOE
Subject: RE: Montague RFA4 response to CTUIR comments

Good afternoon Chase,
The CTUIR has read the responses and are fine with them except for the cultural resources monitoring response. They state:

> " At this time, monitoring by a Professional Archaeologist or other cultural resource specialist is not planned because Montague intends to avoid impacts to known cultural resources. However, the Inadvertent Discovery Plan will be followed, and construction personnel will be trained accordingly. As required by the Montague Site Certificate (Condition 36), a full-time, onsite Assistant Construction Manager will be trained and responsible for environmental compliance. In cases where previously unidentified resources are discovered during construction, all work will stop immediately in the vicinity (30 meters) of the find and Montague will implement the protocol outlined in the Inadvertent Discovery Plan."

They use the term "known cultural resources", but there is a national register eligible historic property, Tɨqáẋtɨqaẋ, which will not be avoided and will be adversely impacted by this project. The reasoning for not having a monitor does not line up with the facts. The CTUIR requests a cultural resources monitor be present for ground disturbing activities.

Thank you,
TEARA FARROW FERMAN

The information in this e-mail may be confidential and intended only for the use and protection of the Confederated Tribes of the Umatilla Indian Reservation. If you have received this email in error, please immediately notify me by return e-mail and delete this from your system. If you are not an authorized recipient for this information, then you are prohibited from any review, dissemination, forwarding or copying of this e-mail and its attachments. Thank you.

From: MCVEIGH-WALKER Chase * ODOE [mailto:Chase.McVeigh-Walker@oregon.gov]
Sent: Monday, October 1, 2018 3:57 PM
To: Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>
Subject: Montague RFA4 response to CTUIR comments

Ms. Teara Farrow Ferman,
Last month, Montague provided a response to the comments you provided for the review of Amendment 4 of the Montague Site Certificate. When you have an opportunity, could you please review the response, and let me know whether you think their response answers and addresses your comment? I have included Montague's response as an attachment to this email.

Thanks,
-Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

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Confederated Tribes *of the*
Umatilla Indian Reservation
Department of Natural Resources
Cultural Resources Protection Program

46411 Timíne Way
Pendleton, OR 97801
Phone (541) 276-3447
Fax (541) 429-7203

March 26, 2019

Sarah Esterson, Senior Siting Analyst
Oregon Department of Energy
Sent via email to: Sarah.Esterson@oregon.gov

Thank you for contacting the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) regarding the Montague Wind Power Facility's Request for Amendment 4. The CRPP offers the following comments for the project.

The Montague Wind Power Facility's Request for Amendment 4 will have a significant adverse effect to historic properties of religious and cultural significance to the CTUIR. The CTUIR first communicated these concerns to Oregon Department of Energy in a letter dated February 26, 2010. The additional development area in the latest amendment to the Montague Wind project's footprint will have a significant adverse effect to two historic properties of religious and cultural significance to the CTUIR. These historic properties are known as *Ulíkš* and *Ala?ála* (Hunn 2015:86).

These historic properties are seasonal camps that were early stops on the CTUIR's seasonal round of First Foods harvesting. These seasonal camps were bases that the CTUIR used to access adjacent plant harvesting and hunting areas. *Ulíkš* and *Ala?ála* are the traditional names for these locations and they are places that are linked together, physically, by a network of trails, and are the places that are referred to when tribal members relay the history of the area in oral histories and stories related to these locations.

The fact that the place names for *Ulíkš* and *Ala?ála* remain and are used confirms that these places are embedded in the CTUIR's culture. Hunn (1996:20) and others assert that place names contain a wealth of information and illustrate indigenous people's reliance on the land and its resources. When these place names are used they are acting as an archive of deep-rooted knowledge and link the present and the past in their use (Banks 2002:209, Hunn 1996:20). Tribal members believe places know their names, which were given by the Creator cannot be changed (OHP 243, Stevens and Palmer 1855).

These historic properties, *Ulíkš* and *Ala?ála*, will be directly affected by Montague Wind Power Facility's Request for Amendment 4 in the following location: T.1 S., R. 22 E., Sections 5, 6, 7, and 8; T.1 S., R. 21 E., Sections 1, 2, 11 and 12; T.1 N., R. 21 E., Sections 22, 25, 26, 27, 28, 34, 35, and 36; T.1 N., R. 20 E., Sections 1, 2, 3, 11 and 12. There will also be indirect effects to the historic properties that will impact the viewshed beyound the locations noted above. The changes proposed in Amendment 4 will cause a significant adverse effect to the integrity of design, setting, feeling, and association of both historic properties. These historic properties also have integrity of location, but that will not be effected by this project.

CTUIR elders believe that *Ulíkš* and *Ala?ála* each retain integrity of location, design, setting, feeling, and association, despite the changes that have already occurred at and around these historic properties. The construction of roads, powerlines, infrastructure, and towers for this project will be a significant adverse effect to the integrity of design, setting, feeling and association at *Ulíkš* and *Ala?ála*. For instance, the significance of these places continues today through ongoing use, stories, traditions, and the belief system that have been passed down through the generations. When constructed the Montague Wind will create an audible intrusion, as the turbines turn and that will be constant disturbance. Diminishing the chances of solitude and quiet contemplation within this space. These quiet communications will be changed forever at this location after the construction of the project ultimately effecting the integrity of design, setting and feeling. Integrity of design, setting and feeling will also be impacted by the tower lights at night and by visible infrastructure during day time visits.

Confederated Tribes *of the*
Umatilla Indian Reservation
Department of Natural Resources
Cultural Resources Protection Program

46411 Timíne Way
Pendleton, OR 97801
Phone (541) 276-3447
Fax (541) 429-7203

These locations are a physical link the CTUIR has with its history and religion and are important elements for perpetuating the CTUIR's ongoing cultural identity. The direct effects from this project include development and ground disturbance within the boundaries of the historic properties. The changes to the landscape with the addition of wind and solar infrastructure effect the integrity of these locations. There is also the possibility that buried archaeological materials could be located within the project area that are related to these historic properties that could be unearthed during project construction.

The indirect effects will also have a singnificant impact to the the viewshed within the property and when viewing these areas from outside the historic properties boundaries. The project will alter the setting and feeling that exist at these historic properties today. The connection with the natural landscape and the unbroken skyline will no longer exist in some locations. The association *Ulíkš* and *Ala?ála* have with each other will be altered when the viewshed is changed.

CTUIR elders believe that *Ulíkš* and *Ala?ála* retain integrity, despite the changes that have already occurred at the historic properties. The CTUIR members have watched and experienced these changes over time. These locations endure despite the changes and they are the physical reminder of the place names, the resources located in these areas, stories, and the ceremonies/acts associated with these locations. When elders visit these sites to teach their children and grandchildren the sites' names and what people did there, it will be difficult to find a place where what they see is the same thing their grandparents saw when they were taught, and so far back to time immemorial. There will be another break between the people and the land they promised the Creator they would protect.

These places, *Ulíkš* and *Ala?ála*, are a physical connection to the tribe's past, between how members of the CTUIR lived before contact with non-Indian people and after contact with non-Indian people, to how they continue to use the landscape today. The physical and spiritual importance of these areas remains intact. This is a place the people promised to protect, in accordance with CTUIR traditions. Just as the CTUIR's history, culture, and traditions are intertwined, so are these traditional use areas. These areas are important to the CTUIR's traditional culture and spiritual way of life.

Prior to Admendment 4 the CRPP has been working with the project proponent to mitigate for adverse effects to a historic property of religious and cultural significance to the CTUIR that is not mentioned in this document. The CRPP has been satisfied with the discussions it has had to mitigate for the adverse effects to this other historic property not talked about in this letter. Admendment 4 impacts were not discussed with the project proponent on how they impacted *Ulíkš* and *Ala?ála*. This letter serves that purpose. The adverse effects should be mitigated for. Rather than opening up a whole host of off-site mitigation options the CRPP proposes an alternative project to mitigate for the significant adverse effects within the Admendment 4 area. The CRPP would like the project proponent to have a cultural resources monitor on site during the ground disturbing portion of the project as their mitigation for significant adverse effect to historic properties. This in conjunction with the other elements of mitigation that the CRPP is negoiating with the project proponent this would be adequate for mitigating for the effects.

Having a cultural resource monitor working during the ground disturbing portions of the project construction will help assure our community that if there is an inadverent discovery during the construction that it will be handled in an appropriate manner. In locations that have been used for agriculture in the past it is likely that Moldboard plowing has been the primary tillage tool, like most of North America, since intensive agriculture started more than 150 years ago. Moldboard plowing depths of 15–20 cm were common in the past. More recently some farmers are plowing at depths of 25–30 cm to eliminate plow pans created by these past pratices (Reicosky and Archer 2007:110). This means that common farming practices are penetrating the ground to an approximately depth of 12 inches. It is the CRPP's agrees with Reicosky and Archer (2007) that the average agricultural field disturbance is close to 12 inches and that any

Confederated Tribes *of the*
Umatilla Indian Reservation
Department of Natural Resources
Cultural Resources Protection Program

46411 Timíne Way
Pendleton, OR 97801
Phone (541) 276-3447
Fax (541) 429-7203

construction plans that require going beyond that depth are likely impacting undisturbed portion of the subsurface by past farming. On the plateau is is not uncommom for precontact archaeological sites to be buried by a 100 cm or more of soil.

If your office requires additional information or explanation of any of the information present in this document please contact the CRPP.

Respectfully,

Shawn Steinmetz
Archaeologist

Bibliography

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Hunn, Eugene S.
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MCVEIGH-WALKER Chase * ODOE

From: ESTERSON Sarah * ODOE
Sent: Thursday, January 17, 2019 4:18 PM
To: MCVEIGH-WALKER Chase * ODOE
Subject: FW: Montague Wind Energy Power Facility Site Certificate (Fourth Amendment)
Attachments: PastedGraphic-1.pdf

Sarah T. Esterson
Energy Facility Siting Analyst
Oregon Department of Energy
550 Capitol St NE, 1st Floor
Salem, OR 97301
P:(503) 373-7945
C: (503) 385-6128

Oregon.gov/energy

From: Christian Nauer [mailto:christian.nauer@ctwsbnr.org]
Sent: Thursday, January 17, 2019 4:05 PM
To: ESTERSON Sarah * ODOE <Sarah.Esterson@oregon.gov>
Cc: Robert Brunoe <robert.brunoe@ctwsbnr.org>
Subject: Montague Wind Energy Power Facility Site Certificate (Fourth Amendment)

Dear Sarah,

Thank you for the opportunity to provide comment on the Montague Wind Energy Power Facility Site Certificate (Fourth Amendment).

General Comment:

As the technical reviewer for NHPA Section 106 and other cultural resource issues for the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), the CTWSRO Tribal Historic Preservation Office (THPO) has concerns with the potential effects to historic properties or cultural resources within the Project Area of Potential Effects (APE). The Project APE is within the territories and areas of concern for the CTWSRO.

Project-specific Comment(s):

This office would like to acknowledge the previous and ongoing efforts made by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) with regard to cultural resources issues related to this Project. The CRPP has a long track record of quality work to protect cultural resources, and in consideration of their previous Project-related efforts we would like to defer comments on cultural resource issues for this Project to our neighbors at the CTUIR CRPP. We would furthermore like to offer our support for their efforts in any way we can be helpful. Please contact our office if any such support is desired.

Thanks again for your consideration, please contact me if you have any questions.

Christian Nauer, MS

Archaeologist
Confederated Tribes of the Warm Springs Reservation of Oregon
Branch of Natural Resources

christian.nauer@ctwsbnr.org
Office 541.553.2026
Cell 541.460.8448

Standard Disclaimers:

*The Confederated Tribes of the Warm Springs Reservation of Oregon have reserved treaty rights in Ceded Lands, as well as Usual and Accustomed and Aboriginal Areas, as set forth through the Treaty with the Middle Tribes of Oregon, June 25, 1855.

*Please know that review by the Tribal Historic Preservation Office does not constitute Government-to-Government consultation. Please ensure that appropriate Government-to-Government consultation is made with the Confederated Tribes of the Warm Springs Tribal Council.

MCVEIGH-WALKER Chase * ODOE

From: Murphy, Tim <timothy.murphy@state.or.us>
Sent: Thursday, March 1, 2018 4:12 PM
To: MCVEIGH-WALKER Chase * ODOE
Cc: JININGS Jon; EDELMAN Scott
Subject: RE: Montague Wind Power Facility preliminary Request for Amendment 4 – DLCD Notice

Hi Chase,

Thank you for the opportunity to review the amendments to the Montague Wind Power Facility. The department has the following comment:

Page K-60, OAR 660-033-0130(38)(f)(E). The applicant states that the entire project area is high-value farmland based on the Columbia Valley American Viticultural Area. However, OAR 660-033-0130(38)(f)(E) deals specifically with the soils portion of the high-value farmland definition in ORS 195.300(10). The applicant should first identify soils in the tract that are high-value farmland soils and then provide findings accordingly. "Tract" is defined as "one or more contiguous lots or parcels under the same ownership."

Please enter this email into record for this application.

Kind regards,

Tim Murphy | Farm and Forest Lands Specialist
Community Services Division
Oregon Dept. of Land Conservation and Development
635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540
Direct: (503) 934-0048 | Main: (503) 373-0050
timothy.murphy@state.or.us | www.oregon.gov/LCD

From: MCVEIGH-WALKER Chase * ODOE [mailto:Chase.McVeigh-Walker@oregon.gov]
Sent: Thursday, February 08, 2018 4:16 PM
To: Murphy, Tim <tmurphy@dlcd.state.or.us>; Jinings, Jon <rjinings@dlcd.state.or.us>
Subject: Montague Wind Power Facility preliminary Request for Amendment 4 – DLCD Notice

Good afternoon Tim and Jon,

We have received preliminary Request for Amendment 4 (pAMD4) of the Montague Wind Power Facility Site Certificate (link provided below). The Montague Wind Power Facility is an approved wind energy facility, located in Gilliam County, with up to 262 wind turbines and a maximum capacity of 404 megawatts. The approved facility is located within a site boundary of approximately 33,402 acres.

The pAMD4 requests Council approval for the following primary components: expansion of the site boundary to encompass approximately 13,365 acres; wind turbine relocation; and the addition of both a solar array and battery storage system to the proposed expanded site boundary. The components included in the amendment request would be located within Gilliam County.

A description of the facility and components of the amendment request, including Exhibit K, are available on our website at:

http://www.oregon.gov/energy/facilities-safety/facilities/Pages/MWP.aspx

We would like to request DLCD review and comment on preliminary Exhibit K by **March 5, 2018**. Please let us know if additional time is needed. Comments may be submitted directly to me at chase.mcveigh-walker@oregon.gov or luke.may@oregon.gov.

Thanks,
Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

Leading Oregon to a safe, clean, and sustainable energy future.

CH2M
2020 SW Fourth Avenue
Suite 300
Portland, OR 97201
O +1 503 235 5000

Chase McVeigh-Walker
Siting Analyst
Oregon Department of Energy
550 Capitol St. N.E., 1st Floor
Salem, OR 97301-3737

August 8, 2018

Subject: Response to Oregon Department of Land Conservation and Development Comment on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility*

Dear Mr. McVeigh-Walker:

This letter documents a response from CH2M HILL Engineers, Inc. (CH2M) on behalf of Montague Wind Power Facility, LLC (Montague) to the comment provided on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility* (RFA 4) by the Oregon Department of Land Conservation and Development (DLCD) in an email dated March 1, 2018. The DLCD comment focused on Exhibit K (Land Use) of RFA 4.

DLCD Comment, via email from Tim Murphy on March 1, 2018:

Page K-60, OAR 660-033-0130(38)(f)(E). The applicant states that the entire project area is high-value farmland based on the Columbia Valley American Viticultural Area. However, OAR 660-033-0130(38)(f)(E) deals specifically with the soils portion of the high-value farmland definition in ORS 195.300(10). The applicant should first identify soils in the tract that are high-value farmland soils and then provide findings accordingly. "Tract" is defined as "one or more contiguous lots or parcels under the same ownership.

Montague Response:

Montague addresses a similar comment in response to numbers K-4 and K-7 in the request for additional information (RAI) received from the Oregon Department of Energy on June 15, 2018. The proposed solar array is located on land owned by Weedman Ranches Inc. (Weedman). As updated in Table K-3 and shown on new Figures K-9, K-10, and K-11 in Exhibit K, the Weedman tract is approximately 8,271.2 acres, of which approximately 2,369.3 acres or 28.6 percent is high-value farmland under ORS 195.300(10)(f)(C). The solar micrositing area within the Weedman tract is approximately 351.3 acres of high-value farmland, which amounts to approximately 4.2 percent of all high-value farmland on the Weedman tract. Additional analysis of soils within the Weedman tract is provided in Montague's response to RAIs K-4 and K-7.

Please feel free to contact Montague or CH2M directly should you wish to discuss these responses. My direct contact information is paul.hicks@jacobs.com, telephone 503-872-4421.

Regards,
CH2M HILL Engineers, Inc.

Paul Hicks
Project Manager

c: Matt Hutchinson/Avangrid Renewables, LLC
Brian Walsh/Avangrid Renewables, LLC
Elaine Albrich/Davis Wright Tremaine LLP
Linnea Fossum/Tetra Tech

MCVEIGH-WALKER Chase * ODOE

From: Murphy, Tim <timothy.murphy@state.or.us>
Sent: Wednesday, October 10, 2018 8:16 AM
To: MCVEIGH-WALKER Chase * ODOE
Subject: RE: Montague RFA4 response to DLCD comments

Hi Chase,

Thank you for sharing the additional information. I'm satisfied that the applicant has addressed our comment. Thank you for your patience.

Have a great day,

Tim Murphy | Farm and Forest Lands Specialist
Community Services Division
Oregon Dept. of Land Conservation and Development
635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540
Direct: (503) 934-0048 | Main: (503) 373-0050
timothy.murphy@state.or.us | www.oregon.gov/LCD

From: MCVEIGH-WALKER Chase * ODOE [mailto:Chase.McVeigh-Walker@oregon.gov]
Sent: Monday, October 01, 2018 3:59 PM
To: Murphy, Tim <tmurphy@dlcd.state.or.us>
Subject: Montague RFA4 response to DLCD comments

Mr. Tim Murphy,
Last month, Montague provided responses to the comments you provided for the review of Amendment 4 of the Montague Site Certificate. When you have an opportunity, could you please review the response, and let me know whether you think their response answers and addresses your comment? I have included Montague's response as an attachment to this email.

Thanks,
-Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, clean, and sustainable energy future.

MCVEIGH-WALKER Chase * ODOE

From: WANG Yumei * DGMI
Sent: Tuesday, July 17, 2018 3:53 PM
To: MCVEIGH-WALKER Chase * ODOE
Cc: AVY Brad * DGMI; ROBERTS Jed * DGMI; MCCLAUGHRY Jason * DGMI; WANG Yumei * DGMI
Subject: DOGAMI memo: RFA4 Montague Construction Compliance - Condition 52 Geotech Report and Exh H
Attachments: DOGAMI memo Montague 071718.pdf

Hello Chase,

Attached are DOGAMI's comments. As discussed, I understand that you will follow up with Matt on his below email (and that I do not need to).

Please let me know if you have any questions. Thanks.

Yumei

Yumei Wang, P.E. | Geotechnical Engineer
Oregon Department of Geology and Mineral Industries (DOGAMI)
800 NE Oregon Street, Suite 965, Portland, Oregon 97232
Office: (971) 673-1551 | Mobile: (503) 913-5749
yumei.wang@oregon.gov | www.oregongeology.org

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From: WANG Yumei * DGMI
Sent: Thursday, June 14, 2018 5:49 PM
To: Hutchinson, Matthew <matthew.hutchinson@avangrid.com>; MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
Cc: Lockard, Alex <alex.lockard@avangrid.com>; WANG Yumei * DGMI <Yumei.WANG@oregon.gov>
Subject: RE: Montague Construction Compliance - Condition 52 Geotech Report

Hi Matt,

Thank you for providing the Geotech report. I will review it next week and either Chase or I will provide you some feedback then.

Yumei

Yumei Wang, P.E. | Geotechnical Engineer
Oregon Department of Geology and Mineral Industries (DOGAMI)
800 NE Oregon Street, Suite 965, Portland, Oregon 97232
Office: (971) 673-1551 | Mobile: (503) 913-5749
yumei.wang@oregon.gov | www.oregongeology.org

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From: Hutchinson, Matthew [mailto:matthew.hutchinson@avangrid.com]
Sent: Friday, June 08, 2018 2:07 PM
To: MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>; WANG Yumei * DGMI <Yumei.WANG@oregon.gov>
Cc: Lockard, Alex <alex.lockard@avangrid.com>
Subject: Montague Construction Compliance - Condition 52 Geotech Report

Avangrid Submittal No.	37
Topic	Geotech report for transmission line
Applicable condition	52

Chase and Yumei,
Attached is the geotechnical investigation report for the transmission line for the Montague Wind Power Facility. This report is intended to satisfy Site Certification Condition 52 requiring geotechnical investigations prior to facility construction. The report is provided in draft form pending any input from ODOE or DOGAMI.

Thanks,
Matt

AVANGRID RENEWABLES

Matt Hutchinson
Permitting Manager Ld/Sr

1125 NW Couch St., Suite 700, Portland, OR, 97209
Telephone 503.478.6317
Cell 503.701.0665
matthew.hutchinson@avangrid.com

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==========

Oregon
Kate Brown, Governor

Department of Geology and Mineral Industries
Administrative Offices
800 NE Oregon St., Suite 965
Portland, OR 97232-2162
(971) 673-1555
Fax: (971) 673-1562
www.oregongeology.org

July 17, 2018

Chase McVeigh-Walker
Oregon Department of Energy
Siting Division
550 Capitol St NE, 1st floor
Salem, OR 97301

Re: **Completeness Review of Exhibit H and March 2018 Barr Geotechnical Engineering Report for Montague Wind Project – 230 kV Transmission Line and Overhead Collection Line, Gilliam County, Oregon**

Dear Mr. McVeigh-Walker,

The Oregon Department of Geology and Mineral Industries (DOGAMI) performed a completeness review of the January 12, 2018 Exhibit H and March 2018 Barr Geotechnical Engineering Report for Montague Wind Project – 230 kV Transmission Line and Overhead Collection Line, Gilliam County, Oregon for request for amendment 4 (RFA4), Gilliam County, Oregon. DOGAMI comments are being provided as part of the pre-construction compliance requirement process.

The bases for the completeness review were a) professional standard-of-practice for characterization of geotechnical hazards and b) relevant guidelines in state and federal statutes.

Specific rules and standards referenced in the completeness of RFA4 include:

1) Energy Facility Siting Council (EFSC) Structural Standard OAR 345-022-0020
2) EFSC Contents of the Application OAR 345-021-0010(1)(h)

DOGAMI finds the information submitted by the Applicant to be incomplete, and has commented on the lack of adequate information about geologic hazards and public safety and designing for disaster resilience and future climate. Specific comments are included on Table 1.

Furthermore, DOGAMI should be provided site-specific geotechnical investigation reports that are completed prior to construction. When site-specific geotechnical investigations are completed, the Applicant should integrate all new pertinent information into the analyses and design, such as seismic hazard analyses. Based on the results of any future investigations, DOGAMI reserves the right to comment on the results with respect to public safety issues pertaining to potential site geologic hazards.

It is the responsibility of the Applicant to ensure that those preparing geologic hazard, geotechnical, and seismic hazard reports in the State of Oregon meet all appropriate requirements.

Thank you for the opportunity to assist with this project. If you have any questions, please contact me at 971-673-1551 (or yumei.wang@oregon.gov).

Sincerely,

Yumei Wang

Yumei Wang
Geotechnical Engineer

cc: Brad Avy, DOGAMI Director
Jason McClaughry, Geohazards Section Leader
Jed Roberts, GS&S Manager

Montague Wind Power Facility Comments on the January 12, 2018 Exhibit H and March 2018 Barr Geotechnical Engineering Report ***Table 1 Prepared by DOGAMI*** *(DOGAMI PCA 32241)*			
Report Page	**Section No.**	**Pg. / Para. / Sentence Reference (as needed)**	**Comment**
[Page H-10, H.8.4]	Exhibit H. Figure H-5	Figure H-5	Figure H-5 shows higher spectral accelerations at 0.4 s and longer for the M9 CSZ as compared with the IBC MConE spectrum. Please provide specific information on how the proposed facility and equipment are being designed to perform at longer period spectral accelerations. What is the structural period of the wind turbines and other equipment?
[Page H-10, H.8.4]	Exhibit H. Figure H-5	Figure H-5	Figure H-5 does not include response spectrum for any of the Quaternary active faults that are on the project site. The Applicant should conduct site-specific seismic analyses for Quaternary active faults that could negatively impact the site, such as the Arlington-Shutler Butte Fault and Columbia Hills fault. Resulting response spectra should be used to inform the design.
[Page H-13, H.9.5]	Exhibit H. H9.5 Disaster Resilience	NA	The State of Oregon, including the Energy Facility Siting Council and Oregon Department of Energy (ODOE), has shifted beyond designing to reduce risks limited to human safety (i.e. life safety), and now requires designing that integrates disaster resilience [see OAR 345-021-0010(1)(h)(F)(i) and Oregon Resilience Plan at: https://www.oregon.gov/gov/policy/orr/pages/index.aspx]. Similarly, the engineering field is largely moving beyond designing to reduce risks to human safety, and moving towards performance based engineering and resilience. As an example, in Chile, their newest proposed code on wind turbines would require recovery of operations within two weeks after a design earthquake. What is the anticipated time for operations to resume after a design basis earthquake (DBE) or maximum considered earthquake (MCE)?
[Page H-13, H.9.5]	Exhibit H. H9.5 Disaster Resilience	NA	Does the facility have emergency generators or back up power? During power outages, what equipment and safety provisions are on emergency power? For example, are there emergency lights on the tops of the transmission poles?
[Page H-13, H.9.5]	Exhibit H. H9.5 Disaster Resilience	"To mitigate potential landslide hazards, areas that have potential of slope instability will be identified and delineated during the final design geotechnical investigation, and the turbines will be located safe distances from steep	The Applicant is not clear about how they will evaluate potential landslide hazards. The March 2018 Barr Geotechnical Engineering Report, Slope Stability Section, page 6, states that some observation was performed. And they list data sources, including the Oregon Department of Geology and Mineral Industries (DOGAMI) 2014 Statewide Landslide Information Database for Oregon (SLIDO). Please evaluate the project area and transmission route for landslide hazards, and describe the method of evaluation. The Applicant should perform original landslide hazard evaluations using state-of-practice techniques, such as evaluating lidar for existing landslides and performing follow up field investigations. The Applicant must not solely rely on published data, such as the SLIDO database, which is incomplete. The original landslide hazard evaluations can include mapping,

Montague Wind Power Facility Comments on the January 12, 2018 Exhibit H and March 2018 Barr Geotechnical Engineering Report ***Table 1 Prepared by DOGAMI*** *(DOGAMI PCA 32241)*			
Report Page	**Section No.**	**Pg. / Para. / Sentence Reference (as needed)**	**Comment**
		slopes so that if slope failure were to occur, the turbines and their associated foundation structures would not be impacted"	borings, trenching and more to characterize landslide features and help with design for landslide mitigation.
[Page H-14, H.9.6]	Exhibit H. H9.6 Future Climate Conditions	NA	Please comment on future drought and dust storm potential and risks.
[Page H-14, H.9.6]	Exhibit H. H9.6 Future Climate Conditions	"Design of structures using BMPs during construction combined with long-term erosion protection and maintenance will result in an additional degree of conservatism when considering the design code parameters and factors of safety, to account for future climate extremes during the 40-year design life of the Facility"	The reference to the 40-year design life of the Facility is unclear. For transmission line structures, ASCE 74 Guidelines for Electrical Transmission Line Structural Loading is a standard of practice guideline. The National Electric Safety Code (NESC) is a United States standard of the safe installation, operation, and maintenance of electric power and communication utility systems including power substations, power and communication overhead lines, and power and communication underground lines. Both documents use a 50-year return period for wind, and near future editions are likely to extend the timeframe to 100 years. Did the Applicant design for 50 year wind loads? Is the Applicant meeting the NESC?

Montague Wind Power Facility Comments on the January 12, 2018 Exhibit H and March 2018 Barr Geotechnical Engineering Report ***Table 1 Prepared by DOGAMI*** *(DOGAMI PCA 32241)*			
Report Page	**Section No.**	**Pg. / Para. / Sentence Reference (as needed)**	**Comment**
Page 1	March 2018 Barr Geotech Report Executive Summary. 230kV Transmission Line and Overhead Collection Line Foundations	"For shallow direct embedment overhead line poles the risk of settlement leading to irreparable harm is lower than for drilled shafts, as the poles may be reset or re-plumbed through standard maintenance as needed. The depth of embedment for these poles should be selected by Avangrid and the foundation designer to balance the risk of collapse potential with the tolerance for maintenance activities."	Does this approach of allowing poles to tilt and resetting them ensure adequate public safety? If poles are tilted, will they be able to maintain their load without collapse and maintain electrical safety clearance? Please provide performance specifications, criterion or other relevant information on allowable tilt. Furthermore, please provide information on monitoring, inspection and maintenance of tilted poles that pertains to public safety.

CH2M
2020 SW Fourth Avenue
Suite 300
Portland, OR 97201
O +1 503 235 5000

Chase McVeigh-Walker
Siting Analyst
Oregon Department of Energy
550 Capitol St. N.E., 1st Floor
Salem, OR 97301-3737

August 7, 2018

Subject: Response to DOGAMI Comments on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility*

Dear Mr. McVeigh-Walker:

This letter documents responses from CH2M HILL Engineers, Inc. (CH2M) on behalf of Montague Wind Power Facility, LLC (Montague) to comments provided on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility* (RFA 4) by the Oregon Department of Geology and Mineral Industries (DOGAMI) in a letter dated July 17, 2018. The DOGAMI letter provided comments on Exhibit H (Geology and Seismicity), submitted by Montague as part of RFA 4.

The attachment to this letter contains a table documenting responses to DOGAMI comments specific to Exhibit H. Responses will be incorporated into Exhibit H with the complete amendment.

Please feel free to contact Montague or CH2M directly should you wish to discuss these responses. My direct contact information is josh.butler@jacobs.com, telephone 208-850-9819.

Regards,
CH2M HILL Engineers, Inc.

Josh Butler
Project Geotechnical Engineer

c: Matt Hutchinson/Avangrid Renewables, LLC
Brian Walsh/Avangrid Renewables, LLC
Elaine Albrich/Davis Wright Tremaine
Paul Hicks/CH2M HILL Engineers, Inc.
Linnea Fossum/Tetra Tech

Attachment
Response to DOGAMI Comments

Response to DOGAMI Comments (PCA 32241) on Exhibit H
Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility
August 7, 2018

Report Page	Section No.	Pg. / Para. / Sentence Reference (as needed)	Comment	Montague Response
Exhibit H Geology and Seismicity				
Page H-10	Section H.8.4 Median Ground Response Spectrum	Figure H-5	Figure H-5 shows higher spectral accelerations at 0.4 s and longer for the M9 CSZ as compared with the IBC MConE spectrum. Please provide specific information on how the proposed facility and equipment are being designed to perform at longer period spectral accelerations. What is the structural period of the wind turbines and other equipment?	The majority of the structures at the proposed Facility are anticipated to have a short fundamental period (less than 0.3 s). Towers for the wind turbines will have a longer period. Regardless, all structures will be designed according to the provided spectral response of the Facility location, and Montague will consider the higher accelerations for the deterministic response in addition to the probabilistic IBC response spectra.
Page H-10	Section H.8.4 Median Ground Response Spectrum	Figure H-5	Figure H-5 does not include response spectrum for any of the Quaternary active faults that are on the project site. The Applicant should conduct site-specific seismic analyses for Quaternary active faults that could negatively impact the site, such as the Arlington-Shutler Butte Fault and Columbia Hills fault. Resulting response spectra should be used to inform the design.	No Quaternary active faults (Holocene-age) have been mapped within the Facility site boundary. These faults are shown on the seismicity map (Figure H-2 in Exhibit H) but the middle-Quaternary-age faults (less than 750,000 years old), such as the Arlington-Shutler Butte fault and the Horse Heaven Hills fault, are not included in the seismic analysis. These faults are not considered to be active according to the USGS definition of an active fault (USGS, 2018). Reference: United States Geological Survey (USGS). 2018. Earthquake Hazards Program. *Earthquake Glossary*. https://earthquake.usgs.gov/learn/glossary/?term=active fault.
Page H-13	Section H.9.5 Disaster Resilience	Not applicable	The State of Oregon, including the Energy Facility Siting Council and Oregon Department of Energy (ODOE), has shifted beyond designing to reduce risks limited to human safety (i.e. life safety), and now requires designing that integrates disaster resilience [see OAR 345-021-0010(1)(h)(F)(i) and Oregon Resilience Plan at:	Montague intends to design the Facility to maintain core operations without interruption from a design basis earthquake (DBE). Critical structures will be designed for continued occupation and operation for a maximum considered earthquake (MCE); noncritical structures will require assessment following the MCE. Montague will evaluate the

Report Page	Section No.	Pg. / Para. / Sentence Reference (as needed)	Comment	Montague Response
			https://www.oregon.gov/gov/policy/orr/pages/index.aspx. Similarly, the engineering field is largely moving beyond designing to reduce risks to human safety and moving towards performance-based engineering and resilience. As an example, in Chile, their newest proposed code on wind turbines would require recovery of operations within two weeks after a design earthquake. What is the anticipated time for operations to resume after a design basis earthquake (DBE) or maximum considered earthquake (MCE)?	Oregon Resilience Plan during design of Facility components, and design for appropriate operation and operation recovery times.
Page H-13	Section H.9.5 Disaster Resilience	Not applicable	Does the facility have emergency generators or backup power? During power outages, what equipment and safety provisions are on emergency power? For example, are there emergency lights on the tops of the transmission poles?	During power outages, the need for backup emergency power is limited to the substation and O&M Building to ensure the safe operation of the Facility. This includes normal substation lighting, which will be available while the backup generator is in operation. Emergency lights on the tops of the transmission poles are not planned, nor is lighting of transmission line poles required by the Federal Aviation Administration, as the structures are less than 200 feet in height. Per Site Certificate Condition 90, the 230-kV and 34.5-kV transmission lines will be designed to the standards of the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the specifications are consistent with applicable codes and standards.
Page H-13	Section H.9.5 Disaster Resilience	"To mitigate potential landslide hazards, areas that have potential of slope instability will be identified and delineated during the final design	The Applicant is not clear about how they will evaluate potential landslide hazards. The March 2018 Barr Geotechnical Engineering Report, Slope Stability Section, page 6, states that some observation was performed. And they list data sources, including the Oregon Department of	Montague evaluated the Facility area for potential landslide hazards as follows: • The project geologist conducted a site reconnaissance. No LiDar coverage is available of the Facility site.

Report Page	Section No.	Pg. / Para. / Sentence Reference (as needed)	Comment	Montague Response
		geotechnical investigation, and the turbines will be located safe distances from steep slopes so that if slope failure were to occur, the turbines and their associated foundation structures would not be impacted"	Geology and Mineral Industries (DOGAMI) 2014 Statewide Landslide Information Database for Oregon (SLIDO). Please evaluate the project area and transmission route for landslide hazards and describe the method of evaluation. The Applicant should perform original landslide hazard evaluations using state-of-practice techniques, such as evaluating lidar for existing landslides and performing follow up field investigations. The Applicant must not solely rely on published data, such as the SLIDO database, which is incomplete. The original landslide hazard evaluations can include mapping, borings, trenching and more to characterize landslide features and help with design for landslide mitigation.	• No landslides were observed in the site vicinity during the site reconnaissance. The slopes were underlain by shallow, flat-lying basalt flows. These are interpreted to be stable. • No borings or trenching were necessary because no landslides were observed. • The most appropriate mitigation for landslides is slope setbacks. During final design, the turbines and transmission towers will be located an appropriate distance from the crests of slopes to avoid damage if a slope failure were to occur. Site-specific geotechnical surveys will be conducted prior to construction in compliance with Site Certificate Condition 52.
Page H-14	Section H.9.6 Future Climate Conditions	Not applicable	Please comment on future drought and dust storm potential and risks.	Future drought conditions and any associated loss of vegetation could increase the potential for dust storms. Critical structures and Facility components will be designed for continuous operation in dust storms and dusty conditions, whether by a scheduled maintenance program or by prevention with sealed components and structures.
Page H-14	Section H.9.6 Future Climate Conditions	"Design of structures using BMPs during construction combined with long-term erosion protection and maintenance will result in an additional degree of conservatism when considering the design code parameters and factors of safety, to	The reference to the 40-year design life of the Facility is unclear. For transmission line structures, ASCE 74 Guidelines for Electrical Transmission Line Structural Loading is a standard of practice guideline. The National Electric Safety Code (NESC) is a United States standard of the safe installation, operation, and maintenance of electric power and communication utility systems including power substations, power and communication overhead lines, and power and communication underground	Montague will design the Facility for the appropriate design life based on required State of Oregon structural and electrical code requirements. Longer design life (e.g., 50-year and 100-year) will be considered during design. The reference to a 40-year design life relates to Montague's assumption for the useful life of the Facility and corresponds with lease agreements with landowners.

Report Page	Section No.	Pg. / Para. / Sentence Reference (as needed)	Comment	Montague Response
		account for future climate extremes during the 40-year design life of the Facility"	lines. Both documents use a 50-year return period for wind, and near future editions are likely to extend the timeframe to 100 years. Did the Applicant design for 50-year wind loads? Is the Applicant meeting the NESC?	

MEMORANDUM

Department of Fish and Wildlife
Wildlife Division
Intra Departmental

Date: February 23, 2018

To: Chase McVeigh- Walker - Oregon Department of Energy

From: Steve Cherry –District Biologist, Sarah Reif –ODFW Energy Coordinator

Subject: ODFW Comments on the Preliminary Request for Amendment 4 Montague Wind Energy Facility

---

Oregon Department of Energy (ODOE) has requested comments from the Oregon Department of Fish and Wildlife (ODFW) on the Preliminary Request for Amendment 4 Montague Wind Energy Facility. This Letter contains: (1) ODFW contact information for the project; and (2) ODFW's comments on the Application.

Contacts

I will be the main contact person for ODFW for the Energy Facility Siting Council (EFSC) permitting process and my contact information is: Steve Cherry, PO Box 363, Heppner, OR 97836. My phone number is (541) 676-5230. I will also be coordinating with Sarah Reif, 3406 Cherry Ave. NE Salem, OR 97303 I would appreciate if you would ask the Applicant to send myself and Sarah Reif hard copies of the future EFSC process documents.

General Comments

Please find below a listing of the most applicable statutes, administrative rules and policies administered by ODFW that would pertain to the siting of this proposed facility. ODFW will review and make recommendations for the proposed project based on the following applicable statutes and rules.

ODFW Management Authorities

Some of the Oregon Department of Fish and Wildlife's (ODFW) goals, objectives, and management authorities for the fish and wildlife populations affected by the Project are found in the following Oregon Revised Statutes (ORS), Oregon Administrative Rules (OAR) and associated plans, and are summarized below.

- Energy Facility Siting Council Siting Standards – Fish and Wildlife Habitat (OAR 345-022-0060)
  This standard requires that the design, construction, and operation of a proposed facility (including mitigation) be consistent with the habitat mitigation goals and standards in OAR chapter 635, division 415. Oregon's Energy Facility Siting Council (EFSC) must determine whether the applicant has done appropriate site-specific studies to characterize the fish and wildlife habitat at the site and nearby. If impacts cannot be avoided, the applicant must provide a habitat mitigation plan. The plan must provide for appropriate mitigation measures, depending on the habitat categories affected by the proposed facility. The plan may require setting aside and improving other land for fish and wildlife habitat to make up for the habitat removed by the facility.

- Energy Facility Siting Council Siting Standards – Threatened and Endangered Species (OAR 345-022-0070)
  To issue a site certificate, EFSC must (after consultation with ODFW) determine that 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 a species listed under the Oregon Endangered Species Act. This standard seeks to avoid harmful impacts to plant and animal species identified as threatened or endangered under state law. In practice, this means that the applicant must provide appropriate studies of the site to identify threatened or endangered species that the proposed facility could affect. ODFW determines the state-listed threatened or endangered wildlife species. If a potential risk to the survival or recovery of a threatened or endangered species exists, the applicant must redesign or relocate the facility to avoid that risk or propose appropriate mitigation measures.

- Wildlife Policy (ORS 496.012)
  Establishes wildlife management policy to prevent serious depletion of any indigenous species and maintain all species of fish and wildlife at optimum levels for future generations.

- State Endangered Species Act (ORS 496.171-182)
  Requires conservation and recovery of wildlife species that are classified as endangered or threatened. Authorizes ODFW to develop conservation and recovery plans for listed wildlife species. At ORS 498.026(1), prohibits "taking" of any listed species. Illegal take is a violation of the wildlife laws, subject to criminal prosecution as a Class A misdemeanor or violation pursuant to ORS 496.992.

- Prohibition of harassment, etc. of wildlife (ORS 498.006)
  Prohibits chasing, harassment, molestation, worrying or disturbing any wildlife, except as the Fish and Wildlife Commission may allow by rule.

- Criminal penalties for wildlife violations (ORS 496.992)
  Makes violation of any wildlife statute or Fish and Wildlife Commission rule subject to prosecution as a Class A misdemeanor or violation.

- Fish and Wildlife Habitat Mitigation Rule (OAR 635-415-0000-0025)

Governs ODFW's provision of biological advice and recommendations concerning mitigation for losses of fish and wildlife habitat caused by development actions. Based on standards in the rule, ODFW determines the appropriate category to apply to land where a development action is proposed. If ODFW determines that such land is Category 1, ODFW must recommend that impacts to the habitat be avoided. If impacts cannot be avoided, ODFW must recommend against the development action. If ODFW determines that such land is Category 2, ODFW must recommend that impacts to the habitat be avoided. If impacts cannot be avoided, ODFW must recommend a high level of mitigation (as specified in more detail in the rule). If such mitigation is not required, ODFW must recommend against the development action.

- Wildlife Diversity Plan (OAR 635-100-0001 through 0030)
  Establishes a plan to maintain Oregon's wildlife diversity by protecting and enhancing populations and habitats of native wildlife at self-sustaining levels throughout natural geographic ranges.

- Oregon Conservation Strategy Plan (Adopted by Commission)
  A blueprint for conservation of the state's native fish and wildlife and their habitats, the Strategy provides information on at-risk species and habitats, identifies key issues affecting them, and recommends actions. The Conservation Strategy emphasizes proactively conserving declining species and habitats to reduce the possibility of future federal or state listings.

- Oregon Plan for Salmon and Watersheds (ORS 541.405)
  Establishes plan to restore native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide environmental, cultural, and economic benefits.

- ODFW's Fish Passage Law (ORS 509.580 - 509.645)
  Requires upstream and downstream passage at all artificial obstructions in those Oregon waters in which migratory native fish are currently or have historically been present.

- General Fish Management Goals (OAR 635-007-0510)
  Establishes the goals that fish be managed to take full advantage of the productive capacity of natural habitats, and that ODFW address losses in fish productivity due to habitat degradation through habitat restoration.

- Native Fish Conservation Policy (OAR 635-007-0502-0535)
  Protects and promotes natural production of indigenous fishes.

- Trout Management (OAR 635-500-0100-0120)
  Requires maintenance of genetic diversity and integrity of wild trout stocks, and the protection, restoration, and enhancement of trout habitat.

- Oregon's Mule Deer Management Plan (OAR 635-190-0000-0030)

Establishes a plan to protect and enhance mule deer populations in Oregon to provide optimum balance among recreational uses, habitat availability, primary land uses, and other wildlife species.

- Oregon's Elk Management Plan (OAR 635-160-0000-0030)
  Establishes a plan to protect and enhance elk populations in Oregon, to provide optimum recreational benefits to the public, and be compatible with habitat capability and primary land uses.

- Oregon's Wolf Conservation and Management Plan (OAR 635-110-0000-0040)
  Establishes measures ODFW will take to conserve and manage the species. This includes actions that could be taken to protect livestock from wolf depredation and address human safety concerns.

- Recommendations for Greater Sage-Grouse Habitat Classification Under Oregon Department of Fish and Wildlife's Fish and Wildlife Habitat Mitigation Policy (OAR 635-140-0000)
  This document provides policy direction, consistent recommendations, and supporting rationale to guide ODFW habitat mitigation recommendations associated with impacts to greater sage-grouse habitat from energy development, its associated infrastructure, or other industrial/commercial development.

Specific Comments

Comment 1
The Applicant states in Exhibit P page 34 that a portion of the project is mule deer winter range. ODFW considers winter range to be Category 2 habitat and the Applicant should address the designated winter range in their Application. However, developed lands (agricultural fields) inside the winter range boundary are not considered category 2 habitat. Also the winter range boundary in that portion of Gilliam county is intended to be within the breaks of Rock Creek and not encompass any of the uplands above the breaks of the canyon. ODFW winter range boundaries are drawn at a large scale level and boundaries are always verified within specific project areas. As stated above while a portion of the winter range line is outside of the breaks of Rock Creek the intent was for only those lands within the canyon to be designated as winter range. ODFW would recommend that the Applicant categorize the habitat inside the canyon of Rock creek as Category 2 habitat and to mitigate for any impacts to those acres appropriately.

Comment 2
The Applicant states in Exhibit P page 32 that most of the nests for the 2010 survey were not found during the 2017 survey. ODFW would like to know if the Applicant revisited those 2010 nests or if the survey was done independent of the known nest sites from 2010. The nest densities in the area dropped dramatically from the 2010 survey to the 2017 survey (76 active and 181 inactive nests in 2010 and 14 active and 30 inactive nests in 2017). The Application states that many of the old nests were not detected and are most likely no longer present. ODFW would like to know if the Applicant has any additional information on any possible factors for the reduced nest densities in the survey area (i.e. loss of nest trees, conversion of habitats, etc.).

Comment 3
Figure P-8-2 shows several of the proposed turbines close to the edge of the bluffs of Rock creek. ODFW would like to discuss the exact locations of turbines F1, J16 and J17 in relation to the breaks of Rock creek. ODFW would recommend that those turbines be micro sited as far from the edge of the canyon as possible to reduce potential raptor mortality. Research has shown that raptors will use the updrafts for soaring and kiting and the additional time spent in the area of the updrafts leads to increased probability of a collision with a wind turbine.

Comment 4
Attachment P- 12a Phase 2 Wildlife Monitoring and Mitigation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Wildlife Monitoring and Mitigation Plan for the proposed amendment.

Comment 5
Attachment P- 12b Phase 2 Revegetation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Revegetation Plan for the proposed amendment.

Comment 6
Attachment P- 12c Phase 2 Habitat Mitigation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Habitat Mitigation Plan for the proposed amendment.

Comment 7
The Applicant states in Exhibit Q page 10 that future Washington ground squirrel (WGS) surveys will be completed as needed. ODFW would recommend that WGS surveys would be completed of the known WGS sites prior to construction to ensure that the WGS have not moved or expanded. If construction is not completed within a three year period after the original surveys were completed a complete new survey of the area would then be required.

Comment 8
The Application in Attachment P-3b sates that Tetra tech recommends preforming additional raptor nest surveys during the breeding season immediately prior to construction. The Application does not state if these surveys will be completed or the protocol that will be used to complete the surveys. The preconstruction surveys would be completed to identify any changes (since the latest surveys were conducted) in the location of Sensitive species, particularly Swainson's hawk, ferruginous hawk and burrowing owl nests. ODFW would recommend that a complete raptor nest survey be completed prior to construction and that those surveys help determine the final micro siting and construction mitigation measures to protect nesting raptors.

ODFW appreciates the opportunity to comment on this Application and is looking forward to working with ODOE and the Applicant on this proposed project.

CH2M
2020 SW Fourth Avenue
Suite 300
Portland, OR 97201
O +1 503.235.5000

Chase McVeigh-Walker
Siting Analyst
Oregon Department of Energy
550 Capitol St. N.E., 1st Floor
Salem, OR 97301-3737

July 26, 2018

Subject: Response to Oregon Department of Fish and Wildlife Comments on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility*

Dear Mr. McVeigh-Walker:

This letter documents responses from CH2M HILL Engineers, Inc. (CH2M) on behalf of Montague Wind Power Facility, LLC (Montague) to comments provided on *Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility* (RFA 4) by the Oregon Department of Fish and Wildlife (ODFW) in a letter dated February 23, 2018. The ODFW comments focus on Exhibits P and Q of RFA 4.

ODFW Comment 1:

The Applicant states in Exhibit P page 34 that a portion of the project is mule deer winter range. ODFW considers winter range to be Category 2 habitat and the Applicant should address the designated winter range in their Application. However, developed lands (agricultural fields) inside the winter range boundary are not considered category 2 habitat. Also, the winter range boundary in that portion of Gilliam County is intended to be within the breaks of Rock Creek and not encompass any of the uplands above the breaks of the canyon. ODFW winter range boundaries are drawn at a large-scale level and boundaries are always verified within specific project areas. As stated above while a portion of the winter range line is outside of the breaks of Rock Creek the intent was for only those lands within the canyon to be designated as winter range. ODFW would recommend that the Applicant categorize the habitat inside the canyon of Rock Creek as Category 2 habitat and to mitigate for any impacts to those acres appropriately.

Montague Response:

To confirm that ODFW-mapped big game winter range is Category 2 habitat within Rock Creek canyon, with the exception of land developed for agriculture, Montague used field data, aerial photography, topographic maps, and ODFW-mapped mule deer range maps to determine Category 2 habitat and the mule deer winter range boundary. Mule deer winter range is within the “breaks” of Rock Creek and does not encompass any of the uplands above the breaks of the canyon. Habitat categories depicted on Figures P-7 through P-9 in Exhibit P will be updated to show Category 2 habitat within the breaks of Rock Creek and to demonstrate that no portion of the Facility occurs within the breaks of Rock Creek, and, accordingly, that the Facility will not impact ODFW mule deer winter range. Updated Figures P-7 through P-9 and corresponding calculations in Exhibit P will be provided to the Oregon Department of Energy (ODOE) upon submittal of the complete amendment request.

ODFW Comment 2:

The Applicant states in Exhibit P page 32 that most of the nests for the 2010 survey were not found during the 2017 survey. ODFW would like to know if the Applicant revisited those 2010 nests or if the survey was done independent of the known nest sites from 2010. The nest densities in the area dropped dramatically from the 2010 survey to the 2017 survey (76 active and 181 inactive nests in 2010 and 14 active and 30 inactive nests in 2017). The Application states that many of the old nests were not detected and are most likely no longer present. ODFW would like to know if the Applicant has any additional information on any possible factors for the reduced nest densities in the survey area (i.e. loss of nest trees, conversion of habitats, etc.).

Montague Response:

Section P.5.2.5 in Exhibit P describes raptor nest field surveys conducted for Phase 2. The 2017 raptor nest surveys extended 2 miles beyond the Phase 2 turbines located within the approved and proposed expanded site boundary, as shown on figures in Attachments P-3a and P-3b to Exhibit P (both attachments are confidential and not for public distribution). The nest densities recorded in the 2010 survey (76 active and 181 inactive nests) were taken from a much larger survey area shown on Figure 4 in Attachment P-9 to Exhibit P (Attachment P-9 is confidential and not for public distribution). Because the 2017 raptor nest surveys were conducted solely within 2 miles of the current planned turbine locations, they did not include every area covered by the larger, previously conducted survey area shown on confidential Figure 4 in Attachment P-9 to Exhibit P. In summary, some nest sites identified in previous studies were not revisited in 2017 because no turbines are currently planned within 2 miles of those nest sites.

The 2017 raptor nest surveys were conducted in accordance with the survey protocol approved by ODFW on April 7, 2017 (see Attachment 2 to Attachment P-3b in Exhibit P [confidential and not for public distribution]). The survey protocol for aerial and ground surveys specified that the status of known nests would be checked within 2 miles of the proposed turbines. Known nests were identified using data provided by agencies such as the Oregon Biodiversity Information Center and the U.S. Fish and Wildlife Service and incorporated historical raptor nest locations from surveys performed by Northwest Wildlife Consultants, Inc. (NWC) at the Facility in 2010 (NWC, 2010)[1].

Raptor survey data were reviewed from adjacent wind facilities surveyed by NWC for raptor nests in 2009, including Leaning Juniper I, IIA, and IIB, and Pebble Springs. Raptor survey data were also reviewed from both NWC wildlife and habitat study reports cited in Exhibit P of RFA 4 (NWC, 2010a; NWC, 2010b)[2].

While prior raptor survey results provided input to the iterative micrositing process, the impact evaluation for raptors in Exhibit P relies on the 2017 surveys. No additional information was identified that might have caused the changes in raptor nest survey results.

ODFW Comment 3:

Figure P-8.2 shows several of the proposed turbines close to the edge of the bluffs of Rock Creek. ODFW would like to discuss the exact locations of turbines F1, J16, and J17 in relation to the breaks of Rock Creek. ODFW would recommend that those turbines be microsited as far from the edge of the canyon as

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[1] Northwest Wildlife Consultants, Inc. (NWC). 2010. GIS shapefiles of raptor nest locations detected in 2010. Data provided on April 7, 2017, by Tyler Hoffbuhr, Avangrid Renewables, LLC.

[2] Northwest Wildlife Consultants, Inc. (NWC). 2010a. *Wildlife and Habitat Studies for Montague Wind Power Facility*. Prepared for Iberdrola Renewables, Inc., Portland, Oregon. January 7.

Northwest Wildlife Consultants, Inc. (NWC). 2010b. *Montague Wind Power Facility Supplemental Wildlife and Habitat Studies.* Prepared for Iberdrola Renewables, Inc., Portland, Oregon. September 22.

possible to reduce potential raptor mortality. Research has shown that raptors will use the updrafts for soaring and kiting and the additional time spent in the area of the updrafts leads to increased probability of a collision with a wind turbine.

Montague Response:

Avangrid has implemented avoidance measures, as described in Section P.9 of Exhibit P in RFA 4, to set turbine locations back at least 200 meters (656 feet) from cliffs where bats and raptors may roost or nest, such as the breaks at Rock Creek. Turbine F1 has been sited approximately 0.125 mile (660 feet) from the nearest breaks at Rock Creek canyon and turbines J16 and J17 have been sited approximately 0.5 mile (2,640 feet) from the nearest breaks at Rock Creek canyon. Montague has sited these turbines to reduce potential raptor mortality associated with raptors using updrafts in the area.

ODFW Comments 4, 5, and 6:

Comment 4: Attachment P-12a Phase 2 Wildlife Monitoring and Mitigation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Wildlife Monitoring and Mitigation Plan for the proposed amendment.

Comment 5: Attachment P-12b Phase 2 Revegetation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Revegetation Plan for the proposed amendment.

Comment 6: Attachment P-12c Phase 2 Habitat Mitigation Plan is not submitted in the Application. ODFW would recommend that the Applicant work with ODFW and ODOE to develop a Habitat Mitigation Plan for the proposed amendment.

Montague Response to Comments 4, 5, and 6:

Montague submitted all three plans to ODOE via email from Matt Hutchinson on March 14, 2018.

ODFW Comment 7:

The Applicant states in Exhibit Q page 10 that future Washington ground squirrel (WGS) surveys will be completed as needed. ODFW would recommend that WGS surveys would be completed of the known WGS sites prior to construction to ensure that the WGS have not moved or expanded. If construction is not completed within a three-year period after the original surveys were completed, a complete new survey of the area would then be required.

Montague Response:

Montague will conduct surveys of known WGS sites in compliance with Site Certificate Condition 94, which requires protocol surveys during the active squirrel season prior to construction. In accordance with Condition 94, Category 1 habitat boundaries will be modified as appropriate based on updated survey information. Montague will provide a written report of the surveys for ODFW and ODOE concurrence prior to construction.

ODFW Comment 8:

The Application in Attachment P-3b states that Tetra Tech recommends preforming additional raptor nest surveys during the breeding season immediately prior to construction. The Application does not state if these surveys will be completed or the protocol that will be used to complete the surveys. The preconstruction surveys would be completed to identify any changes (since the latest surveys were conducted) in the location of Sensitive species, particularly Swainson's hawk, ferruginous hawk and burrowing owl nests. ODFW would recommend that a complete raptor nest survey be completed prior to construction and that those surveys help determine the final micrositing and construction mitigation measures to protect nesting raptors.

Montague Response:

Additional raptor nest surveys will be conducted prior to construction in accordance with Site Certificate Condition 95(e), consistent with the methodology previously approved by ODFW on April 7, 2017 (see Attachment 2 to Attachment P-3b in Exhibit P [confidential and not for public distribution]). The survey results will be documented in a preconstruction report submitted to ODFW and ODOE to demonstrate compliance with Site Certificate Condition 95(e).

Please feel free to contact Montague or CH2M directly should you wish to discuss these responses. My direct contact information is forrest.parsons@jacobs.com, telephone 503-736-4065.

Regards,
CH2M HILL Engineers, Inc.

Forrest Parsons
Project Biologist

c: Matt Hutchinson/Avangrid Renewables, LLC
Brian Walsh/Avangrid Renewables, LLC
Paul Hicks/CH2M HILL Engineers, Inc.
Linnea Fossum/Tetra Tech
Elaine Albrich, Davis Wright Tremaine LLP

MCVEIGH-WALKER Chase * ODOE

From: Steve Cherry <Steve.P.Cherry@state.or.us>
Sent: Monday, October 8, 2018 3:02 PM
To: MCVEIGH-WALKER Chase * ODOE
Subject: RE: Montague RFA4 response to ODFW comments

Chase,
I have read through their responses and feel that they have adequately addressed ODFW's comments. Thanks

Steve

From: MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
Sent: Monday, October 1, 2018 4:02 PM
To: CHERRY Steve P <Steve.P.Cherry@state.or.us>
Subject: Montague RFA4 response to ODFW comments

Mr. Steve Cherry,
Last month, Montague provided responses to the comments you provided for the review of Amendment 4 of the Montague Site Certificate. When you have an opportunity, could you please review the response, and let me know whether you think their response answers and addresses your comment? I have included Montague's response as an attachment to this email.

Thanks,
-Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, clean, and sustainable energy future.

MCVEIGH-WALKER Chase * ODOE

From: CROOK Geoff S <Geoff.S.CROOK@odot.state.or.us>
Sent: Wednesday, May 30, 2018 1:44 PM
To: MCVEIGH-WALKER Chase * ODOE
Cc: PFEIFFER Amy L
Subject: RE: Montague Wind Power Facility preliminary Request for Amendment 4 - ODOT Notice

Chase, I don't have any concerns at this time, however would like to give our specialists in this part of the state a chance to review the proposal. They will be more familiar with this stretch of highway and any potential concerns re: adjacent uses. I have copied Amy Pfeiffer, our Region 4 Planning and Environmental Manager.
Thanks,

Geoff Crook
Sustainability Program Manager
Oregon Department of Transportation
Planning, Implementation & Analysis Unit
503-986-3425

From: MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
Sent: Wednesday, May 30, 2018 11:24 AM
To: CROOK Geoff S <Geoff.S.CROOK@odot.state.or.us>
Subject: Montague Wind Power Facility preliminary Request for Amendment 4 - ODOT Notice

Good Morning Geoff,

We have received preliminary Request for Amendment 4 (pAMD4) of the Montague Wind Power Facility Site Certificate (link provided below). The Montague Wind Power Facility is an approved wind energy facility, located in Gilliam County, with up to 262 wind turbines and a maximum capacity of 404 megawatts. The approved facility is located within a site boundary of approximately 33,691 acres.

The pAMD4 requests Council approval for the following primary components: expansion of the site boundary to encompass approximately 13,365 acres; wind turbine relocation; and the addition of both a solar array and battery storage system to the proposed expanded site boundary. The components included in the amendment request would be located within Gilliam County.

http://www.oregon.gov/energy/facilities-safety/facilities/Pages/MWP.aspx

Much like the requested review for the Boardman Solar Facility, the Department would like to request ODOT's review, comment, and input on the pAMD4. Due to the proximity of the proposed solar array (Scenario C) to the John Day Hwy (Hwy 19), we would like to know if ODOT has any concerns regarding glare from the proposed solar array on traffic.

Section R.7 of **Exhibit R** discusses two areas within the proposed micrositing corridor/site boundary where the Certificate Holder (Montague), has recognized that "there may be public concerns about the facility's possible effects on nearby rural and residential areas that may not be designated scenic resources under OAR 345-022-0080." The two areas identified are a "segment of the Oregon Highway19/John Day Highway near the Solar micrositing area … and the community of Olex." In their **pRFA 4 Supplement**, Montague selected two locations where visual simulations were developed, one of which was a view looking North from Highway 19, at its intersection with Baseline Road.

Thank you, and please don't hesitate to contact me with any questions.

-Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

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MCVEIGH-WALKER Chase * ODOE

From: LAPP Thomas <Thomas.Lapp@odot.state.or.us>
Sent: Wednesday, May 30, 2018 1:40 PM
To: MCVEIGH-WALKER Chase * ODOE
Cc: MCCAFFERTY Jeremiah G
Subject: RE: Montague Wind Power Facility preliminary Request for Amendment 4 – ODOT Notice

Chase,

It appears the Olex community is at approximate mile point 17.00 on the John Day Highway 005/OR19. This area falls outside of the ODOT District 12 maintenance area and is in ODOT District 9 jurisdiction for maintenance and permitting. District 12 begins at MP 59.64 on this alignment.

Jeremiah McCafferty issues permits in District 9. Please let me know I can assist you in any way should one of these sites develop in District 12.

Thanks,

Thomas Lapp
District 12 Permit Specialist
1327 SE 3rd Street
Pendleton, OR 97801
Ph (541)278-3450
Fax (541)276-5767

From: MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
Sent: Wednesday, May 30, 2018 11:12 AM
To: LAPP Thomas <Thomas.Lapp@odot.state.or.us>; allison.m.hamilton@odot.state.or.us
Subject: Montague Wind Power Facility preliminary Request for Amendment 4 – ODOT Notice

Good Morning Tom and Allison,

We have received preliminary Request for Amendment 4 (pAMD4) of the Montague Wind Power Facility Site Certificate (link provided below). The Montague Wind Power Facility is an approved wind energy facility, located in Gilliam County, with up to 262 wind turbines and a maximum capacity of 404 megawatts. The approved facility is located within a site boundary of approximately 33,691 acres.

The pAMD4 requests Council approval for the following primary components: expansion of the site boundary to encompass approximately 13,365 acres; wind turbine relocation; and the addition of both a solar array and battery storage system to the proposed expanded site boundary. The components included in the amendment request would be located within Gilliam County.

http://www.oregon.gov/energy/facilities-safety/facilities/Pages/MWP.aspx

Much like the requested review for the Boardman Solar Facility, the Department would like to request ODOT's review, comment, and input on the pAMD4. Due to the proximity of the proposed solar array (Scenario C) to the John Day Hwy (Hwy 19), we would like to know if ODOT has any concerns regarding glare from the proposed solar array on traffic.

Section R.7 of **Exhibit R** discusses two areas within the proposed micrositing corridor/site boundary where the Certificate Holder (Montague), has recognized that "there may be public concerns about the facility's possible effects on nearby rural and residential areas that may not be designated scenic resources under OAR 345-022-0080." The two areas identified are a "segment of the Oregon Highway19/John Day Highway near the Solar micrositing area … and the community of Olex." In their **pRFA 4 Supplement**, Montague selected two locations where visual simulations were developed, one of which was a view looking North from Highway 19, at its intersection with Baseline Road.

Thank you, and please don't hesitate to contact me with any questions.

-Chase

Chase McVeigh-Walker Siting Analyst
Oregon Department of Energy
550 Capitol Street N.E., 1st Floor
Salem, OR 97301
P: 503-934-1582
C: 971-600-5323
Oregon.gov/energy

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Oregon
Kate Brown, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

State Land Board

Kate Brown
Governor

Dennis Richardson
Secretary of State

Tobias Read
State Treasurer

March 5, 2019

Avangrid Renewables
Attn: Matt Hutchinson
1125 NW Couch Street Suite 700
Portland, Oregon 97209

Re: WD #2018-0660 **Addendum**
Montague Wind Power Facility Phase 2 (WD #2011-0364R),
Gilliam County; Portions of Multiple TRS and TL within Large Project Area South of Arlington;

Dear Mr. Hutchinson:

The Department received a request on December 12, 2018 from CH2M (now Jacobs) to add an additional 1,164 acres to the delineation report study area (WD #2011-0364R) that had received prior Department approval on February 28, 2019. We have reviewed the addendum prepared by CH2M for the site referenced above. Please note that the study areas include only portions of the tax lots (see the attached maps and table). Based upon the information presented in the report, and additional information submitted upon request, we concur with the waterway boundaries as mapped in revised Figures 5A-5E of the report. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the expanded study area, one ephemeral waterway was identified. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetlands or below the ordinary high-water line (OHWL) of a waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). The ephemeral waterway is not regulated per OAR 141-085-0515(3); therefore, it is not subject to current state Removal-Fill permit requirements.

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and decide jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you again for having the site evaluated. Please phone me at 503-986-5271 if you have any questions.

Sincerely,

Daniel Evans, PWS
Jurisdiction Coordinator

Approved by _____
Peter Ryan, PWS
Aquatic Resource Specialist

Enclosures

ec: Claudia Steinkoenig, Jacobs
Gilliam County Planning Department
Brad Johnson, Corps of Engineers
Heidi Hartman, DSL
Joy Vaughan, ODFW
Chase McVeigh-Walker, ODOE

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:
Matt Hutchinson, Avangrid Renewables, LLC
1125 NW Couch Street, Suite 700
Portland, Oregon 97209

Business phone # (503) 478-6317
Mobile phone # (optional)
E-mail: matthew.hutchinson@avangrid.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Matt Hutchinson **Signature:** MHutchinson
Date: 12/12/18 Special instructions regarding site access: ____

Project and Site Information

Project Name: Montague Wind Power facility

Latitude: 45.704539 Longitude: -120.517339
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Construction of a wind power facility

Tax Map # See attached summary table
Tax Lot(s)

Tax Map #
Tax Lot(s)

Project Street Address (or other descriptive location):
Project sites are located east and west of Highway 19 South of Arlington

Township Range Section QQ
Use separate sheet for additional tax and location information

City: Arlington, Oregon County: Gilliam

Waterway: not applicable River Mile: not applicable

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
C. Steinkoenig, Jacobs (formerly CH2M)
2020 SW 4th Avenue, Suite 300
Portland, Oregon 97219

Phone # (503) 736-4136
Mobile phone # (if applicable)
E-mail: claudia.steinkoenig@jacobs.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: CS Date: 12/12/18

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No | Study Area size: 1,164 acres Total Wetland Acreage: 0.0000

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ Industrial Land Certification Program Site
☐ Wetland restoration/enhancement project (not mitigation)
☒ Previous delineation/application on parcel
If known, previous DSL # WD#2011-0364

☐ Fee payment submitted $ ____
☐ Fee ($100) for resubmittal of rejected report
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # ____ Expiration date ____

☐ LWI shows wetlands or waters on parcel
Wetland ID code ____

For Office Use Only

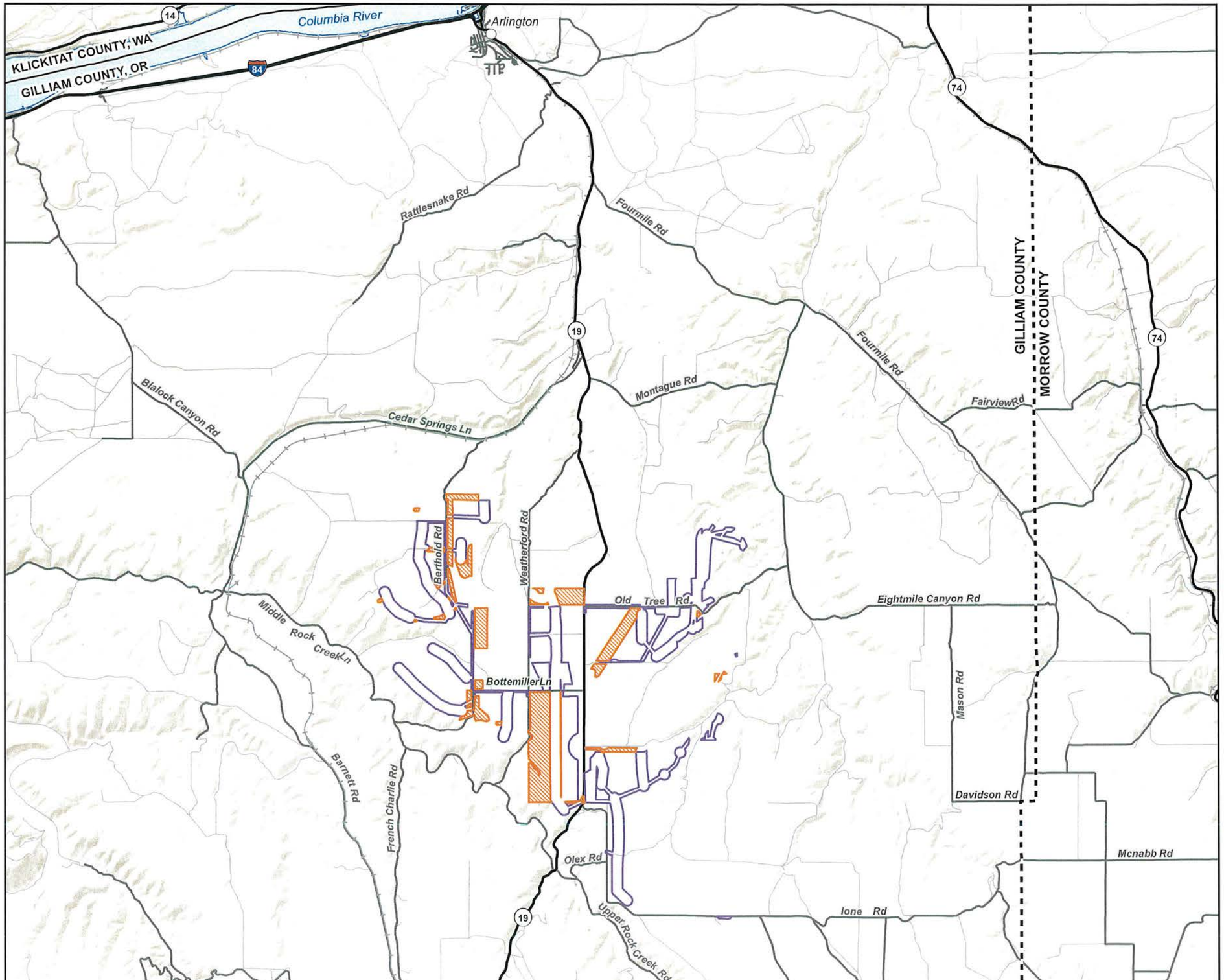
DSL Reviewer: C.S. Fee Paid Date: ____/____/____ DSL WD # 2014-0660

Date Delineation Received: 12/12/18 Scanned: ☐ Electronic: ☒ DSL App.# ____

PA 77411

Township	Range	Section	Tax Lots
1 North	21 East	4, 5, 6, 8, 13, 14, 15, 16, 17, 18, 21, 23, 27, 28, 29, 33, 34, 35	200, 400, 401, 500, 700, 804, 900, 1100, 1101, 1200, 1500, 2000, 2100
1 North	22 East	18, 19	800, 1900
1 South	21 East	2, 3	203
Tax Map Numbers			
01N21E0000-00200			
01N21E0000-00400			
01N21E0000-00401			
01N21E0000-00500			
01N21E0000-00700			
01N21E0000-00804			
01N21E0000-00900			
01N21E0000-01100			
01N21E0000-01101			
01N21E0000-01200			
01N21E0000-01500			
01N21E0000-02000			
01N21E0000-02100			
01N21E0000-ROADS			
01N22E0000-00800			
01N22E0000-01900			
01S21E0000-00203			
01S21E0000-ROADS			

Figure 1
Wetland Survey
Project Location
Montague Wind Power Facility - Phase 2



Legend

- 2018 Wetland Survey Corridor
- WD2011-0364R Wetland Survey Corridor

Basemap Features

- Interstate/Highway
- Public Road
- Other Road
- Major Railroad Line
- State Boundary
- County Boundary

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Basemap Source: ESRI World Terrain Base

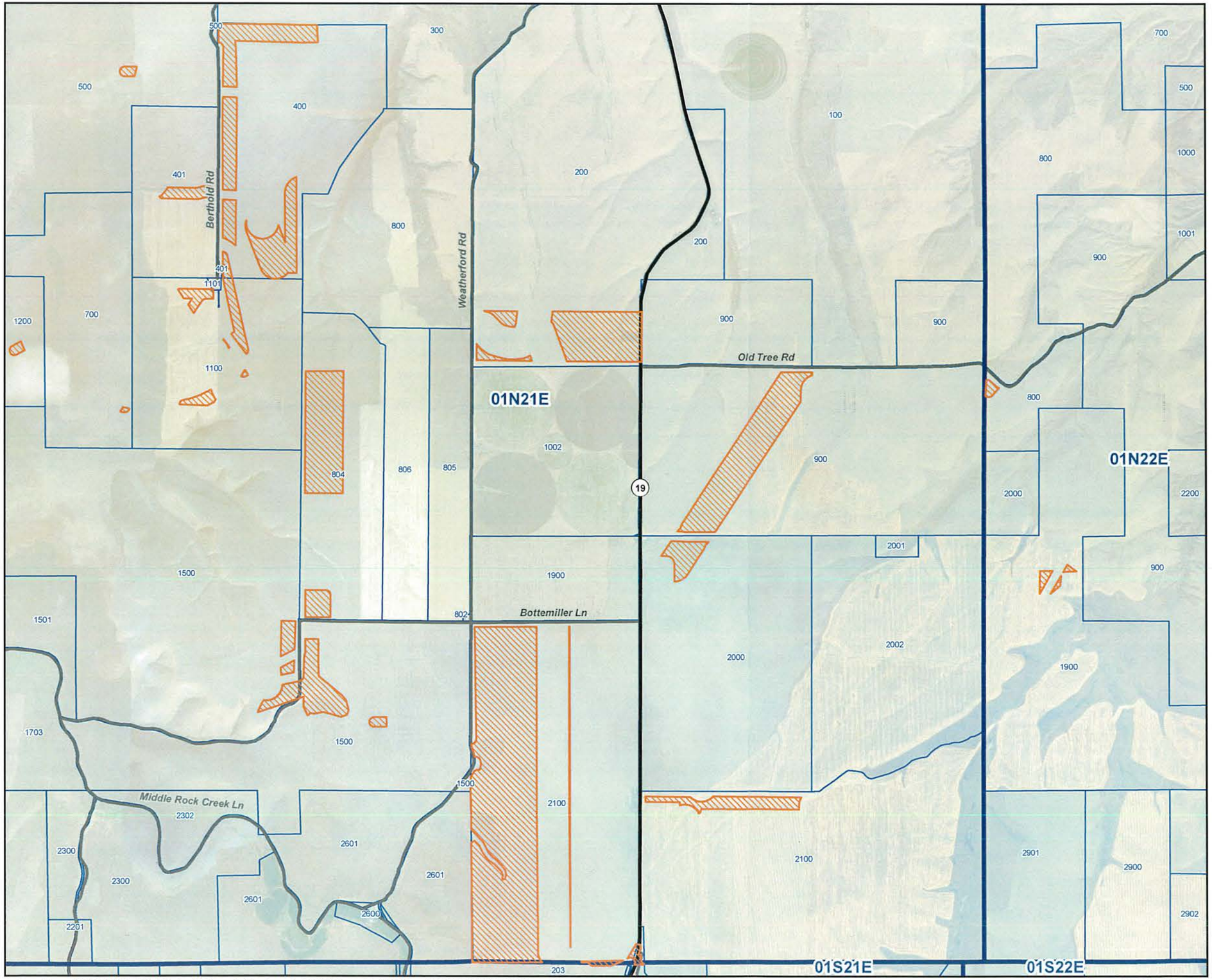

Figure 2
Wetland Survey
Tax Lots
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

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Basemap Source: ESRI World Imagery

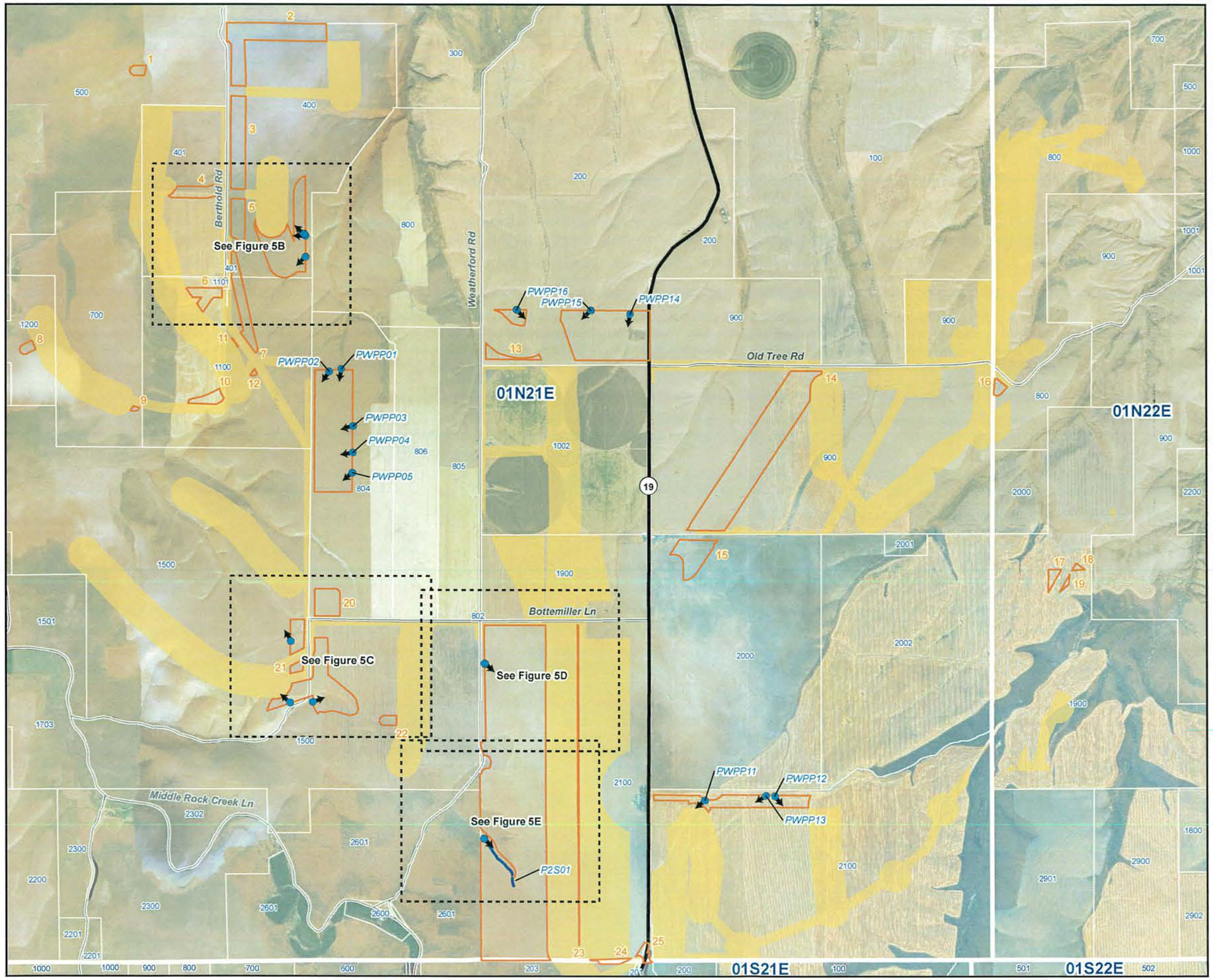

Figure 5A
Wetland Survey
Wetlands and Waterways
Survey Detail Map
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- 12 Study Area Unit Label
- WD2011-0364R Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary
- Field Data Point and Photo Direction
- 2018 Field Verified Ordinary High Water

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

- Field data points and ordinary high water boundaries were mapped with sub-meter accuracy.

DSL WD # 2018-0660

Approval Issued 3-5-2019

Approval Expires 3-5-2024

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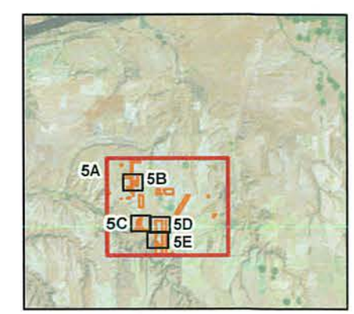

AVANGRID RENEWABLES

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Basemap Source: ESRI World Imagery

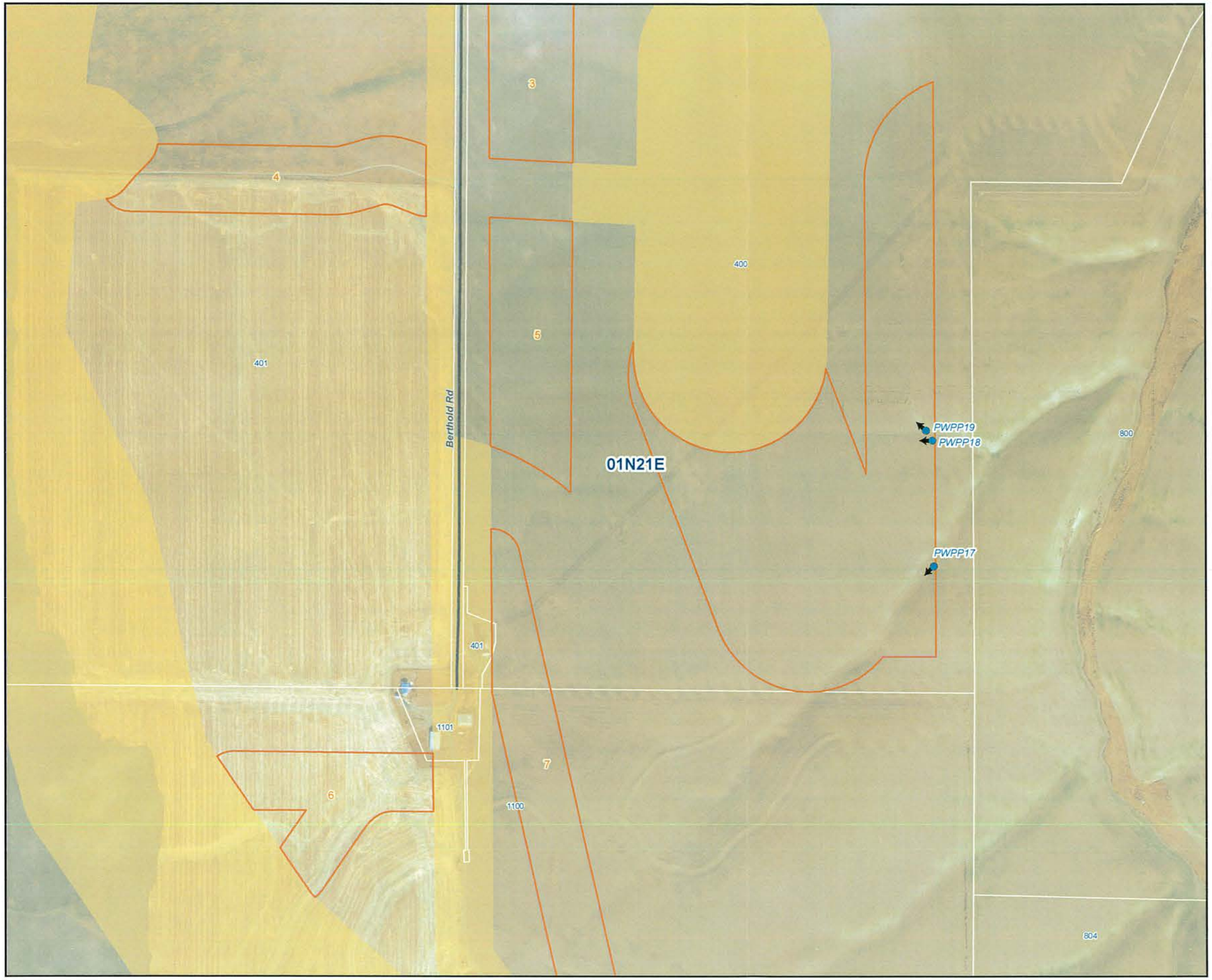

Figure 5B
Wetland Survey
Wetlands and Waterways
Survey Detail Map
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- 12 Study Area Unit Label
- WD2011-0364R Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary
- Field Data Point and Photo Direction
- 2018 Field Verified Ordinary High Water
- Water Feature Continues Outside of the Survey Corridor
- Flow Direction

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

- Field data points and ordinary high water boundaries were mapped with sub-meter accuracy.

DSL WD # 2018-0660

Approval Issued 3-5-2019

Approval Expires 3-5-2024

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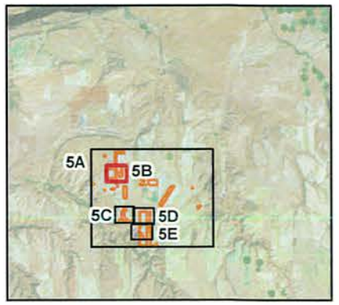

AVANGRID RENEWABLES

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Basemap Source: ESRI World Imagery

Figure 5C
Wetland Survey
Wetlands and Waterways
Survey Detail Map
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- 12 Study Area Unit Label
- WD2011-0364R Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary
- Field Data Point and Photo Direction
- 2018 Field Verified Ordinary High Water
- Water Feature Continues Outside of the Survey Corridor
- Flow Direction

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

- Field data points and ordinary high water boundaries were mapped with sub-meter accuracy.

DSL WD # 2018-0660

Approval Issued 3-5-2019

Approval Expires 3-5-2024

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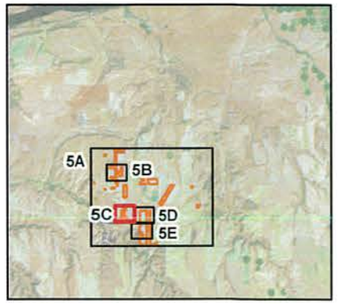

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Basemap Source: ESRI World Imagery

Figure 5D
Wetland Survey
Wetlands and Waterways
Survey Detail Map
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- 12 Study Area Unit Label
- WD2011-0364R Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary
- Field Data Point and Photo Direction
- 2018 Field Verified Ordinary High Water
- Water Feature Continues Outside of the Survey Corridor
- Flow Direction

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

- Field data points and ordinary high water boundaries were mapped with sub-meter accuracy.

DSL WD # 2018-0660

Approval Issued 3-5-2019

Approval Expires 3-5-2024

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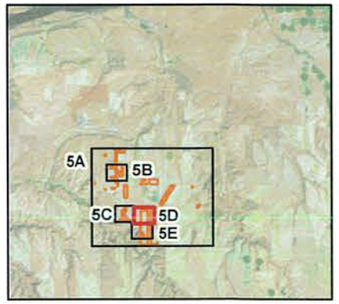

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Basemap Source: ESRI World Imagery

Figure 5E
Wetland Survey
Wetlands and Waterways
Survey Detail Map
Montague Wind Power Facility - Phase 2

Legend

- 2018 Wetland Survey Corridor
- 12 Study Area Unit Label
- WD2011-0364R Wetland Survey Corridor
- Public Land Survey System Township Range Boundary
- Gilliam County Tax Lot Boundary
- Field Data Point and Photo Direction
- 2018 Field Verified Ordinary High Water
- Water Feature Continues Outside of the Survey Corridor
- Flow Direction

Basemap Features

- Interstate/Highway
- Public Road

- Tax lot GIS data for Gilliam County downloaded on 10/18/2017.

- Field data points and ordinary high water boundaries were mapped with sub-meter accuracy.

DSL WD # 2018-0660

Approval Issued 3-5-2019

Approval Expires 3-5-2024

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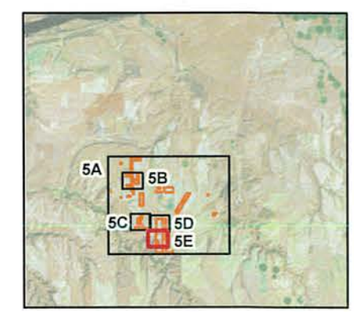

AVANGRID RENEWABLES

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Basemap Source: ESRI World Imagery

Oregon

Kate Brown, Governor

OREGON DEPARTMENT OF AVIATION

November 16, 2018

3040 25th Street, SE
Salem, OR 97302-1125
Phone: (503) 378-4880
Toll Free: (800) 874-0102
FAX: (503) 373-1688

Matt Hutchinson
Avangrid Renewables

Subject: **Oregon Department of Aviation comments regarding the construction of wind turbines constructed to various heights located near Arlington, Oregon.**

Aviation Reference: 2018-ODA-L-827-910-OE

The Oregon Department of Aviation (ODA) has conducted an aeronautical study of the proposed construction and has determined that notice to the FAA is required. The structures exceed FAR Part 77.9 (a-d) and Obstruction Standards of OAR 738-70-0100.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes to the original application will void this determination. Any future construction or alteration to the original application will require a separate notice from ODA.

This determination will expire 18 months after its effective date, regardless of whether the proposed construction or alteration has been started, or on the date the proposed construction or alteration is abandoned, whichever is earlier.

Mitigation Recommendation:

☒ We do not object with conditions to the construction described in this proposal. This determination does not constitute ODA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

☒ Marking and lighting are recommended for aviation safety. We recommend it be installed and maintained in accordance with FAA Advisory Circular AC70/7460-1L

☐ The proposed obstruction should to be lower to a height that is no longer a hazard to the airport primary and horizontal surface FAA FAR 77

☐ The proposed obstruction should be relocate outside the airport primary and horizontal surface FAA FAR 77

Sincerely,

Matt Lawyer
Program Coordinator

	STUDY_ASN	AGL_HEIGHT_DE	AGL_HEIGI	AMSL	AMSL_HEIGHT_DET	AMSL_HEIGHT_P	ELEVATION	ENTERED_DATE	LAT_DD	LON_DD	PROPOSAL_DESCRIPTION	RECEIVED_DATE	STATUS	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	SURVEY_ACC	TIMESTAMP
Montague Phase I	2017-WTW-2446-OE	0	499	1525	0	1525	1026	2/24/2017	45.58641667	-120.119625	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2447-OE	0	499	1513	0	1513	1014	2/24/2017	45.58849167	-120.1114444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E10	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2448-OE	0	499	1563	0	1563	1064	2/24/2017	45.58360556	-120.1058056	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E11	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2449-OE	0	499	1523	0	1523	1024	2/24/2017	45.57553333	-120.1130028	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E12	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2450-OE	0	499	1495	0	1495	996	2/24/2017	45.589025	-120.1036	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E12	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2451-OE	0	499	1527	0	1527	1028	2/24/2017	45.57255	-120.1136417	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E13	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2452-OE	0	499	1568	0	1568	1069	2/24/2017	45.56589167	-120.1164139	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E14	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2453-OE	0	499	1604	0	1604	1105	2/24/2017	45.56250833	-120.1234278	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E15	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2454-OE	0	499	1534	0	1534	1035	2/24/2017	45.58341944	-120.12015	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E2	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2455-OE	0	499	1535	0	1535	1036	2/24/2017	45.58095	-120.1204111	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E3	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2456-OE	0	499	1537	0	1537	1038	2/24/2017	45.57721667	-120.1206861	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E4	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2457-OE	0	499	1549	0	1549	1050	2/24/2017	45.57430833	-120.1231917	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2458-OE	0	499	1598	0	1598	1099	2/24/2017	45.56995278	-120.1268667	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2459-OE	0	499	1612	0	1612	1113	2/24/2017	45.56598333	-120.1438444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2460-OE	0	499	1616	0	1616	1117	2/24/2017	45.56300556	-120.1439389	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2461-OE	0	499	1625	0	1625	1126	2/24/2017	45.5596	-120.1439	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	E9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2462-OE	0	499	1509	0	1509	1010	2/24/2017	45.57360833	-120.0974083	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F0	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2463-OE	0	499	1551	0	1551	1052	2/24/2017	45.57132778	-120.0997361	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2464-OE	0	499	1552	0	1552	1053	2/24/2017	45.56879444	-120.1011778	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F2	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2465-OE	0	499	1603	0	1603	1104	2/24/2017	45.56605	-120.1005222	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F3	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2466-OE	0	499	1598	0	1598	1099	2/24/2017	45.56337222	-120.1022389	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F4	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2467-OE	0	499	1565	0	1565	1066	2/24/2017	45.56023611	-120.10435	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2468-OE	0	499	1573	0	1573	1074	2/24/2017	45.55605	-120.1036889	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2469-OE	0	499	1592	0	1592	1093	2/24/2017	45.550975	-120.105625	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2470-OE	0	499	1581	0	1581	1082	2/24/2017	45.548175	-120.105	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2471-OE	0	499	1726	0	1726	1227	2/24/2017	45.53948611	-120.0934139	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	F9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2472-OE	0	499	1521	0	1521	1022	2/24/2017	45.55891667	-120.0868528	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	G1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2473-OE	0	499	1669	0	1669	1170	2/24/2017	45.55307222	-120.1542222	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2474-OE	0	499	1623	0	1623	1124	2/24/2017	45.55787222	-120.1331028	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H10	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2475-OE	0	499	1640	0	1640	1141	2/24/2017	45.55509167	-120.1385194	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H11	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2476-OE	0	499	1664	0	1664	1165	2/24/2017	45.55193889	-120.1451972	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H12	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2477-OE	0	499	1671	0	1671	1172	2/24/2017	45.54756389	-120.1461194	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H13	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2478-OE	0	499	1684	0	1684	1185	2/24/2017	45.54433889	-120.1470917	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H14	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2479-OE	0	499	1687	0	1687	1188	2/24/2017	45.54152222	-120.1481222	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H15	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2480-OE	0	499	1704	0	1704	1205	2/24/2017	45.53868333	-120.1457528	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H16	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2481-OE	0	499	1709	0	1709	1210	2/24/2017	45.53597778	-120.1442417	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H17	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2482-OE	0	499	1715	0	1715	1216	2/24/2017	45.53309444	-120.1445361	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H18	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2483-OE	0	499	1593	0	1593	1094	2/24/2017	45.55445556	-120.1236444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H19	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2484-OE	0	499	1681	0	1681	1182	2/24/2017	45.55006389	-120.1572194	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H2	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2485-OE	0	499	1610	0	1610	1111	2/24/2017	45.552	-120.1269167	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H20	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2486-OE	0	499	1614	0	1614	1115	2/24/2017	45.54903889	-120.1266306	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H21	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2487-OE	0	499	1622	0	1622	1123	2/24/2017	45.54604167	-120.1267417	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H22	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2488-OE	0	499	1634	0	1634	1135	2/24/2017	45.543475	-120.1279222	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H23	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2489-OE	0	499	1651	0	1651	1152	2/24/2017	45.54048056	-120.1293	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H24	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2490-OE	0	499	1695	0	1695	1196	2/24/2017	45.53816389	-120.1280806	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H25	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2491-OE	0	499	1690	0	1690	1191	2/24/2017	45.547275	-120.1599944	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H3	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2492-OE	0	499	1700	0	1700	1201	2/24/2017	45.54459444	-120.1625167	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H4	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2493-OE	0	499	1707	0	1707	1208	2/24/2017	45.54144722	-120.1625583	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2494-OE	0	499	1710	0	1710	1211	2/24/2017	45.53850556	-120.1612583	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2495-OE	0	499	1724	0	1724	1225	2/24/2017	45.53562222	-120.1596111	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2496-OE	0	499	1724	0	1724	1225	2/24/2017	45.53260833	-120.1581167	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2497-OE	0	499	1606	0	1606	1107	2/24/2017	45.56011389	-120.1296667	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	H9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2498-OE	0	499	1872	0	1872	1373	2/24/2017	45.52814722	-120.1155528	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2499-OE	0	499	1951	0	1951	1452	2/24/2017	45.500125	-120.1266694	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I10	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2500-OE	0	499	1971	0	1971	1472	2/24/2017	45.49718333	-120.1264417	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I11	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2501-OE	0	499	1883	0	1883	1384	2/24/2017	45.52552778	-120.1186	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I2	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2502-OE	0	499	1848	0	1848	1349	2/24/2017	45.52298611	-120.1185278	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I3	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2503-OE	0	499	1820	0	1820	1321	2/24/2017	45.52046111	-120.1184889	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I4	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2504-OE	0	499	1825	0	1825	1326	2/24/2017	45.51738333	-120.1193444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2505-OE	0	499	1820	0	1820	1321	2/24/2017	45.51449444	-120.1214139	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2506-OE	0	499	1851	0	1851	1352	2/24/2017	45.51286111	-120.1262694	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2507-OE	0	499	1872	0	1872	1373	2/24/2017	45.50995556	-120.1262611	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2508-OE	0	499	1891	0	1891	1392	2/24/2017	45.50646944	-120.1266861	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2509-OE	0	499	1917	0	1917	1418	2/24/2017	45.5033	-120.1265889	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	I99	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2510-OE	0	499	1863	0	1863	1364	2/24/2017	45.51304444	-120.1060667	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J10	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2511-OE	0	499	1880	0	1880	1381	2/24/2017	45.51039444	-120.1069833	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J11	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2512-OE	0	499	1895	0	1895	1396	2/24/2017	45.50699722	-120.1077556	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J12	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2513-OE	0	499	1904	0	1904	1405	2/24/2017	45.50422222	-120.10845	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J13	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2514-OE	0	499	1903	0	1903	1404	2/24/2017	45.50133333	-120.1084528	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J14	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2515-OE	0	499	1922	0	1922	1423	2/24/2017	45.49819167	-120.1117722	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J15	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2516-OE	0	499	1934	0	1934	1435	2/24/2017	45.49559167	-120.1132611	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J16	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2517-OE	0	499	1968	0	1968	1469	2/24/2017	45.49269167	-120.1129389	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J17	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2518-OE	0	499	1790	0	1790	1291	2/24/2017	45.53083889	-120.1126944	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2519-OE	0	499	1803	0	1803	1304	2/24/2017	45.52348056	-120.1033972	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2520-OE	0	499	1829	0	1829	1330	2/24/2017	45.52096389	-120.10395	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2521-OE	0	499	1855	0	1855	1356	2/24/2017	45.51849444	-120.1047778	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2522-OE	0	499	1862	0	1862	1363	2/24/2017	45.51570556	-120.1063389	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	J9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2523-OE	0	499	1710	0	1710	1211	2/24/2017	45.53673889	-120.0878444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K1	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2524-OE	0	499	1849	0	1849	1350	2/24/2017	45.50991111	-120.0907639	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K10	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2525-OE	0	499	1863	0	1863	1364	2/24/2017	45.50678611	-120.0929139	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K11	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2526-OE	0	499	1884	0	1884	1385	2/24/2017	45.49819722	-120.0985722	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K12	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2527-OE	0	499	1907	0	1907	1408	2/24/2017	45.49551944	-120.0999806	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K13	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2528-OE	0	499	1931	0	1931	1432	2/24/2017	45.49211111	-120.1022389	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K14	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2529-OE	0	499	1732	0	1732	1233	2/24/2017	45.53365556	-120.0897278	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K2	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2530-OE	0	499	1780	0	1780	1281	2/24/2017	45.53000278	-120.0902444	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K3	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2531-OE	0	499	1798	0	1798	1299	2/24/2017	45.52678611	-120.0912	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K4	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2532-OE	0	499	1805	0	1805	1306	2/24/2017	45.52391667	-120.0922028	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K5	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2533-OE	0	499	1793	0	1793	1294	2/24/2017	45.52121111	-120.0895472	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K6	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2534-OE	0	499	1810	0	1810	1311	2/24/2017	45.51820278	-120.0905889	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K7	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2535-OE	0	499	1803	0	1803	1304	2/24/2017	45.51535556	-120.0822639	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K8	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2536-OE	0	499	1828	0	1828	1329	2/24/2017	45.512875	-120.0878139	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K9	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2537-OE	0	499	1868	0	1868	1369	2/24/2017	45.50396944	-120.0950556	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K98	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2538-OE	0	499	1880	0	1880	1381	2/24/2017	45.50112222	-120.0974917	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	K99	OR	Wind Turbine		4D	3/24/2018
Montague Phase I	2017-WTW-2539-OE	0	499	1635	0	1635	1136	2/24/2017	45.54116111	-120.0796472	Utilities scale wind project	2/24/2017	Work In Proc	Arlington	L2	OR	Wind Turbine		4D	3/24/2018

Montague Phase I	2017-WTW-2540-OE	0	499	1694	0	1694	1195	2/24/2017	45.538925	-120.07965	Utilities scale wind project	2/24/2017	Work In Proj	Arlington	L3	OR	Wind Turbine	4D	3/24/2018
Montague Phase I	2017-WTW-2541-OE	0	499	1722	0	1722	1223	2/24/2017	45.53577778	-120.0757528	Utilities scale wind project	2/24/2017	Work In Proj	Arlington	L4	OR	Wind Turbine	4D	3/24/2018
Montague Phase I	2017-WTW-2542-OE	0	499	1765	0	1765	1266	2/24/2017	45.53294444	-120.07495	Utilities scale wind project	2/24/2017	Work In Proj	Arlington	L5	OR	Wind Turbine	4D	3/24/2018
Montague Phase I	2017-WTW-2543-OE	0	499	1776	0	1776	1277	2/24/2017	45.53029722	-120.0756333	Utilities scale wind project	2/24/2017	Work In Proj	Arlington	L6	OR	Wind Turbine	4D	3/24/2018

Montague Phase II	ASN	Structure Name	AGL (ft)	Latitude	Longitude	SE (ft)	
Montague Phase II	2018-WTW-9697-OE	A1	599	45-35-23.28	120-14-47.13	1085	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9698-OE	A2	599	45-35-13.87	120-14-47.12	1096	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9699-OE	A3	599	45-35-3.34	120-14-46.95	1105	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9700-OE	A4	599	45-34-49.92	120-14-46.68	1092	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9701-OE	B1	599	45-34-18.9	120-14-19.97	1108	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9702-OE	B2	599	45-34-8.05	120-14-13.35	1119	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9703-OE	B3	599	45-33-59.92	120-14-1.78	1130	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9704-OE	B4	599	45-33-55.06	120-13-46.85	1133	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9705-OE	C1	599	45-35-39.25	120-13-31.01	1071	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9706-OE	C10	599	45-33-58.59	120-12-54.93	1166	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9707-OE	C2	599	45-35-28.34	120-13-26.02	1075	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9708-OE	C3	599	45-35-15.7	120-13-30.14	1084	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9709-OE	C4	599	45-35-5.3	120-13-32.9	1086	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9710-OE	C5	599	45-34-49.7	120-13-34.88	1087	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9711-OE	C6	599	45-34-40.17	120-13-28.32	1108	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9712-OE	C7	599	45-34-27.72	120-13-24.07	1116	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9713-OE	C8	599	45-34-18.59	120-13-15.25	1126	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9714-OE	C9	599	45-34-9.55	120-13-1.1	1159	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9715-OE	D1	599	45-35-4.18	120-12-38.91	1097	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9716-OE	D2	599	45-34-49.16	120-12-39.34	1113	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9717-OE	D3	599	45-34-36.98	120-12-33.74	1120	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9718-OE	E1	599	45-36-16.01	120-12-12.77	1046	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9719-OE	E2	599	45-36-3.96	120-12-9.52	1033	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9720-OE	E3	599	45-35-53.91	120-12-8.45	1052	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9721-OE	E4	599	45-35-40.94	120-12-7.82	1066	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9722-OE	E5	599	45-35-27.52	120-12-7.21	1080	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9723-OE	F1	599	45-33-8.31	120-14-1.86	1184	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9724-OE	F2	599	45-32-54.52	120-13-43.26	1220	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9725-OE	F3	599	45-32-46.78	120-13-31.28	1235	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9726-OE	F4	599	45-32-34.81	120-13-10.14	1245	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9727-OE	F5	599	45-32-29.84	120-12-54.95	1225	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9728-OE	F6	599	45-32-28.55	120-12-38.28	1214	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9729-OE	G1	599	45-33-26.33	120-13-17.04	1130	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9730-OE	G2	599	45-33-22	120-13-5.72	1155	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9731-OE	G3	599	45-33-16.19	120-12-53.89	1163	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9732-OE	G4	599	45-33-7.47	120-12-43.98	1182	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9733-OE	G5	599	45-32-59.28	120-12-32.46	1182	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9734-OE	H1	599	45-34-12.93	120-11-32.17	1148	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9735-OE	H10	599	45-32-31.87	120-11-38.92	1223	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9736-OE	H11	599	45-32-22.72	120-11-39.04	1229	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9737-OE	H12	599	45-32-13.19	120-11-39.27	1236	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9738-OE	H13	599	45-32-4.4	120-11-43.6	1239	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9739-OE	H2	599	45-34-1.49	120-11-32.59	1152	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9740-OE	H3	599	45-33-49.79	120-11-33.02	1153	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9741-OE	H4	599	45-33-36.9	120-11-34.06	1162	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9742-OE	H5	599	45-33-26.63	120-11-34.19	1178	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9743-OE	H6	599	45-33-16.6	120-11-34.94	1185	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9744-OE	H7	599	45-33-7.17	120-11-34.11	1186	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9745-OE	H8	599	45-32-53.8	120-11-34.36	1202	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9746-OE	H9	599	45-32-40.21	120-11-38.8	1215	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9747-OE	J1	599	45-34-15.63	120-10-39.35	1164	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9748-OE	J10	599	45-32-16.06	120-10-34.23	1229	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9749-OE	J11	599	45-32-3.11	120-10-34.3	1239	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9750-OE	J12	599	45-31-50.43	120-10-34.33	1250	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9751-OE	J13	599	45-31-38.99	120-10-34.21	1265	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9752-OE	J14	599	45-31-27.1	120-10-34.19	1273	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9753-OE	J15	599	45-31-17.26	120-10-34.13	1282	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9754-OE	J16	599	45-31-6.96	120-10-34.14	1289	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9755-OE	J17	599	45-30-56.58	120-10-23.27	1299	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9756-OE	J2	599	45-34-2.24	120-10-32.57	1160	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9757-OE	J3	599	45-33-46.51	120-10-32.54	1163	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9758-OE	J4	599	45-33-32.68	120-10-32.47	1177	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9759-OE	J5	599	45-33-19.45	120-10-32.11	1186	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9760-OE	J6	599	45-33-6.82	120-10-33.2	1197	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9761-OE	J7	599	45-32-55.09	120-10-34.07	1206	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9762-OE	J8	599	45-32-39.94	120-10-33.97	1217	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9763-OE	J9	599	45-32-28.74	120-10-34.12	1213	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9764-OE	K1	599	45-31-46.66	120-9-36.63	1241	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9765-OE	K10	599	45-30-0.81	120-9-13.27	1477	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9766-OE	K11	599	45-29-50.99	120-9-13.34	1474	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9767-OE	K12	599	45-29-41.2	120-9-13.39	1485	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9768-OE	K13	599	45-29-32.47	120-9-0.14	1494	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9769-OE	K2	599	45-31-33.78	120-9-30.74	1258	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9770-OE	K3	599	45-31-19.88	120-9-33.2	1337	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9771-OE	K4	599	45-31-7.44	120-9-16.29	1479	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9772-OE	K5	599	45-30-56.74	120-9-12.67	1453	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9773-OE	K6	599	45-30-47.17	120-9-11.42	1448	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9774-OE	K7	599	45-30-30.95	120-9-11.02	1469	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9775-OE	K8	599	45-30-21.44	120-9-11.27	1453	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9776-OE	K9	599	45-30-11.02	120-9-13	1451	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9777-OE	L1	599	45-31-51.07	120-8-39.82	1229	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9778-OE	L2	599	45-31-34.43	120-8-39.32	1331	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9779-OE	L3	599	45-31-18.46	120-8-36.9	1471	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9780-OE	M1	599	45-31-29.09	120-8-9.24	1449	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9781-OE	M2	599	45-31-49.43	120-7-48.15	1273	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9782-OE	M3	599	45-31-59.55	120-7-7.72	1202	Notice Required, lighting and marking Recommended.
Montague Phase II	2018-WTW-9783-OE	M4	599	45-32-20.34	120-6-57.79	1122	Notice Required, lighting and marking Recommended.

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

January 4, 2019

Ms. Sarah Esterson
OR Dept of Energy
550 Capitol St NE, 1st Flr
Salem, OR 97301

RE: SHPO Case No. 10-0378
ODOE, Avangrid Renewables Montague Wind Power, NWP-2010-86
Wind farm
(1N 20E 1, 12) (1N 21E 1, 4, 5, 6, 7, 8), Arlington, Gilliam County

Dear Ms. Esterson:

Our Sarah received the latest supplemental survey report for the project referenced above. We have reviewed this report (SHPO Report# 30144) and agree that the project activities, as described in the report, will likely have no adverse effect on any known archaeological site. Our office understands that the applicant is in consultation with the CTUIR (Confederated Tribes of the Umatilla Indian Reservation) regarding potential effects to a HPRCSIT (Historic Property of Religious and Cultural Significance to Indian Tribes) that is known to exist within a portion of the project area and we look forward to hearing from them in the future if any adverse effects will result to it from the proposed project. In reading through the recent survey report we have also noted that the author's have included Oregon's Tribal Position Paper on Human Remains. The copy of this position paper that is included within the document is out of date with tribal contacts listed at the end of the paper no longer accurate. It is important that the applicant update their copy of this form and make sure that all staff who needs to access it is are aware of all current tribal contacts in case there is a need to reach out due to an inadvertent discovery.

Under federal and state law archaeological sites, objects and human remains are protected on both public and private land in Oregon. If project impacts and the degree/type of required ground disturbance changes from that outlined in your report, further consultation with our office will be required before proceeding with the proposed activity. If you have any questions regarding any future discovery, or this letter, feel free to contact our office.

Sincerely,

Dennis Griffin, Ph.D., RPA
State Archaeologist
(503) 986-0674
dennis.griffin@oregon.gov

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

March 1, 2019

Ms. Sarah Esterson
OR Dept of Energy
550 Capitol St NE, 1st Flr
Salem, OR 97301

RE: SHPO Case No. 10-0378
ODOE, Avangrid Renewables Montague Wind Power, NWP-2010-86
Wind farm
(1N 20E 1, 12) (1N 21E 1, 4, 5, 6, 7, 8), Arlington, Gilliam County

Dear Ms. Esterson:

Thank you for submitting documentation and additional information for the project referenced above. When determining if a resource is eligible for listing in the National Register of Historic Places, we use the criteria outlined in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation.* First, we determine if the resource has historic significance under one or more of four criteria. Next, we assess if the property retains sufficient integrity to convey that historic significance. These aspects of integrity include location, setting, design, materials, workmanship, feeling, and association. When assessing project effects to historic properties, we determine if the project actions will, either directly or indirectly, alter any of the characteristics that qualify the property for listing and if a property's integrity will be diminished.

Based on these criteria and the information provided to our office, we find that the following properties are not eligible for listing in the National Register of Historic Places:

- Weedman Farms, 68040 Highway 19
- Ann Flores Weatherford Property, 69180 Weatherford Road
- Rucker Farm, 69064 Weatherford Road

Since the information provided to our office did not include a sufficient comparative analysis of other agricultural properties in the region, we are not able to concur with the recommendation that the Ruckell Property (69398 Berthold Road) is not eligible for listing. We find the property eligible for listing. However, based on the proposed location of the project infrastructure, we find that the actions will not result in a significant adverse impact.

We concur that the Weatherford Barn is eligible for listing in the National Register of Historic Places under Criterion A for its association with agriculture. The property retains integrity of location, design, setting, materials, feeling, and association. The proposed infrastructure within the vicinity of the Weatherford Barn will greatly diminish the integrity of this historic property. The physical environment of the property and character (setting) will be greatly altered. Also, the historic sense of the property (feeling) and link with agriculture (association) will also be diminished by the proposed project. We find that the actions will result in a significant adverse impact.

We look forward to developing an appropriate approach toward mitigating the significant adverse impact. While there is significant flexibility in the forms that mitigation can take, our office would like to offer the following ideas:

- A reconnaissance level survey of barns in Gilliam County or neighboring counties built prior to a certain date.

- Partnering with a third-party to fund a barn rehabilitation grant for the community, or for a specific barn (ideally publically owned).
- Partnering with a local historical society to develop an exhibit on historic barns.

Please note that these are initial ideas, and mitigation is what all parties agree to. Please feel free to visit our website to view some examples of successful past mitigation projects. These can be found at: http://www.oregon.gov/oprd/HCD/SHPO/Pages/preservation_106_examplemitigation.aspx.

It is our office policy to re-evaluate the eligibility of resources if the previous documentation occurred more than five years ago. We encourage parties to consult with our office early in project planning to determine the level of effort needed for updating documentation.

This letter refers to above-ground historic resources only. Comments pursuant to a review for archaeological resources, if applicable, will be sent separately. Local regulations, if any, still apply and review under local ordinances may be required. Please do not hesitate to contact me with questions, comments, or to discuss potential mitigation.

Sincerely,

Tracy Schwartz
Historic Preservation Specialist
(503) 986-0677
tracy.schwartz@oregon.gov

Attachment D: Draft Habitat Mitigation Plan

Montague Wind Power Facility: Phase 2 Habitat Mitigation Plan

[AS AMENDED ~~JANUARY 2018~~APRIL 2019]

I. Introduction

This plan describes methods and standards for preservation and enhancement of an area of land near the Montague Wind Power Facility (MWPF) to mitigate for the impacts of the facility on wildlife habitat.[1] The certificate holder will construct the facility in two phases. This plan addresses mitigation for both the permanent impacts of facility components and the temporal impacts associated with the second phase (Phase 2) of facility construction. The certificate holder shall protect and enhance the mitigation area as described in this plan. This plan specifies habitat enhancement actions and monitoring procedures to evaluate the success of those actions. Remedial action may be necessary if progress toward habitat enhancement success is not demonstrated in the mitigation area.

II. Description of the Impacts Addressed by the Plan

The land area that will be occupied by permanent Phase 2 facility components ~~(the "footprint") is approximately 68 acres, based on the preliminary design configuration for Phase 2 of the MWPF. In addition to the footprint impacts, construction of Phase 2 of the facility could temporarily disturb approximately 499 acres. Although much of the area is~~will mostly be cropland, but also~~habitat that will be affected by construction disturbance~~ includes areas of perennial bunchgrass and desirable shrubs. After disturbance, the recovery of perennial bunchgrass species to a mature stage might take five to seven years; recovery of desirable shrubs such as bitterbrush and sagebrush might take ten to 30 years to reach maximum height and vertical branching. Even where recovery of these habitat subtypes is successful, there is a loss of habitat quality during the period of time needed to achieve recovery (temporal impact).

III. Calculation of the Size of the Mitigation Area

Before beginning construction on Phase 2 of the facility, the certificate holder shall provide to the Oregon Department of Energy (Department) a map showing the final design configuration of Phase 2 of the facility and a table showing the estimated areas of permanent impacts and construction area impacts on habitat (by category, habitat types, and habitat subtypes). The certificate holder shall calculate the size of the mitigation area, as illustrated below, based on the final design configuration of Phase 2 of the facility. The certificate holder shall implement the habitat enhancement actions described in this plan, after the Department has approved the size of the mitigation area. This plan does not address additional mitigation that is required under the Montague Wind Power Facility Wildlife Monitoring and Mitigation Plan.

The mitigation area must be large enough to meet the habitat mitigation goals and standards of the Oregon Department of Fish and Wildlife (ODFW) described in Oregon Administrative Rule (OAR) 635-415-0025. The ODFW goals require mitigation to achieve "no net loss" of habitat quantity or quality in Categories 2, 3 and 4 and a "net benefit" in habitat

[1] This plan is incorporated by reference in the site certificate for the Montague Wind Power Facility and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

quantity or quality for impacts to habitat in Categories 2 and 5. The MWPF would not have any impacts on Category 1 or Category 5 habitats. Impacts on Category 6 habitat does not require mitigation.

For the footprint impacts, the mitigation area includes two acres for every one acre of Category 2 habitat affected (a 2:1 ratio) and one acre for every acre of footprint impacts to Category 3 and 4 habitat (a 1:1 ratio). The 2:1 ratio for Category 2 is intended to meet the ODFW goals of "no net loss" and "net benefit" of habitat quantity or quality for impacts to Category 2 habitat. The 1:1 ratio for the footprint impacts to Category 3 and 4 habitat is intended to meet the ODFW goal of "no net loss" of habitat in these categories.

To mitigate for temporary construction impacts, the mitigation area includes ~~0.5~~2 acres for every acre of Category 2 ~~or Category 3~~ SSA (sagebrush shrub-steppe) habitat affected (a ~~0.5~~2:1 ratio) and 1 acre for every Category 3 or Category 4 SSA habitat affected (a 1:1 ratio). This portion of the mitigation area is intended to address the temporal loss of habitat quality during the recovery of SSA habitat disturbed during construction. The size of this portion of the mitigation area assumes that restoration of disturbed SSA habitat is successful, as determined under the Montague Wind Power Facility Revegetation Plan. If the revegetation success criteria are not met in the affected areas, then the Oregon Energy Facility Siting Council ("Council") may require the certificate holder to provide additional mitigation.

Areas of potential impact within each affected habitat category and the corresponding mitigation area for each category are calculated as follows, based on maximum high-quality habitat (Categories 2, 3, and 4) impact estimates for Phase 2 (Design Scenario A):[2]

Category 2

Footprint impacts: 2.10 acres

Temporary impacts to SSA: 0.~~0~~2 acre

Mitigation area requirement: (2.10 acres x 2) + (0.2 acre x 2) = 4.~~2~~60 acres

Category 3

Footprint impacts: 0.44 acre

Temporary impacts to SSA: 0.~~29~~09 acre

Mitigation area requirement: 0.44 acre + (0.~~29~~09 acre x ~~0.5~~1) = 0.~~59~~53 acre

Category 4

Footprint impacts: 0.09 acre

Mitigation area requirement: 0.09 acre

Total mitigation area for Phase 2 (Design Scenario A) of the MWPF (rounded up to nearest whole acre): ~~5~~6 (~~4.88~~5.22) acres

[2] Table 9 [Temporary and Permanent Disturbance by Habitat Category and Subtype – Phase 2 Design Scenario A (Maximum Wind Layout)] in Attachment P-11 (Avian Use and Habitat Disturbance Supporting Data) of Exhibit P in Request for Amendment No. 4 to the Site Certificate for the Montague Wind Power Facility (Montague Wind Power Facility, LLC, 2017).

IV. Description of the Mitigation Area

The certificate holder has selected a mitigation area in proximity to the facility where habitat protection and enhancement are feasible consistent with this plan.[3] The certificate holder has identified a 440-acre parcel in a relatively remote setting where habitat protection and enhancement are feasible.[4] Conservation easements for other wind energy facilities have been established within the 440-acre parcel, and the certificate holder has an option for establishing a conservation easement for the MWPF on the remaining acres.[5] If sufficient land for Phase 2 of the MWPF mitigation area is not acquired within the 440-acre parcel, the certificate holder shall select other land that is suitable for meeting the mitigation area requirement consistent with this plan. Before beginning construction of Phase 2 of the facility, the certificate holder shall determine the final size of the mitigation area needed for Phase 2. The certificate holder shall determine the location and boundaries of the mitigation area in consultation with ODFW and the affected landowners and subject to the approval of the Department. The final mitigation area must contain suitable habitat to achieve the ODFW goals of no net loss of habitat quantity or quality in Categories 2, 3 and 4 and a net benefit in habitat quantity or quality for impacts to Category 2 habitat through appropriate enhancement actions. Before beginning construction of Phase 2 of the facility, the certificate holder shall acquire the legal right to create, maintain and protect the habitat mitigation area for the life of the facility by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department.[6]

V. Habitat Enhancement Actions

The objectives of habitat enhancement are to protect habitat within the mitigation area from degradation and to improve the habitat quality of the mitigation area. By achieving these goals, the certificate holder can address the permanent and temporal habitat impacts of Phase 2 of the MWPF and meet the ODFW goals of no net loss of habitat quantity or quality in Categories 2, 3 and 4 and a net benefit in habitat quantity or quality for impacts to Category 2 habitat. The certificate holder shall initiate the habitat enhancement actions for Phase 2 of the facility as soon as the size of the mitigation area has been determined and approved by the Department. The certificate holder shall implement the following enhancement actions within the habitat mitigation area:

1) Modification of Livestock Grazing Practices. The certificate holder shall restrict grazing within the habitat mitigation area. Eliminating livestock grazing within the mitigation area during most of the year will enable recovery of native bunchgrass and sagebrush in

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[3] OAR 635-415-0005 defines "in-proximity habitat mitigation" as follows: "habitat mitigation measures undertaken within or in proximity to areas affected by a development action. For the purposes of this policy, 'in proximity to' means within the same home range, or watershed (depending on the species or population being considered) whichever will have the highest likelihood of benefiting fish and wildlife populations directly affected by the development."

[4] The 440-acre parcel is described in Section IV.4.(b)(F) of the *Final Order on the Application for the Leaning Juniper II Wind Power Facility*, September 21, 2007, pp. 97-100.

[5] The 440-acre parcel is shown in Figures P-10 and P-11 of the MWPF site certificate application.

[6] As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

areas where past grazing or recent (2008) wildfires have occurred, resulting in better vegetative structure and complexity for a variety of wildlife. Reduced livestock grazing may be used as a vegetation management tool, limited to the period from February 1 through April 15.

2) Shrub Planting. The certificate holder shall plant sagebrush shrubs in locations within the habitat mitigation area where existing sagebrush is stressed or where recent (2008) wildfires have occurred. The certificate holder shall determine the size of the shrub-planting areas based on the professional judgment of a qualified biologist after a ground survey of actual conditions. The size of the shrub-planting areas will depend on the available mitigation area and opportunity for survival of planted shrubs. ~~The shrub survival rate at four years after planting is an indicator of successful enhancement of habitat quality to Category 2.~~ The certificate holder shall complete the initial sagebrush planting within one year after the beginning of construction of Phase 2 of the MWPF. Supplementing existing, but disturbed, sagebrush areas with sagebrush seedlings would assist the recovery of this valuable shrub-steppe component. The certificate holder shall obtain shrubs from a qualified nursery or grow shrubs from native seeds gathered from the mitigation area. The certificate holder shall identify the area to be planted with sagebrush shrubs after consultation with ODFW and subject to final approval by the Department. The certificate holder shall mark the planted sagebrush clusters at the time of planting for later monitoring purposes and shall keep a record of the number of shrubs planted.

3) Weed Control. The certificate holder shall implement a weed control program. Under the weed control program, the certificate holder shall monitor the mitigation area to locate weed infestations. The certificate holder shall continue weed control monitoring, as needed, for the life of the facility. As needed, the certificate holder shall use appropriate methods to control weeds. Weed control on the mitigation site will reduce the spread of noxious weeds within the habitat mitigation area and on any nearby grassland, Conservation Reserve Program or cultivated agricultural land. Weed control will promote the growth of desirable native vegetation and planted sagebrush. The certificate holder may consider weeds to be successfully controlled when weed clusters have been eradicated or reduced to a non-competing level. Weeds may be controlled with herbicides or hand-pulling. The certificate holder shall notify the landowner of the specific chemicals to be used on the site and when spraying will occur. To protect locations where young desirable forbs may be growing, spot-spraying may be used instead of total area spraying.

4) Fire Control. The certificate holder shall implement a fire control plan for wildfire suppression within the mitigation area. The certificate holder shall provide a copy of the fire control plan to the Department before starting habitat enhancement actions. The certificate holder shall include in the plan appropriate fire prevention measures, methods to detect fires that occur and a protocol for fire response and suppression. The certificate holder shall maintain fire control for the life of the facility. If any part of the mitigation area is damaged by wildfire, the certificate holder shall assess the extent of the damage and implement appropriate actions to restore habitat quality in the damaged area.

~~5) Nest platforms. The certificate holder shall construct at least one artificial raptor nest platform in the mitigation area tailored to the opportunities of the site, using best~~

~~professional judgment of raptor use in the general area. The certificate holder may construct more than one nest platform based on the availability of suitable locations. The certificate holder shall maintain the nest platforms for the life of the facility.~~

~~6)~~5) Habitat Protection. The certificate holder shall restrict uses of the mitigation area that are inconsistent with the goals of no net loss of habitat quantity or quality in Categories 2, 3 and 4 and a net benefit in Category 2 habitat quantity or quality.

VI. Monitoring

1. Monitoring Procedures

The certificate holder shall hire a qualified investigator (~~an independent~~ botanist, wildlife biologist or revegetation specialist) to conduct a comprehensive monitoring program for the mitigation area. The purpose of this monitoring is to evaluate on an ongoing basis the protection of habitat quality, the results of enhancement actions and the use of the area by avian and mammal species, especially during the wildlife breeding season.

The investigator shall monitor the habitat mitigation area for the life of the facility beginning in the year following the initial sagebrush planting. The investigator shall visit the site as necessary to carry out the following monitoring procedures:

1) Annually assess vegetation cover (species, structural stage, etc.) and progress toward meeting the success criteria.

2) Annually record environmental factors (such as precipitation at the time of surveys and precipitation levels for the year).

3) Annually record any wildfire that occurs within the mitigation area and any remedial actions taken to restore habitat quality in the damaged area.

4) Annually assess the success of the weed control program and recommend remedial action, if needed.

5) Assess the recovery of native bunchgrass and natural recruitment of sagebrush resulting from removal of livestock grazing pressure and recovery post-fire by comparing the quality of bunchgrass and sagebrush cover at the time of each monitoring visit with the quality observed in previous monitoring visits and as observed when the mitigation area was first established. The investigator shall establish photo plots of naturally recovering sagebrush and native bunchgrass during the first year following the beginning of construction of the MWPF. The investigator shall take comparison photos in the first year and in every other year thereafter until the subject vegetation has achieved mature stature. The investigator shall determine the extent of successful recovery of native bunchgrass based on measurable indicators (such as signs of more abundant seed production) and shall report on the progress of recovery within in the monitoring plots. The investigator shall report on the timing and extent of any livestock grazing that has occurred within the mitigation area since the previous monitoring visit.

6) Assess the survival rate and growth of planted sagebrush. At the time of planting, sagebrush clusters will be marked for monitoring. The investigator shall select several planted clusters for photo monitoring and shall take close-up and long-distance digital

images of each selected cluster during monitoring visits. The certificate holder shall determine the number of clusters to be photo-monitored at the time of planting in consultation with the Department and ODFW, based on the number of clusters planted. The investigator shall take comparison photos in the first year following the initial sagebrush planting and in every other year thereafter until the surviving planted sagebrush has achieved mature stature. In each monitoring year, the investigator shall determine and report the survival rate of planted sagebrush. Based on past experience of restoration specialists for other sagebrush planting projects, a survival rate as high as 50 percent can be achieved if there are years of high soil moisture, but a more typical survival rate is 2 surviving shrubs per 10 planted (20 percent) after four years. Shrub planting will be considered successful if a 20 percent survival rate is achieved after four years. The investigator shall recommend remedial action when, in the investigator's judgment, the survival rate of planted sagebrush is inadequate to demonstrate a trend toward an improvement in habitat quality.

The certificate holder shall report the investigator's findings and recommendations regarding the monitoring of the mitigation area to the Department and to ODFW on an annual basis. In the annual mitigation area report, the certificate holder shall describe all habitat mitigation actions carried out during the reporting year. The mitigation area report may be included as part of the annual report on the MWPF that is required by the site certificate.

2. Success Criteria

Mitigation of the permanent and temporal habitat impacts of the facility may be considered successful if the certificate holder protects and enhances sufficient habitat within the mitigation area to meet the ODFW goals of no net loss of habitat quantity or quality in Categories 2, 3 and 4 and a net benefit in habitat quantity or quality for impacts to Category 2 habitat. The certificate holder must protect the quantity and quality of habitat within the mitigation area for the life of the facility. ODFW has advised the Department that protection of habitat alone (without enhancement activity) will not meet the intent of the "net benefit" goal.

The certificate holder must protect a sufficient quantity of habitat in each category to meet the mitigation area requirements calculated under Section III based on the final design configuration for Phase 2 of the facility. The certificate holder shall determine the actual mitigation area requirements for Phase 2 of the facility, subject to Department approval, before beginning construction of Phase 2 of the facility. If the land selected for the mitigation area does not already contain sufficient habitat in each category to meet these requirements, then the certificate holder must demonstrate improvement of habitat quality sufficient to change lower-value habitat to a higher value (for example, to convert Category 3 habitat to Category 2). The certificate holder may demonstrate improvement of habitat quality based on evidence of indicators such as increased avian use by a diversity of species, survival of planted shrubs, more abundant seed production of desirable native bunchgrass, natural recruitment of sagebrush, and successful weed control. If the certificate holder cannot demonstrate that the habitat mitigation area is trending toward the habitat quality goals described above within four years after the initial sagebrush planting, the certificate holder shall propose remedial action. The Department may require supplemental planting or other corrective measures.

After the certificate holder has demonstrated that the habitat quantity goals have been achieved, the investigator shall verify, during subsequent monitoring visits, that the mitigation area continues to meet the ODFW "no net loss" and "net benefit" goals described above. The investigator shall recommend remedial action if the habitat quality within the mitigation area falls below the habitat quantity goals listed above. The Department may require supplemental planting, other corrective measures and additional monitoring as necessary to ensure that the habitat quantity goals are achieved and maintained.

VII. Amendment of the Plan

This *Habitat Mitigation Plan* may be amended from time to time by agreement of the certificate holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject or modify any amendment of this plan agreed to by the Department.

Attachment E: Draft Revegetation Plan

Attachment E: Draft Revegetation and Weed Control Plan

(As amended in Final Order on Amendment 4)

Summit Ridge Wind Farm: Draft Revegetation and Weed Control Plan

1. Introduction

This Revegetation and Weed Control Plan ("Plan") describes the methods and standards to restore temporarily disturbed areas from construction of the Summit Ridge Wind Farm (Summit Ridge).[1] The certificate holder is not required to restore areas occupied by permanent facility components (the "footprint") under this Plan.

Revegetation and restoration measures are designed to support wildlife habitat, control erosion, and mitigate against the invasion of noxious weed species into newly disturbed areas. Where vegetation has been damaged or removed during construction, the certificate holder must restore suitable vegetation to pre-disturbance condition or better. In addition, the certificate holder shall maintain erosion and sediment control measures implemented during the construction phase, until the affected areas are restored as described within this Plan, and the risk of erosion has been eliminated. The overall goal of this Plan is to return temporarily disturbed habitat to as close to pre-construction conditions as possible. The Plan contains the following objectives:

- Promote recovery of disturbed areas;
- Re-establish native plant communities in non-cultivated areas and re-establish regular farming practices in cultivated areas;
- Control the introduction and spread of undesirable plants;
- Protect the site from erosion; and
- Support existing wildlife habitat.

These objectives will be achieved by a combination of techniques, including, but not limited to the following:

- Installing and maintaining appropriate erosion control best management practices (BMPs) and construction limit staking per the Oregon Department of Environmental Quality (DEQ) 1200-C permit;
- Revegetation of non-cultivated disturbed areas with native grasses and forbs (flowering plants) and resuming crop production in cultivated areas;
- Controlling weed germination and growth during and after construction; and
- Establishing a regular monitoring program during and after construction to ensure the continued successful development of restored areas, and to quickly identify new populations of weeds.

[1] This plan is incorporated by reference in the site certificate for Summit Ridge and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

2. Facility Description and Habitat Inventory

Summit Ridge Wind, LLC (certificate holder) received a Site Certificate from the Energy Facility Siting Council in 2011, which authorized the construction and operation of a 194.4 megawatt (MW) wind energy generation facility in Wasco County, Oregon. The facility is located approximately 17 miles southeast of The Dalles and eight miles east of Dufur. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines, and a substation are included within the facility site boundary.

The goal of this plan is to return temporarily disturbed habitat areas (such as road shoulders, underground electric cable trenches, and temporarily disturbed areas around tower sites) to a condition that is commensurate to, or better than, pre-construction conditions. Habitat areas temporarily disturbed, by habitat category and subtype, are presented in Table 1 below.

Table 1: Estimate of Temporary Habitat Impacts, by Habitat Category and Subtype[2]

Habitat Category and Subtype	Acres
Category 2	
Shrub-steppe – Big Sagebrush Shrub Steppe	0.37
Category 2 – Big Game Winter Range	
Developed/Disturbed Revegetated Grassland	18
Grassland – Native Perennial Grassland	6.69
Shrub-steppe – Rabbit/Buckwheat Shrub-steppe	3.34
Category 2 – Big Game Winter Range	
Developed/Disturbed – Old Field	0.67
Grassland – Exotic Annual Grassland	19.09
Total Temporary Impacts to be Revegetated =	**48.16**
*To be updated during pre-construction, based on final facility design.	

As demonstrated by the table above, construction of the facility would temporarily impact approximately 48.16 acres of habitat.

3. Revegetation Procedures (Temporarily Disturbed Areas)

The following methods and protocol are to be followed for all areas of temporary ground and/or vegetation disturbance in the upland habitats throughout the site boundary.

[2] Note that temporarily impacted habitat includes Category 3 and 4, but is considered Category 2 habitat based on the presence of Big Game Winter Range habitat.

3.1 Pre-Disturbance Wildlife Habitat Vegetation Assessment

The site certificate for the facility requires restoration of disturbed areas to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060), which aligns with the mitigation goals and policies within the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635 Division 415). In order to meet the 'no net loss of habitat quality' goal of the mitigation policy, the certificate holder shall revegetate disturbed areas according to a set of agreed-upon success criteria that return the site to pre-disturbance condition.

Revegetation success is measured at approved, fixed-point pairs of reference and monitoring sites within the disturbed area. Reference sites are used as a proxy for pre-disturbance condition while accounting for changes not within control of the certificate holder, such as climatic variability and landscape-scale shifts in plant communities. As presented in Table 1, the following Category 2 habitat subtypes would be temporarily disturbed during construction: Shrub-steppe (Big Sagebrush); Developed / Disturbed Revegetated Grassland; Grassland – Native Perennial Grassland; Shrub-steppe (Rabbit / Buckwheat); Developed / Disturbed – Old Field; and Grassland – Exotic Annual Grassland. Therefore, at a minimum, the certificate holder shall identify six paired monitoring and reference site locations. However, it is recommended to identify many monitoring sites per reference site, within areas of distinct habitat, as necessary for statistical rigor.

Prior to facility construction, the certificate holder shall identify paired monitoring and reference sites in consultation with ODFW and the Department. Reference sites should be identified that closely resemble the pre-disturbance characteristics of the revegetation area monitoring site as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation and species diversity of desirable vegetation. "Desirable vegetation" is defined as those species included in the seed mix or native or native-like species, excluding noxious weeds. The certificate holder shall consider land use patterns, soil type, local terrain and noxious weed densities in selecting paired monitoring and reference sites. After the paired monitoring and reference sites are selected by the certificate holder and approved by the Department and ODFW, these sites shall remain in the same location unless approval is obtained by the Department and ODFW.

Pre-disturbance wildlife habitat conditions of the paired monitoring and reference sites shall be determined based on a pre-construction vegetation inventory, to be conducted by a qualified biologist. The pre-construction wildlife habitat vegetation assessment shall include:

- The ODFW habitat category for the area disturbed (Consistent with the evaluation approved per Condition 10.1)
- Photos representing the habitat,
- Vegetation density (percent cover, percent bare ground, percent cover by plant species)
- Vegetation structural stage, slope, soil type
- An assessment of the relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.

- As assessment of species diversity of desirable vegetation.

The pre-disturbance vegetation inventory shall be submitted for review and approval by the Department, in consultation with ODFW prior to the agency consultation described in Section 3.2 of this plan.

3.2 Pre-Revegetation Agency Consultation

Prior to construction, the certificate holder shall consult with ODFW, ODOE, and the Wasco County Weed Control Authority to discuss its pre-disturbance vegetation inventory, which must include habitat category and habitat subtype conditions, paired monitoring and reference site locations, conditions, revegetation methods, erosion and sediment control measures, and an implementation schedule.

Six months prior to commercial operation, the certificate holder will meet with ODFW, ODOE, and Wasco County Weed Control Authority to review the actual extent and conditions of temporarily disturbed areas, confirm that the revegetation methods agreed upon during pre-construction review are still appropriate, and to re-visit reference and monitoring sites.

3.3 Revegetation Methods

Revegetation of temporarily disturbed areas will include several important aspects, including topsoil management, selection of an appropriate seed mix, and control of noxious and other undesirable plant species. The certificate holder shall choose planting methods based on site- specific factors such as slope, erosion potential, and the size of the area in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed.

3.3.1 Topsoil Management and Decompaction

The certificate holder shall restore topsoil to pre-construction condition or better. Preservation and/or replacement of native topsoil not only ensures a healthy, nutrient-rich seed bed, but also incorporates the native seed bank, increasing overall species richness and potential for full recovery of the site to natural conditions. Areas without sufficient topsoil recover at a slower rate, and tend to be colonized by exotic species much sooner, than areas with native topsoil.

During construction, topsoil should be kept in place where possible. Where it is necessary to remove topsoil, it shall be stockpiled in appropriate locations and protected with erosion control BMPs per the DEQ 1200-C permit. Stockpiled topsoil shall be windrowed inside of the clearing limits, kept separate from subsoil, and protected from wind and water erosion. If topsoil is removed from its place of origin, it shall be labeled and tracked so that it may be replaced appropriately prior to commencement revegetation.

Another contributing factor to restoration success is the condition of the seed bed at the time of seeding. Compacted soil does not provide an optimal environment for seed germination and establishment, but can instead lead to a lack of vegetative cover and thus increased erosion potential over time. In preparation for seeding activities, areas compacted by construction activities shall be ripped to a depth of 12" where feasible and roughened to provide maximum seed-soil contact.

3.3.2 Seed Mixture

The facility is expected to result in temporary disturbance to approximately 48.16 acres of non-agricultural land, subject to verification as part of the preconstruction habitat assessment required per Condition 10.1. The certificate holder will reseed this area after construction during the period from September to April of any given year to ensure sufficient soil moisture for germination and plant establishment. One seed mixture was developed for use in the revegetation of all temporarily disturbed habitats within the site boundary (Table 2). This seed mixture will be used, unless an alternative mixture is requested by a landowner, or agency biologist. The certificate holder will submit a request for approval from the Department, in consultation with ODFW, for any alternative mixture. To re-establish plant communities of most value to wildlife, native species are included in the seed mixture, as well as certain non-native species that ODFW has determined to be beneficial to wildlife. Species were selected based on a variety of factors including tolerance to xeric conditions and seed availability.

Plant materials (seed and nursery stock) used in revegetation must be adapted to the conditions of the site in order to have the best chance of germination and long-term survival. All plant materials shall meet the following requirements, pending approval by ODFW and the Wasco County Weed Department:

- Seed and nursery stock shall be "source identified". The original source for the plant material should be Columbia Plateau Ecoregion (north-central Oregon State). The seed should be a locally adapted biotype, adapted to conditions similar to the project site.
- Seed shall be certified "weed free", indicating there are no noxious weeds in the seed.
- Seed application rates shall be based on pure live seed per pound, which is passed upon purity and germination testing.
- Seed shall be tested within 120 days of application for purity, germination, and noxious weed content. Inert matter should not exceed 10%. A tetrazolium test may be performed on forb species which are limited in availability in order to assess viability of the seed before it is used.

The certificate holder shall seed disturbed cropland areas with wheat or other crop seed. The certificate holder shall consult with the landowner and farm operator to determine species composition, seed and fertilizer application rates and application methods. Cropland areas are successfully revegetated when the replanted areas achieve crop production comparable to adjacent non-disturbed cultivated areas. The certificate holder shall consult with the landowner or farmer to determine whether these areas have been successfully revegetated and shall report to the Department on the success of revegetation in these areas.

Table 2: Proposed Seed Mixes for Summit Ridge Wind Farm

Habitat Types	Species	Lbs/Acre (Pure Live Seed)
Native and Revegetated Grasssland	Sherman big bluegrass (*Poa Secunda*)	2
	Magnar basin wildrye (*Leymus cinereus*)	2
	Whitman bearless wheatgrass (*Psuedoroegeneria spicata ssp. Inermis*)	2
	Sandberg's bluegrass (*Poa sandbergii*)	2.5
	Idaho fescue (*Festuca idahoensis*)	2.5
	Basin big sagebrush (*Artemisia tridentate ssp. Tridentata*)	1
	TOTAL	**12**
Sagebrush and Rabbitbrush dominated Shrub-Steppe	Bluebunch Wheatgrass (Pseudoroegeneria spicata)	11
	Idaho fescue (*Festuca idahoensis*)	4
	Sandberg's bluegrass (*Poa sandbergii*)	2
	Bottlebrush Squirreltail (Elymus elymoides)	0.5
	Silky Lupine (Lupinus sericeus)	0.5
	Common Yarrow (Achillea millefolium)	0.5
	Threadleaf fleabane (Erigeron filifolius)	0.1
	Basin big sagebrush (Artemisia tridentate ssp. Tridentata)	0.1
	Gray rabbit-brush (Chrysothamnus naseosus)	0.1
	TOTAL	**18.8**
Agricultural Fields	Revegetated in accordance with landowner requirements	

5.3.3 Seed Planting Methods

A combination of broadcast seeding, drill seeding, and hydroseeding shall be used to apply the seed; the choice of method will depend on slope and other site conditions. For example, drill seeding and broadcast seeding should be used as appropriate on areas with a slope of less than 3:I, and hydroseeding should be used on areas with a slope of greater than 3:I. Seeding rates (pounds of pure live seed per acre) must be adjusted according to the seeding method used. For hydroseeding, green-dyed, wood-fiber mulch shall be added to the slurry mixture at a rate of 1000 pounds per acre. In addition to serving as a carrying agent for the seed, the biodegradable green mulch serves as a tracer for visually checking distribution to ensure complete and uniform coverage of the disturbed areas. Seeding activities should be scheduled during the period from September to April of any given year.

3.4 Revegetation Monitoring and Records

Successful revegetation will re-establish the native plant community through slow, but progressively steady, vegetative growth. Any problems with seeding should be identified and promptly corrected. In

order to properly assess the progress of vegetation establishment, the certificate holder shall maintain a record of revegetation work for both cropland and wildlife habitat areas.

Following completion of construction, the certificate holder will submit its vegetation monitoring methodology to ODFW and the Department for approval prior to monitoring. Within each revegetation area monitoring site, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (within the general revegetation area, revegetation monitoring sites, and within the reference sites):

- Degree of erosion due to disturbance activities (high, moderate or low).
- Vegetation density.
- Relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.
- Species diversity of desirable vegetation.

Following the initial year of seeding, monitoring will occur annually for the first five years. After the first growing season following initial seeding (Year 1), a qualified investigator shall inspect all areas of revegetation, including each paired monitoring and reference site, to assess revegetation success based on the success criteria and to recommend remedial actions, if needed.

During the initial 5-years of annual monitoring, the certificate holder's qualified investigator (ecologist or botanist) shall evaluate whether a revegetated wildlife habitat area is trending toward meeting the success criteria by comparing the approved, fixed-point revegetation area monitoring site to an approved, fixed-point reference site. The certificate holder's qualified investigator shall compare the revegetation area monitoring sites to the selected reference sites, unless some event (such as wildfire, tilling, or intensive livestock grazing) has changed the vegetation conditions of a reference site so that it no longer represents undisturbed conditions of the revegetation area monitoring site. If such events have eliminated all suitable reference sites for a revegetation area monitoring site, the investigator, in consultation with the Department and ODFW, shall select one or more new reference sites. Following the selection of a new reference site, an updated table and latitude/longitudinal data shall be provided to the Department within a 6-month revegetation record report or annual compliance report, whichever report is submitted first.

The certificate holder shall submit, electronically, to the Department and ODFW the revegetation inspection report in a semi-annual report. The report shall include the investigator's assessment of whether the revegetated area monitoring sites are trending toward meeting the success criteria; whether the monitoring sites adequately represent revegetation success of equivalent habitat/habitat subtype of non-monitoring site revegetated areas; assessment of factors impacting the ability of the revegetated area monitoring sites to trend towards meeting the success criteria; description of appropriate weed control measures as recommended by the Department in consultation with ODFW and Sherman County Weed Control Authority; and, any remedial actions recommended.

If an area is not trending toward meeting the success criteria at Year 5 and has not been converted by the landowner to an inconsistent use, the certificate holder may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability. As an alternative, the certificate holder or the Department, in consultation with ODFW, may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity. The certificate holder shall implement the remedial action plan, subject to the approval of the Department in consultation with ODFW.

The certificate holder shall maintain a record of revegetation activities. In the record, the certificate holder shall include the date that construction activity was completed in the area to be restored, a description of the affected area (location, acres affected and pre-disturbances condition) and supporting figures representing the revegetated area, the date that revegetation work began and a description of the work done within the affected area. The certificate holder shall update the revegetation records as revegetation work occurs. The certificate holder shall report revegetation activities to the Department every-six months for the first 5-years after the completion of facility construction. After five years, any revegetation actions will be described in the annual report per OAR 345-026-0080(e).

3.5 Revegetation Success Criteria

In each monitoring report to the Department, the certificate holder shall provide an assessment of revegetation success for all previously-disturbed wildlife habitat areas. While the monitoring report shall evaluate whether all previously-disturbed wildlife habitat areas are trending towards revegetation success, the success criteria are evaluated based on the revegetation success of the approved revegetated monitoring sites compared to the approved, reference sites. A wildlife habitat area is successfully revegetated when the habitat quality is equal to, or better than, the habitat quality of the pre-construction ODFW habitat category of the reference sites as follows:

- Vegetation density is equal to or greater than that of the reference site.
- Relative proportion of desirable vegetation is equal to or greater than that of the reference site.
- Species diversity of desirable vegetation is equal to or greater than that of the reference site

When the Department, in consultation with ODFW, finds that the conditions of the wildlife habitat area revegetation monitoring sites satisfy the criteria for revegetation success, the Department shall conclude that the certificate holder has met the restoration obligations for that area. If the Department finds that the landowner has converted a temporarily disturbed wildlife habitat area to a use that is inconsistent with these success criteria (i.e. agricultural use), prior to the area achieving success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses and that the area shall be considered permanently disturbed. However, the certificate holder shall be responsible for meeting the obligations of the Council's Fish and Wildlife Habitat standard, including providing compensatory mitigation for these areas. Mitigation shall be determined by the Department, in consultation with ODFW.

4. Weed Control Methods

Weed control will be a priority for the life of the facility and should begin early to prevent infestations and development of substantial weed seed reservoirs in the soil. Emphasis will be placed on avoiding infestations and controlling populations of state-listed noxious weeds known to occur on the site. These species are listed in Table 3.

In addition to these state-listed weed species, the Wasco County Weed Department maintains its own weed list including special pest species. Weed species on the County list that are documented to occur on the site are also included in Table 3.

4.1 Preconstruction Noxious Weed Inventory

Before initial weed treatment begins, the certificate holder will evaluate target species and their identification, and to identify native species to be avoided.

4.2 Best Management Practices

Control will be accomplished through use of herbicides targeted to the individual weed species, cleaning vehicles prior to entering the construction site (to reduce the potential for transporting non-native species to the construction areas), hand eradication, mowing, and use of fabric mulch or biobarriers.

Control of cheatgrass during the fall establishment period is essential in order to reduce competition with seeded plants. As a general strategy, the herbicide Plateau® may be applied during the fall prior to fall rains, as a pre-emergent cheatgrass treatment; however, this should only be done where seed application will be by rangeland drill such that the desirable grass seed will have minimal contact with the herbicide.

Table 3: Designated Oregon Noxious Weeds Observed During Field Surveys

Scientific Name	Common Name	ODA Status	Wasco County Weed Classification
Apocynum sp.	Dogbane		C
Centourea diffits o	Diffuse knapweed	B list	B
Cirsium orvense	Canada thistle	B list	B
Cirsium vulgare	Bull thistle	B list	
Convolvulus orvensis	Field bindweed	B list	C
Conzya conodensis	Horseweed		Q
Lepidium latifolium	Perennial pepperweed	B list	C
Solsolo koli	Russian thistle		C
Verboscum thomis	Common mullein		Q
Note: The Oregon State Weed Boar's Noxious Weed Classification System designates noxious weeds as either "A" and may be given the additional designation of "T"			

Table 3: Designated Oregon Noxious Weeds Observed During Field Surveys

Scientific Name	Common Name	ODA Status	Wasco County Weed Classification
• "A" Designated Weed- a weed of known economic importance which occurs in the state in small enc infestations to make eradication or containment possible; or is not known to occur, but its presence neighboring states make future occurrence in Oregon seem imminent. • "B" Designated Weed- a weed of economic importance which is regionally abundant, but which may limited distribution in some counties. • "T" Designated Weed- a priority noxious weed designated by the Oregon State Weed Board as a targ which the ODA will develop and implement a statewide management plan. "T" designated noxious w are species selected from either the "A" or "B" list. The Wasco County Weed List and Classifications are as follows: • "A" Pests- a weed of known economic importance which occurs in the county in small enough infesta to make eradication practical. • "B" Pests- a weed of known economic importance and of limited distribution within the county and i subject to intensive control or eradication, where feasible, at the county level. • "C" Pests- a weed that also has economic importance but is more widely spread. Control of these we will be limited by conditions that warrant special attention. • "Q" Pests- a weed that exists in the county, but is of little, no, or undetermined economic importanc However, they are to be monitored and subject to control if they begin to appear threatening.			

Glyphosate can then be applied over the winter, as needed in areas where cheatgrass has germinated, at a rate of four ounces per acre to seeded areas in February or March, before seeded grasses have germinated but after cheatgrass has germinated. A higher concentration may be required and will be determined based on incidental take after initial application. Frequent monitoring of such areas during this time period is encouraged, in order to determine whether sites are suitable for herbicide application. A less dilute rate of glyphosate should be applied to areas that have been disturbed and not seeded, if and when needed.

Other approaches may be used to control non-native plants, depending on site conditions, plant species, and project schedule and budget. These approaches include cleaning vehicles prior to entering the construction site (to reduce the potential for transporting non-native species to the construction areas), hand eradication, mowing, and use of fabric mulch or biobarriers. These approaches shall be considered on a site-specific basis, and applied by professionals trained to identify exotics for selective plant management. All chemical applications shall be made by licensed, trained and certified professionals, in accordance with strict health and safety procedures and with practices that comply fully with state and federal regulations. Use of Plateau® as a pre-emergent should be done with caution, as it may have an adverse effect on desired grasses where the seed was broadcast or hydraulically applied (i.e., no separation between seed and soil treated with Plateau®). It may be appropriate to experiment in some locations with Plateau® applied at a rate (or rates) substantially less than the six ounce rate recommended by the manufacturer for cheatgrass control in established rangelands.

The Plan shall be finalized prior to construction through coordination with ODFW and the Wasco County Weed Department, and shall be implemented during construction and for the life of the facility.

4.3 Weed Monitoring and Records

Monitoring will be conducted on an annual basis for the life of the facility to assess weed growth and to recommend weed control measures. The weed monitoring will consist of two general components:

- Site survey to identify weed species that have established within the disturbed areas
- Inspections of treated areas to assess the success of weed treatments.

The site survey will be a pedestrian survey of disturbed areas in mid to late May. The survey will be scheduled to be initiated slightly before the herbicide application to identify any weed species. The focus will be on weed species observed prior to construction on site, as well as other species on the Wasco County weed list that might require different control measures.

The certificate holder shall report the status of controlling and preventing the spread of and introduction of noxious weed species in its annual report, in accordance with OAR 345-026-0080.

5. Plan Amendments

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

Attachment F: Draft Wildlife Monitoring and Management Plan

Montague Wind Power Facility: Phase 2 Wildlife Monitoring and Mitigation Plan

[AS AMENDED JANUARY 2018]

This plan describes wildlife monitoring that the certificate holder shall conduct during operation of Phase 2 of the Montague Wind Power Facility (MWPF).[1] The monitoring objectives are to determine whether the facility causes significant fatalities of birds and bats and to determine whether the facility results in a loss of habitat quality.

The certificate holder shall use experienced and properly trained personnel (the "investigators") to conduct the monitoring required under this plan. ~~The professional qualifications of the investigators are subject to approval by the Oregon Department of Energy (Department).~~ For all components of this plan except the Wildlife Reporting and Handling System, the certificate holder shall hire independent third-party investigators (not employees of the certificate holder) to perform monitoring tasks.

The *Wildlife Monitoring and Mitigation Plan* for the MWPF has the following components:

1) Fatality monitoring program including:
    a) Definitions and methods
    b) Removal trials
    c) Searcher efficiency trials
    d) Fatality monitoring search protocol
    e) Incidental finds and injured birds
    f) Statistical methods for fatality estimates
    g) Mitigation
2) Raptor nesting surveys
3) Washington ground squirrel surveys
4) Wildlife Reporting and Handling System
5) Data reporting

Based on the results of the monitoring programs, mitigation of significant impacts may be required. The selection of the mitigation actions should allow for flexibility in creating appropriate responses to monitoring results that cannot be known in advance. If the Department determines that mitigation is needed, the certificate holder shall propose appropriate mitigation actions to the Department and shall carry out mitigation actions approved by the Department, subject to review by the Oregon Energy Facility Council (Council).

[1] This plan is incorporated by reference in the site certificate for the MWPF and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

1. Fatality Monitoring

(a) Definitions and Methods

Seasons

This plan uses the following dates for defining seasons:

Season	Dates
Spring Migration	March 16 to May 15
Summer/Breeding	May 16 to August 15
Fall Migration	August 16 to October 31
Winter	November 1 to March 15

Search Plots

The investigators shall conduct fatality monitoring within search plots. The certificate holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW), shall select search plots based on a systematic sampling design with a random starting point that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. Each search plot will contain one turbine. Search plots will be square or circular. Circular search plots will be centered on the turbine location and will have a radius equal to the maximum blade tip height of the turbine contained within the plot. "Maximum blade tip height" is the turbine hub-height plus one-half the rotor diameter. Square search plots will be of sufficient size to contain a circular search plot as described above. The certificate holder shall use the same search plots for each search conducted during a monitoring year.

Scheduling

Fatality monitoring will begin one month after commencement of commercial operation of the facility. Subsequent monitoring years will follow the same schedule (beginning in the same calendar month in the subsequent monitoring year).

In each monitoring year, the investigators shall conduct fatality monitoring searches at the rates of frequency shown below. Over the course of one monitoring year, the investigators will conduct 16 searches, as follows:

Season	Frequency
Spring Migration	2 searches per month (4 searches)
Summer/Breeding	1 search per month (3 searches)
Fall Migration	2 searches per month (5 searches)
Winter	1 search per month (4 searches)

Sample Size

The sample size for fatality monitoring is the number of turbines searched per monitoring year. The investigators shall conduct fatality monitoring during each monitoring year in search plots at one-third of the turbines that are built or 50 turbines, whichever is greater. If fewer than 50 turbines are built, the certificate holder shall search all turbines. The facility is being constructed in two phases (Phases 1 and 2). Phase 1 will be completed in advance of Phase 2. The number of turbines constructed within both phases will be considered when determining the

sample size for the facility, and the turbines searched will be distributed proportionally throughout the entire facility (comprising Phases 1 and 2).

The certificate holder may choose to build the MWPF using turbine types in two size classes:

- Small: turbines having a rotor diameter of 82 meters (269 feet) or less
- Large: turbines having a rotor diameter greater than 82 meters

If the final design of the MWPF includes both small and large turbines, the certificate holder shall consult with an independent expert with experience in statistical analysis of avian fatality data to determine whether it would be possible to design a turbine sample with a sufficient number of turbines in each size class to allow a statistical comparison of fatality rates for all birds as a group. The certificate holder shall submit the expert's written analysis to the Department. If the expert's analysis shows that a comparison study is possible and if the Department approves, the certificate holder shall sample the appropriate number of turbines in each class and conduct the comparison study. The certificate holder may choose to sample more than 50 turbines in each monitoring year, if a larger sample size would allow the comparison study to be done.

Duration of Fatality Monitoring

The investigators shall perform one complete monitoring cycle during the first full year of facility operation (Year 1). Although Phase 1 will be completed in advance of Phase 2, by the time Phase 1 has begun operating, Phase 2 will likely be under construction or about to begin construction. As such, the number and nature of turbines to be constructed in Phase 2 will be known at that time. The certificate holder proposes to select the sample turbines from all turbines throughout the facility (Phases 1 and 2) using a systematic sampling regime with a random start.

Monitoring of the selected turbines in Phase 1 will begin when Phase 1 commences commercial operation and will continue for a full year (52 weeks). Monitoring of the selected turbines in Phase 2 will begin when Phase 2 commences commercial operation and will also continue for a full year. As a result of this sampling plan, Phase 1 will complete a full year of monitoring in advance of Phase 2. Phase 2 will continue monitoring until it, too, has completed a full year of monitoring. As a result of the construction schedule, monitoring of turbines at the facility will continue without interruption for longer than one full year and possibly for as long as two full years.

When a full year of monitoring at Phase 1 has been completed, the raw data will be compiled by the certificate holder in a memo style report, which will include any notable results from the year of monitoring, and provided to the Department and ODFW. Then, when a full year of monitoring at Phase 2 is complete, the data for both Phases 1 and 2 will be analyzed together and a report prepared for the entire facility.

The certificate holder will report the results of monitoring to the Department and ODFW. In the evaluation, the certificate holder shall compare the results for the MWPF with the thresholds of concern described in Section 1(g) of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. If the fatality rates for the first year of monitoring at the MWPF do not exceed any of the thresholds of concern and are within the range of the fatality rates found at other wind power facilities in the region, then the investigators will

perform a second year of monitoring in Year 5 of operations. This may occur under two scenarios:

Monitoring at Phase 1 will begin 5 years after the first year of operation/monitoring at Phase 1, and monitoring at Phase 2 will begin 5 years after the first year of operation/monitoring at Phase 2.

-or-

Monitoring at both Phases 1 and 2 will commence in Year 5 of operations at the facility (Year 5 of operations at Phase 1 and Year 4 of operations at Phase 2).

If fatality rates for the first year of monitoring at the MWPF exceed any of the thresholds of concern or exceed the range of fatality rates found at other wind power facilities in the region, the certificate holder shall propose additional mitigation for Department and ODFW review within 6 months after reporting the fatality rates to the Department. Alternatively, the certificate holder may opt to conduct a second year of fatality monitoring immediately if the certificate holder believes that the combined results of both phases for Year 1 monitoring were anomalous. If the certificate holder takes this option, the investigators still must perform the monitoring in Year 5 of operations as described above.

(b) Removal Trials

The objective of the removal trials is to estimate the length of time avian and bat carcasses remain in the search area. Estimates of carcass removal rates will be used to adjust carcass counts for removal bias. “Carcass removal” is the disappearance of a carcass from the search area due to predation, scavenging or other means such as farming activity.

The investigators shall conduct carcass removal trials within each of the seasons defined above during the first year of fatality monitoring. For each trial, the investigators shall use 10 to 15 carcasses of small- and large-bodied species. After the first year of fatality monitoring, the investigators may reduce the number of removal trials and the number of removal trial carcasses during any subsequent year of fatality monitoring, subject to the approval of the Department. The investigators must show that the reduction is justified based on a comparison of the first-year removal data with published removal data from nearby wind energy facilities.

The investigators shall use game birds or other legal sources of avian species as test carcasses for the removal trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall select species with approximately the same coloration and size attributes as species found within the site boundary. If suitable trial carcasses are available, trials during the fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat carcasses will be used if available.

Trial carcasses will be marked discreetly for recognition by searchers and other personnel. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be: (1) placed in an exposed posture (e.g., thrown over the shoulder), (2) hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass) or (3) partially hidden. The trial carcasses will be placed randomly within the carcass removal trial plots. Trial carcasses will be left in place until the end of the carcass removal trial.

An approximate schedule for assessing removal status is once daily for the first 4 days, and on days 7, 10, 14, 21, 28 and 35. This schedule may be adjusted depending on actual carcass

removal rates, weather conditions and coordination with the other survey work. The condition of scavenged carcasses will be documented during each assessment, and at the end of the trial all traces of the carcasses will be removed from the site. Scavenger or other activity could result in complete removal of all traces of a carcass in a location or distribution of feathers and carcass parts to several locations. This distribution will not constitute removal if evidence of the carcass remains within an area similar in size to a search plot and if the evidence would be discernible to a searcher during a normal survey.

Before beginning removal trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first-year removal trials to the Department and ODFW. In the report, the certificate holder shall analyze whether four removal trials per year, as described above, provide sufficient data to accurately estimate adjustment factors for carcass removal. The number of removal trials may be adjusted up or down, subject to the approval of the Department.

(c) Searcher Efficiency Trials

The objective of searcher efficiency trials is to estimate the percentage of bird and bat fatalities that searchers are able to find. The investigators shall conduct searcher efficiency trials on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated agriculture habitat types. A pooled estimate of searcher efficiency will be used to adjust carcass counts for detection bias.

The investigators shall conduct searcher efficiency trials within each of the seasons defined above during the years in which the fatality monitoring occurs. Each trial will involve approximately 4 to 15 carcasses. The searchers will not be notified of carcass placement or test dates. The investigators shall vary the number of trials per season and the number of carcasses per trial so that the searchers will not know the total number of trial carcasses being used in any trial. In total, approximately 80 carcasses will be used per year, or approximately 15 to 25 per season.

For each trial, the investigators shall use small- and large-bodied species. The investigators shall use game birds or other legal sources of avian species as test carcasses for the efficiency trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall select species with approximately the same coloration and size attributes as species found within the site boundary. If suitable test carcasses are available, trials during the fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat carcasses will be used if available. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plot and shall use methods similar to those used to mark removal test carcasses as long as the procedure is sufficiently discreet and does not increase carcass visibility.

The certificate holder shall distribute trial carcasses in varied habitat in rough proportion to the habitat types within the facility site. On the day of a standardized fatality monitoring search (described below) but before the beginning of the search, investigators will place efficiency trial carcasses randomly within search plots (one to three trial carcasses per search plot) within areas to be searched. If scavengers appear attracted by placement of carcasses, the carcasses will be distributed before dawn.

Efficiency trials will be spread over the entire season to incorporate effects of varying weather and vegetation growth. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be: (1) placed in an exposed posture (thrown over the shoulder), (2) hidden to simulate a crippled bird or (3) partially hidden.

The number and location of the efficiency trial carcasses found during the carcass search will be recorded. The number of efficiency trial carcasses available for detection during each trial will be determined immediately after the trial by the person responsible for distributing the carcasses. Following plot searches, all traces of test carcasses will be removed from the site.

If new searchers are brought into the search team, additional searcher efficiency trials will be conducted to ensure that detection rates incorporate searcher differences. The certificate holder shall include a discussion of any changes in search personnel and any additional detection trials in the reporting required under Section 5 of this plan.

Before beginning searcher efficiency trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first-year efficiency trials to the Department and ODFW. In the report, the certificate holder shall analyze whether the efficiency trials as described above provide sufficient data to accurately estimate adjustment factors for searcher efficiency. The number of searcher efficiency trials for any subsequent year of fatality monitoring may be adjusted up or down, subject to the approval of the Department.

(d) Fatality Monitoring Search Protocol

The objective of fatality monitoring is to estimate the number of bird and bat fatalities that are attributable to facility operation as an indicator of the impact of the facility on habitat quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated variances. The investigators shall perform fatality monitoring using standardized carcass searches according to the schedule described above.

Personnel trained in proper search techniques ("the searchers") will conduct the carcass searches by walking parallel transects approximately 6 meters apart within the search plots. A searcher will walk at a rate of approximately 45 to 60 meters per minute along each transect, searching both sides out to 3 meters for casualties. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.

Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a complete carcass or body part, 10 or more feathers or three or more primary feathers in one location. When parts of carcasses and feathers from the same species are found within a search plot, searchers shall make note of the relative positions and assess whether or not these are from the same fatality.

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded and labeled with a unique number. Searchers shall make note of the nearest two or three structures (turbine, power pole, fence, building or overhead line) and the approximate distance from the carcass to these structures. The species and age of the carcass will be determined when possible. Searchers shall note the extent to which the carcass is intact and estimate time since death. Searchers shall describe all evidence that might assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire strike, predation or disease. ~~When assessment of the carcass is complete, all traces of it will be removed from the site.~~

~~Each carcass will be bagged and frozen (assuming the necessary permits have been acquired) for future reference and possible necropsy or (if the carcass is fresh and whole) for use in trials. A copy of the data sheet for each carcass will be kept with the carcass at all times. For each carcass found, searchers will record species, sex, and age when possible, date and time collected, location, condition (e.g., intact, scavenged, feather spot) and any comments that may indicate cause of death. Searchers will photograph each carcass as found and will map the find on a detailed map of the search area showing the location of the wind turbines and associated facilities. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with U.S. Fish and Wildlife Service (USFWS). The certificate holder shall obtain appropriate collection permits from ODFW and USFWS.~~

The investigators shall calculate fatality rates using the statistical methods described in Section (f), except that the investigators may use different notation or methods that are mathematically equivalent with prior approval of the Department. In making these calculations, the investigators may exclude carcass data from the first search of each turbine plot (to eliminate possible counting of carcasses that were present before the turbine was operating).

The investigators shall estimate the number of avian and bat fatalities attributable to operation of the facility based on the number of avian and bat fatalities found at the facility site. All carcasses located within areas surveyed, regardless of species, will be recorded and, if possible, a cause of death determined based on blind necropsy results. If a different cause of death is not apparent, the fatality will be attributed to facility operation. The total number of avian and bat fatalities will be estimated by adjusting for removal and searcher efficiency bias.

On an annual basis, the certificate holder shall report an estimate of fatalities in eight categories: (1) all birds, (2) small birds, (3) large birds, (4) raptors, (5) grassland birds, (6) nocturnal migrants, (7) state and federally listed threatened and endangered species and State Sensitive Species listed under OAR 635-100-0040 and (8) bats. The certificate holder shall report annual fatality rates on both a per-megawatt (MW) and per-turbine basis.

(e) Incidental Finds and Injured Birds

The searchers might discover carcasses incidental to formal carcass searches (e.g., while driving within the project area). For each incidentally discovered carcass, the searcher shall identify, photograph, record data and collect the carcass as would be done for carcasses within the formal search sample during scheduled searches. If the incidentally discovered carcass is found within a formal search plot, the fatality data will be included in the calculation of fatality rates. If the incidentally discovered carcass is found outside a formal search plot, the data will be reported separately. The certificate holder shall coordinate collection of incidentally discovered state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate ~~collection of~~ incidentally discovered federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with USFWS.

The certificate holder shall ~~develop and follow a protocol for handling injured birds. Any injured native birds found on the facility site will be carefully captured by a trained project biologist or technician and transported to~~ contact a qualified rehabilitation specialist approved by

the Department.[2] to respond to injured wildlife. The certificate holder shall pay costs, if any, charged for time and expenses related to care and rehabilitation of injured native birds found on the site, unless the cause of injury is clearly demonstrated to be unrelated to the facility operations.

(f) Statistical Methods for Fatality Estimates

The estimate of the total number of wind facility-related fatalities is based on:

(2) The observed number of carcasses found during standardized searches during the two monitoring years for which the cause of death is attributed to the facility.[3]
(3) Searcher efficiency expressed as the proportion of planted carcasses found by searchers.
(4) Removal rates expressed as the estimated average probability a carcass is expected to remain in the study area and be available for detection by the searchers during the entire survey period.

Definition of Variables

The following variables are used in the equations below:

c_i	the number of carcasses detected at plot *i* for the study period of interest (e.g., one year) for which the cause of death is either unknown or is attributed to the facility
n	the number of search plots
k	the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the search plot buffer area)
$\bar{c}$	the average number of carcasses observed per turbine per year
s	the number of carcasses used in removal trials
s_c	the number of carcasses in removal trials that remain in the study area after 35 days
se	standard error (square of the sample variance of the mean)
t_i	the time (days) a carcass remains in the study area before it is removed
$\bar{t}$	the average time (days) a carcass remains in the study area before it is removed
d	the total number of carcasses placed in searcher efficiency trials
p	the estimated proportion of detectable carcasses found by searchers
I	the average interval between searches in days
$\hat{\pi}$	the estimated probability that a carcass is both available to be found during a search and is found

[2] Approved specialists include Blue Mountain Wildlife, a wildlife rehabilitation center in Pendleton, and the Audubon Bird Care Center in Portland. The certificate holder must obtain Department approval before using other specialists.
[3] If a different cause of death is not apparent, the fatality will be attributed to facility operation.

m_t the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias

C nameplate energy output of turbine in MW

Observed Number of Carcasses

The estimated average number of carcasses ($\bar{c}$) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^{n} c_i}{k}. \tag{1}$$

Estimation of Carcass Removal

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ($\bar{t}$) is the average length of time a carcass remains at the site before it is removed:

$$\bar{t} = \frac{\sum_{i=1}^{s} t_i}{s - s_c}. \tag{2}$$

This estimator is the maximum likelihood estimator assuming the removal times follow an exponential distribution and there is right-censoring of data. Any trial carcasses remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses are removed before the end of the trial, then s_c is 0, and $\bar{t}$ is just the arithmetic average of the removal times. Removal rates will be estimated by carcass size (small and large), habitat type and season.

Estimation of Observer Detection Rates

Observer detection rates (i.e., searcher efficiency rates) are expressed as *p*, the proportion of trial carcasses that are detected by searchers. Observer detection rates will be estimated by carcass size, habitat type and season.

Estimation of Facility-Related Fatality Rates

The estimated per turbine annual fatality rate (m_t) is calculated by:

$$m_t = \frac{\bar{c}}{\hat{\pi}}, \tag{3}$$

where $\hat{\pi}$ includes adjustments for both carcass removal (from scavenging and other means) and observer detection bias assuming that the carcass removal times t_i follow an exponential distribution. Under these assumptions, this detection probability is estimated by:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[\frac{\exp\left(I / \bar{t} \right) - 1}{\exp\left(I / \bar{t} \right) - 1 + p} \right]. \tag{4}$$

The estimated per MW annual fatality rate (m) is calculated by:

$$m = \frac{m_t}{C}. \qquad (5)$$

The final reported estimates of *m*, associated standard errors and 90% confidence intervals will be calculated using bootstrapping (Manly, 1997). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances, and confidence intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be sampled with replacement, and $\bar{c}$, $\bar{t}$, p, $\hat{\pi}$ and m will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5th and upper 95th percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

Nocturnal Migrant and Bat Fatalities

Differences in observed nocturnal migrant and bat fatality rates for lit turbines, unlit turbines that are adjacent to lit turbines and unlit turbines that are not adjacent to lit turbines will be compared graphically and statistically.

(g) Mitigation

The certificate holder shall ~~use a worst-case analysis~~best-available science to resolve any uncertainty in the results and to determine whether the data indicate that additional mitigation should be considered. The Department may require additional, targeted monitoring if the data indicate the potential for significant impacts that cannot be addressed by worst-case analysis and appropriate mitigation.

Mitigation may be appropriate if fatality rates exceed a "threshold of concern."[4] For the purpose of determining whether a threshold has been exceeded, the certificate holder shall calculate the average annual fatality rates for species groups after each year of monitoring. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the following thresholds apply to the MWPF:

[4] If a different cause of death is not apparent, the fatality will be attributed to facility operation.
n species in the Final Order on the Application for the Klondike III Wind Project (June 30, 2006) and for bats in the Final Order on the Application for the Biglow Canyon Wind Farm (June 30, 2006). As explained in the Klondike III order: "Although the threshold numbers provide a rough measure for deciding whether the Council should be concerned about observed fatality rates, the thresholds have a very limited scientific basis. The exceeding of a threshold, by itself, would not be a scientific indicator that operation of the facility would result in range-wide population level declines of any of the species affected. The thresholds are provided in the Wildlife Monitoring and Mitigation Plan to guide consideration of additional mitigation based on two years of monitoring data."

Species Group	**Threshold of Concern** (fatalities per MW)
Raptors (All eagles, hawks, falcons, and owls, including burrowing owls.)	0.09
Raptor species of special concern (Swainson's hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl and any federal threatened or endangered raptor species.)	0.06
Grassland species (All native bird species that rely on grassland habitat and are either resident species occurring year-round or species that nest in the area, excluding horned lark, burrowing owl and northern harrier.)	0.59
State sensitive avian species listed under OAR 635-100-0040 (Excluding raptors listed above.)	0.2
Bat species as a group	2.5

If the data show that a threshold of concern for a species group has been exceeded, the certificate holder shall implement additional mitigation if the Department determines that mitigation is appropriate based on analysis of the data, consultation with ODFW and consideration of any other significant information available at the time. In addition, the Department may determine that mitigation is appropriate if fatality rates for individual avian or bat species (especially State Sensitive Species) are higher than expected and at a level of biological concern. If the Department determines that mitigation is appropriate, the certificate holder, in consultation with the Department and ODFW, shall propose mitigation measures designed to benefit the affected species. Acceptable mitigation may include, but not limited to, contributions to wildlife rehabbers, funding of research by third parties on local raptor populations, or habitat mitigation. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other components of the *Wildlife Monitoring and Mitigation Plan* or *Habitat Mitigation Plan*, would also benefit the affected species.

The certificate holder shall implement mitigation as approved by the Department, subject to review by the Council. The Department may recommend additional, targeted data collection if the need for mitigation is unclear based on the information available at the time. The certificate holder shall implement such data collection as approved by the Council.

The certificate holder shall design mitigation to benefit the affected species group. Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species through a conservation easement or similar agreement. Tracts of land that are intact and functional for wildlife are preferable to degraded habitat areas. Preference should be given to protection of land that would otherwise be subject to development or use that would diminish the wildlife value of the land. In addition, mitigation measures might include: enhancement of the protected tract by weed removal and control; increasing the diversity of native grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for raptors; improving wildfire response; and conducting or making a contribution to research that will aid in understanding more about the affected species and its conservation needs in the region.

If the data show that the threshold of concern for bat species as a group has been exceeded, the certificate holder shall implement additional mitigation if the Department determines that mitigation is appropriate based on analysis of the data, consultation with ODFW and consideration of any other significant information available at the time. For example, if the threshold for bat species as a group is exceeded, the certificate holder may contribute to Bat Conservation International or to a Pacific Northwest bat conservation group to fund new or ongoing research in the Pacific Northwest to better understand wind facility impacts to bat species and to develop possible ways to reduce impacts to the affected species.

Solar Array

In addition to wind turbines, Phase 2 may include a photovoltaic (PV) solar energy array on up to ~~640~~ 1,189 acres in Category 6 habitat within the solar micrositing area. Although publicly available fatality studies conducted at PV solar projects are rare in the literature, those that are available have documented fatalities of passerines but raptor and bat fatalities were generally absent. In the most recent study available, Walston et al. (2016) found the rate of bird mortality from known causes (i.e., collision with project infrastructure) at a large PV facility in central California was low (0.50 birds/MW/year). In comparison, Johnson and Erickson (2011) summarized fatality rates from 25 year-long fatality monitoring studies conducted at 23 wind-energy facilities in the Columbia Plateau Ecoregion and found the mean number of all bird (excluding raptors) mortality was 2.28 fatalities/MW/year.

Some risk of avian mortality occurs with most human development (ranging from single-family homes to large-scale industrial projects), but it is unlikely that the proposed PV solar array will result in significant impacts to birds. Known risk factors for avian collision fatalities include the height of structures, size of the facility, attributes of structures (e.g., guy wires, type of lighting), as well as the type of development, siting in high-risk areas, and species at potential risk. The role of these risk factors has been outlined in the USFWS guidelines for wind turbines (USFWS, 2012) and communication towers (USFWS, 2013), as well as by various publications in the peer reviewed literature (Gehring et al., 2009, 2011; Kerlinger et al., 2010).

After consideration of potential risk factors, the collision risk to birds from the facility solar array infrastructure will likely be low. Most importantly, the PV array, as proposed, will be located in disturbed habitat, will have only down-shielded lighting, will not have guy wires, and will not have any structures exceeding 15 feet (4.6 meters) in height (the greatest height of PV panels at full rotation). However, the certificate holder will consult with the Department and ODFW to confirm the extent of fatality monitoring that should be conducted for the solar faiclity~~The solar array is not a type of development that should raise undue concern over bird mortality and, therefore, fatality monitoring of the solar array is not planned~~.

2. Raptor Nest Surveys

The objectives of raptor nest surveys are: (1) ~~to estimate the size of the local breeding populations of~~count raptor ~~species that~~ nests on the ground or aboveground in trees or other aboveground nest locations in the vicinity of the facility; and (2) to determine whether operation of the facility results in a reduction of nesting activity or nesting success in the local populations of the following raptor species: Swainson's hawk, golden eagle, ferruginous hawk, and burrowing owl.

The certificate holder shall conduct short-term and long-term monitoring around Phase 2 wind turbines. Raptor nest surveys would not occur if Phase 2 is only comprised of solar generation. The investigators will use ground surveys to evaluate nest success by gathering data on active nests, on nests with young and on young fledged. The investigators will analyze the data as described in Section 3(c) and will share the data with state ~~and federal~~ biologists.

(a) Short-Term Monitoring

Short-term monitoring will be done in two monitoring seasons. The first monitoring season will be in the first raptor nesting season after completion of construction of the facility. The second monitoring season will be in the fourth year after construction is completed. The certificate holder shall provide a summary of the first-year results in the monitoring report described in Section 5. After the second monitoring season, the investigators will analyze two years of data compared to the baseline data.

For Raptor Species that Nest Aboveground

During each monitoring season, the investigators will conduct a minimum of one aerial and one ground survey for raptor nests in late May or early June and additional surveys as described in this section. The survey area is the area within the site boundary and a 2-mile buffer zone around the site. For the ground surveys while checking for nesting *success* (conducted within the facility site and up to a maximum of ½ mile from the facility site), nests outside the leased project boundary will be checked from an appropriate distance where feasible, depending on permission from the landowner for access.

All nests discovered during preconstruction surveys and any nests discovered during post-construction surveys, whether active or inactive, will be given identification numbers. Nest locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system (GPS) coordinates will be recorded for each nest. Locations of inactive nests will be recorded because they could become occupied during future years.

Determining nest *occupancy* may require one or two visits to each nest. Aerial surveys for nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests, the certificate holder will determine nesting *success* by a minimum of one ground visit to determine the species, number of young and young fledged within the facility site and up to ½ mile from the facility site. "Nesting success" means that the young have successfully fledged (the young are independent of the core nest site).

For Burrowing Owls

If burrowing owl nest sites are discovered during pre-construction, construction, or post-construction, the investigators will monitor them according to the following protocol approved by ODFW. This species is not easily detected during aerial raptor nest surveys. ~~The investigators shall record active burrowing owl nest sites in the vicinity of the facility as they are discovered during other wildlife monitoring tasks~~. Any nests discovered during post-construction surveys, whether active or showing signs of intermittent use by the species, will be given identification numbers. Nest locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system coordinates will be recorded for each nest site. Coordinates for ancillary burrows used by one nesting pair or a group of nesting pairs will also be recorded. Locations of inactive nests will be recorded because they could become occupied during future years.

The investigators shall conduct burrowing owl monitoring in the same years as the raptor nest surveys described above. For occupied nests, the investigators shall determine nesting *success* by a minimum of one ground visit to determine species, number of young and young fledged. "Nesting success" means that the young have successfully fledged (the young may or may not be independent of the core nest site). Three visits to the nest sites may be necessary to determine outcome. Nests that cannot be monitored due to the landowner denying access will be checked from a distance where feasible.

If burrowing owl nests are discovered during the first year of post-construction raptor nest surveys (the first raptor nesting season after construction is completed), the investigators shall monitor those nest locations during the second year of surveys in the fourth year after construction is completed. Thereafter, the investigators shall monitor all known burrowing owl nest locations as a part of the long-term raptor nest monitoring program described in Section 2(b) below.

(b) Long-Term Monitoring

In addition to the two years of post-construction raptor nest surveys described in Section 2(a), the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life of the facility.[5] Investigators will conduct the first long-term raptor nest survey 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); and will repeat the survey at 5-year intervals thereafter. In conducting long-term surveys, the investigators will follow the same survey protocols as described above in Section 2(a) unless the investigators propose alternative protocols that are approved by the Department. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other monitoring conducted in adjacent areas. The investigators will analyze the data and report after each year of long-term raptor nest surveys.

(c) Analysis

The investigators will analyze the raptor nesting data to determine whether a reduction in either nesting success or nest use has occurred in the survey area. If the analysis indicates a reduction in nesting success or nest use by Swainson's hawks, ferruginous hawks, or burrowing owls, then the certificate holder will propose appropriate mitigation for the affected species as described in Section 2(d) and will implement mitigation as approved by the Department, subject to review by the Council.

Reductions in nesting success or nest use could be due to operation of the MWPF, operation of another wind facility in the vicinity or some other cause. The investigators shall attribute the reduction to operation of the MWPF if the wind turbine closest to the affected nest site is an MWPF turbine, unless the certificate holder demonstrates, and the Department agrees, that the reduction was due to a different cause. At a minimum, if the analysis shows that a Swainson's hawk, ferruginous hawk or burrowing owl has abandoned a nest territory within the facility site or within ½ mile of the facility site or has not fledged any young over two successive surveys within that same area, the investigators will assume the abandonment or unsuccessful

[5] As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

fledging is due to operation of the facility unless another cause can be demonstrated convincingly.

Given the low raptor nesting densities in the area and the presence of other wind energy facilities nearby, statistical power to detect a relationship between distance from an MWPF wind turbine and nesting parameters (e.g., number of fledglings per reproductive pair) will be very low. Therefore, impacts may have to be judged based on trends in the data, results from other wind energy facility monitoring studies and literature on what is known regarding the populations in the region.

(d) Mitigation

If the analysis shows a reduction in nesting success or nest use, the certificate holder shall implement mitigation if the Department determines that mitigation is appropriate. The certificate holder shall propose mitigation for the affected species in consultation with the Department and ODFW and shall implement mitigation as approved by the Council. In proposing appropriate mitigation, the certificate holder shall advise the Department if any other wind project in the area is obligated to provide mitigation for a reduction in raptor nesting success at the same nest site. Mitigation should be designed to benefit the affected species or contribute to overall scientific knowledge and understanding of what causes nest abandonment or nest failure. Mitigation may be designed to proceed in phases over several years. It may include, but is not limited to, additional raptor nest monitoring, protection of natural nest sites from human disturbance or cattle activity (preferably within the general area of the facility) or participation in research projects designed to improve scientific understanding of the needs of the affected species. Mitigation may take into consideration whether the mitigation required or provided in conjunction with other components of the *Wildlife Monitoring and Mitigation Plan* or *Habitat Mitigation Plan* would also benefit the raptor species whose nesting success was adversely affected.

3. Washington ground squirrel surveys

The certificate holder shall conduct long-term post-construction surveys to collect data on Washington ground squirrel (WGS) activity within the site boundary. Qualified professional biologists will monitor the locations within the site boundary where WGS were detected in preconstruction surveys (beginning in 2017). The survey area includes the identified burrow areas and the buffer areas within 785 feet in suitable habitat. The investigators will walk standard protocol-level transects twice between late March and late May and record level of use, notes on natal sites, physical extent of the sites and any noticeable land use or habitat changes that may have occurred since the preconstruction survey in 2017. The investigators shall report any new WGS detections but the boundaries of Category 1 habitat will not be revised from pre-construction boundaries.

The certificate holder shall conduct surveys during the year following construction and every three years thereafter for the life of the facility in areas where WGS were detected within the typical maximum dispersal distance of 3,281 feet (1,000 meters) of the facility. After each survey, the certificate holder shall report the results to ODFW and to the Department and shall include maps of the areas surveyed and detection locations. WGS surveys will not be conducted if there are barriers to WGS dispersal (i.e., active agriculture fields, highways, perennial

waterbodies) or an absence of suitable habitat corridors that would prevent the dispersal of WGS into areas where facility components are located.

4. Wildlife Reporting and Handling System

The Wildlife Reporting and Handling System is a voluntary monitoring program for maintenance personnel to search for avian and bat casualties during operation of the facility. Maintenance personnel will be trained in the methods needed to carry out this program. This monitoring program includes the initial response, handling, and reporting of bird and bat carcasses discovered incidental to maintenance operations ("incidental finds"). This is a voluntary program and may be discounted by the certificate holder at any time.

~~All avian and bat carcasses discovered by maintenance personnel will be photographed and data will be recorded as would be done for carcasses within the formal search sample during scheduled searches. If maintenance personnel discover incidental finds, the maintenance personnel will notify a project biologist. The project biologist (or the project biologist's experienced wildlife technician) will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. The certificate holder's on-site carcass handling permittee must be a person who is listed on state and federal scientific or salvage collection permits and who is available to process (collect) the find on the day it is discovered.~~

During the years in which fatality monitoring occurs, if maintenance personnel discover incidental finds outside the search plots for the fatality monitoring searches, the data will be reported separately from fatality monitoring data. If maintenance personnel discover carcasses within search plots, the data will be included in the calculation of fatality rates. The maintenance personnel will notify a project biologist. ~~The project biologist will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with USFWS~~.

5. Data Reporting

The certificate holder will report wildlife monitoring data and analysis to the Department for each calendar year in which wildlife monitoring occurs. Monitoring data include fatality monitoring program data, raptor nest survey data, WGS survey data, WGS incidental observation and assessment reports and Wildlife Reporting and Handling System data. The certificate holder may include the reporting of wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or submit this information as a separate document at the same time the annual report is submitted. In addition, the certificate holder shall provide to the Department any data or record generated in carrying out this monitoring plan upon request by the Department.

The certificate holder shall notify USFWS and ODFW ~~immediately~~ if any federal or state endangered or threatened species are killed or injured on the facility site within 48 hours of species identification.

Within 30 days after receiving the final versions of reports that are required under this plan, the Department will make the reports available to the public on its website and will specify a time in which the public may submit comments to the Department.[6]

6. Amendment of the Plan

This *Wildlife Monitoring and Mitigation Plan* may be amended from time to time by agreement of the certificate holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan and to mitigation actions that may be required under this plan. The Department shall notify the Council of all amendments and mitigation actions, and the Council retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by the Department.

7. References

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U.S. Fish and Wildlife Service (USFWS). 2012. *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines*. UOMB Control No. 1018- 0148.

U.S. Fish and Wildlife Service (USFWS). 2013. *Revised Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning -- Suggestions Based on Previous USFWS Recommendations to FCC Regarding WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on*

[6] The certificate holder may establish a Technical Advisor Committee (TAC) but is not required to do so. If the certificate holder establishes a TAC, the TAC may offer comments to the Council about the results of the monitoring required under this plan.

Migratory Birds," Docket No. 08-61, FCC's Antenna Structure Registration Program, and Service 2012 Wind Energy Guidelines.

Walston, L. J., Jr., K. E. Rollins, K. E. LaGory, K. P. Smith, and S. A. Meyers. 2016. "A preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States." *Renewable Energy* 92: 405–414.

Attachment G: Draft Historical Resource Mitigation Plan

Inadvertent Discovery Plan

PLAN AND PROCEDURES FOR THE INADVERTENT DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS FOR THE MONTAGUE WIND POWER FACILITY, GILLIAM COUNTY, OREGON

1.0 Introduction

Montague Wind Power Facility, LLC (Montague) proposes to construct the Montague Wind Power Facility (Montague Facility) in Gilliam County, Oregon. This Inadvertent Discovery Plan outlines procedures to follow, in accordance with state and federal laws, if cultural resources or human remains are discovered during construction.

2.0 Recognizing Cultural Resources

A cultural resource is an item of historical, traditional, or cultural importance. The item could be prehistoric or historic. Examples are as follows:

- A multispecies accumulation of shell (shell-midden) with associated bone, stone, antler, or wood artifacts, burned rocks, or charcoal
- Bones that appear to be human or animal bones associated with a shell-midden (i.e., with associated artifacts or cooking features)
- An area of charcoal or very dark, stained soil with associated artifacts
- Artifacts made of chipped or ground stone (i.e., an arrowhead, adze, or metate) or an accumulation (more than one) of cryptocrystalline stone flakes (lithic debitage)
- Items made of botanical materials
- Clusters of tin cans or bottles, agricultural, or military equipment that appears to be older than 50 years

3.0 Onsite Responsibilities

STEP 1: STOP WORK IMMEDIATELY. If the contractor or subcontractor believes that he or she has uncovered any cultural resource during construction of the project, all work adjacent to the discovery must stop. The discovery location should not be left unsecured at any time.

STEP 2: NOTIFY CONSTRUCTION PROJECT MANAGEMENT IMMEDIATELY. Contact the construction project manager or cultural resources specialist for the Montague Facility, as listed below.

Construction Project Manager

To be determined.

Cultural Resources Specialist

If the construction project manager cannot be reached, contact one of the designated Cultural Resources Specialists:

David Sheldon
CH2M
Cell: (360) 219-6953
david.sheldon@Jacobs.com

Matt Steinkamp
CH2M
Cell: (503) 358-9499
matt.steinkamp@jacobs.com

STEP 3: NOTIFY THE STATE HISTORIC PRESERVATION OFFICE IMMEDIATELY. The Montague Facility construction project manager or cultural resources specialist will contact the Oregon State Historic Preservation Office (SHPO) immediately.

Note: If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call 911 or speak with the media.

STEP 4: PARTICIPATE IN CONSULTATION AND DOCUMENTATION. The Montague Facility construction project manager will participate in consultations with Oregon SHPO and affiliated Tribes. After consultation, the construction project manager will complete a written plan of action describing the disposition of cultural resources pursuant to 43 *Code of Federal Regulations* (CFR) Part 10 and will execute his or her prescribed duties within that plan of action.

4.0 Further Contacts and Consultations

Construction Project Manager

The Montague Facility construction project manager's responsibilities as follows:

- Secure the Site: The construction project manager is responsible for taking appropriate steps to protect and secure the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material in consultation with the affiliated Tribe(s).
- Direct Construction Elsewhere Onsite: The construction project manager will direct construction to resume away from cultural resources where appropriate and in communication with the affiliated Tribe(s).
- Contact Project Cultural Resources Specialist: If the cultural resources specialist has not yet been reached in earlier attempts, the construction project manager will do so.

Cultural Resources Specialist

The cultural resources specialist's responsibilities are as follows:

- Notify Tribes: If not already notified, the cultural resources specialist will notify the Tribe(s) of the discovery.
- Identify Find: The construction project manager will consult with the Tribes and will ensure that a qualified individual examines the find to determine if it is a cultural resource, as follows:
  - If it is determined to not be a cultural resource, work may proceed with no further delay.
  - If it is determined to be a cultural resource, the cultural resources specialist will send a certified letter to the Tribal Historic Preservation Offices, notifying them that a cultural resource has been discovered and requesting further consultation.
  - If the find may be human remains or funerary objects, the cultural resources specialist will follow the procedures described in Section 5.0.

- Notify State Agencies: The construction project manager will contact Oregon SHPO.
- Formulate Plan: The construction project manager, affiliated Tribes, and Oregon SHPO will consult to determine a plan for disposition of the cultural resources.

Any required excavation or removal of cultural resources will be carried out under the requirements of 43 CFR Part 10.3 and 16 *United States Code* 470 aa, and will require a permit from the Oregon SHPO. The activity that resulted in the inadvertent discovery may resume thirty (30) days after certification of receipt of notification.

Oregon Historic Preservation Office

State Archaeologist
Dennis Griffin, Ph.D.
e-mail: Dennis.Griffin@oregon.gov
(503) 986-0674

-or-

Assistant State Archaeologist
John Pouley
E-mail: john.pouley@oregon.gov
(503) 986-0675

Tribes

Confederated Tribes of the Warm Springs Reservation of Oregon
Robert Brunoe, Tribal Historic Preservation Officer
THPO@ctwsbnr.org
PO Box 460
Warm Springs, Oregon 97761
(541) 553-3555

Confederated Tribes of the Umatilla Indian Reservation
Teara Farrow Ferman, Cultural Resources
tearafarrowferman@ctuir.com
46411 Timine Way
Pendleton, OR 97801
(541) 429-7230

5.0 Special Procedures for the Discovery of Human Skeletal Material

Any human skeletal remains will at all times be treated with the utmost dignity and respect. The attached document titled *Tribal Position Paper on the Treatment of Human Remains* (Government to Government Cultural Resources Cluster Group, September 2006) describes the appropriate protocol on the treatment of Native American human remains.

STEP 1: STOP WORK. In the event that human remains are discovered, stop all work in the area and secure the site.

STEP 2: NOTIFY APPROPRIATE PARTIES. Notify the construction project manager, law enforcement, and the coroner, immediately. The coroner (with the assistance of law enforcement personnel) will determine if the remains are human and whether the discovery site constitutes a crime scene, and will notify Oregon SHPO and the Tribes.

- Medical Examiner, Gilliam County

  To be determined

- Gilliam County Sheriff's Department

  221 S. Oregon Street
  Condon, Oregon 97823
  (541) 384-2851

STEP 3: PROTECT THE REMAINS. There shall be no photography or drawings and sketches made of the human remains or funerary objects found with the human remains without written permission signed by the affiliated Tribes. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Remains should not be removed from the site prior to identifying the remains as Native American or not. If the remains are determined to be Native American, final disposition will be decided through consultation with the affiliated Tribes, Oregon SHPO, and Montague.

STEP 4: CONSULTATION. If the coroner determines the remains are nonforensic, and if it is determined that the remains constitute a cultural resource, the construction project manager or appointed representative will participate in consultation with the affiliated Tribes and Oregon SHPO. The construction project manager or appointed representative will complete a written plan of action describing the disposition of cultural resources pursuant to 43 CFR Part 10 and will execute its prescribed duties within that plan of action. If the remains are determined to be Native American, final disposition will be decided through consultation with the affiliated Tribes, Oregon SHPO, and Montague. If the medical examiner is not able to make a determination of Native American, a qualified forensic anthropologist from the State, Tribe, or contracted archaeological firm will need to be consulted for final determination.

6.0 Proceeding with Construction

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. The construction project manager and a qualified archaeologist or Tribal representative must determine the boundaries of the discovery location. Construction may continue at the discovery location only after the process outlined in this plan is followed and the Oregon SHPO (and the federal agencies, if any) determines that compliance with state and federal laws is complete.

Attachment H: Inadvertent Discovery Plan

Montague Wind Power Facility
Draft Phase 2 Historical Resource Mitigation Plan
[APRIL 2019]

I. Introduction

This draft plan describes approaches to mitigating the significant adverse impact to the Weatherford Barn resulting from construction and operation of the Montague Wind Power Facility (MWPF).[1] The certificate holder will construct the facility in phases. This plan addresses mitigation associated with the second phase (Phase 2) of facility construction and operation. The Oregon State Historic Preservation Office (SHPO) has determined that components of Phase 2 of the MWPF will have a significant adverse impact on the Weatherford Barn, an aboveground historic property eligible for inclusion in the National Register of Historic Places (NRHP). The Weatherford Barn is located on Bottemiller Lane, west of Oregon Route (OR) 19 in Gilliam County, Oregon, at approximately latitude 45.547156; longitude 120.170658 within the Shutler Flat U.S. Geographical Survey 7.5-minute quadrangle.

II. Regulatory Context for Mitigation

Pursuant to Oregon Administrative Rule (OAR) 345-022-0090 and SHPO guidance, the certificate holder conducted a historic and cultural resources inventory within 1 mile of the proposed expanded site boundary for Phase 2 of the MWPF. The Weatherford Barn is located within this analysis area and research determined it is eligible for listing in the NRHP. The certificate holder then identified potential impacts to the resource under OAR 345-021-0010(1)(s)(D) and provides this mitigation plan to prevent destruction of the resource in accordance with OAR 345-021-0010(1)(s)(D)(iii).

III. Description of the Aboveground Historic Property

This section provides a description of the Weatherford Barn, the determination of eligibility for inclusion in the NRHP, ownership associated with the Weatherford Barn, and the setting within the vicinity of the Weatherford Barn.

1. Weatherford Barn

The Weatherford Barn is a one-story, rectangular plan, wood-frame building with a front gable roof constructed in 1880. The building is surrounded by agricultural fields. Overall, the building is in poor condition and is no longer in regular use. Two large open bays are located on the north elevation – a double-height central bay and a side-aisle bay on the west side of the north elevation. A large, open bay is centered on the south elevation.

The west side of the roof is clad in nonoriginal corrugated metal, while the east side is covered in shingles, large sections of which are missing or badly deteriorated. The barn's exterior walls are covered in vertical wood boards. Many of these boards are rotten or missing, particularly on the west and south elevations. In addition, the original barn doors are missing. The building's interior floors are formed by wood planks on a slightly raised pier foundation.

[1] This plan is incorporated by reference in the site certificate for the Montague Wind Power Facility and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

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As a result of the deteriorated roof and walls, and the missing doors, the building is exposed to the elements. The building leans to the east, and four wood planks have been secured to buttress the side elevation. A wood post and wire fence have been added around the wood buttresses.

2. Determination of Eligibility

An Oregon Inventory of Historic Properties Historic Resource Survey Form was completed for the Weatherford Barn in 1987. The form labels the property as the Weatherford Barn, and lists the owner as Marion T. Weatherford. The Weatherford family was, and remains, an important farming family in the area. However, it is not certain that the barn was originally constructed by the Weatherford family. A 1934 Metsker Map of the area shows that the parcel containing the barn was at that time part of Cannon Ranch, owned by A. M. Cannon. According to the 1934 map, the Weatherford Ranch was located approximately 3 miles southwest, near Olex (Metsker Maps, 1934). However, the parcels surrounding the barn appear to have been owned by members of the Weatherford family, including Herbert R. Weatherford (to the west), Cavy E. Childs (daughter of William W. Weatherford) to the north, and M. F. Weatherford to the southwest. A brief history of the county and the Weatherford family is included below for context.

Gilliam County encompasses 1,223 square miles and is bordered by the Columbia River to the north, Wasco and Sherman counties to the west, Morro and Grant counties to the east, and Wheeler County to the south. Originally located within the eastern region of Wasco County, the Legislative Assembly established Gilliam County on February 25, 1885. After the county was established, the town of Arlington, formerly known as Alkali, which had been platted in 1882, was named the county seat (Portland State University and the Oregon Historical Society, 2017). However, the county seat was moved to Condon, Oregon (formerly known as Summit Springs) in 1890.

3. Ownership

Marion T. Weatherford was born on October 9, 1906, near Arlington, Oregon "on his family's wheat and cattle farm" (Burson, 2015). The farm became known for the Weatherford 16 Mule Team, which hauled wagons 26 miles to and from the railroad in Arlington. Between 1922 and 1942, Marion T. did not live at the family farm, although he visited regularly and "always kept in touch with current events in this community" (Burson, 2015). In 1942, after the death of his parents, Marion T. "returned to take over the farm with his wife Leona" (Burson, 2015). It was apparently at this time that Marion T. acquired the property on OR 19, known currently as the Marion T. Weatherford Ranch; it is also likely that at this time he acquired the barn, referred to as Weatherford Barn. After Marion T. returned to the community, he became involved in a number of local organizations during the 1940s and 1950s and established himself as an important figure within the community (Burson, 2015; Oregon State University, 2017).

Marion T. Weatherford owned the barn on Bottemiller Lane when it was inventoried in 1987. It is currently owned by the Robert Athearn Living Trust. The 1987 Historic Resource Survey form identifies the vernacular style barn as in "good" condition and states: "This is the oldest known barn in the county, and has been in continual use as a barn since its construction in 1880. It has been excellently maintained" (Startz, 1987). The barn is identified in the Oregon Historic Sites Database as eligible for the NRHP (2017). While the barn is no longer in good condition and does not appear to be regularly used, it still retains important elements of its

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integrity, including design, setting, location, feeling, and association. It remains significant as the oldest known barn in Gilliam County. As such, the property remains eligible for listing in the NRHP under Criterion A, for its association with the early agricultural history of the area.

4. Setting

The Weatherford Barn is located in an agricultural field north of Bottemiller Lane and west of OR 19 in Gilliam County, Oregon. OR 19, also known as the John Day Highway, connects Arlington in northern Gilliam County to Condon near the Gilliam County/Wheeler County line to the south. An approximately 3.9-mile segment of the highway crosses the proposed expanded site boundary for Phase 2 of the MWPF and is adjacent to the proposed solar area, battery storage system, and Phase 2 collector substation.

This segment of OR 19 is an important vantage point because the highway is an artery for both in-county and inter-county travel. The Phase 2 facilities would be the first features that drivers see at the crest of the hill driving north on OR 19 headed out of Rock Creek Canyon. The landscape in the area consists of a flat plane that slopes up gradually from north to south, gaining approximately 215 feet in elevation over the 3.9 miles from the northern to the southern facility site boundary. The landscape is open, and agricultural in nature, with views extending across flat fields devoted to field crops toward distant low hills. The only developed features consist of the Weatherford Barn and two small clusters of farm residences and farm operation support structures (barns, sheds, and grain storage facilities).

The landscape in this area looks like other agricultural areas in Gilliam County and surrounding counties where wind generation installations have already been developed. Existing turbines are located approximately 1.8 miles northwest of the Weatherford Barn.

IV. Description of the Impacts Addressed by the Plan

In a letter dated March 1, 2019, regarding SHPO Case No. 10-0378, SHPO concluded that components of the certificate holder's proposed Phase 2 facilities near the Weatherford Barn would diminish the setting, feeling, and association of Weatherford Barn. In response to SHPO's finding, the certificate holder demonstrates that they will reduce impacts to Weatherford Barn to less than significant by either implementing setbacks described in Section V or by implementing one of the mitigation options described in Section VI.

V. Implementation of Setbacks

The proposed Phase 2 facilities near the Weatherford Barn include the solar array area, facility substation, battery storage system, and transmission lines. The solar array is approximately 1 mile wide and will extend along the west side of OR 19 for 2 miles between Bottemiller Lane and the southern boundary of the facility near Baseline Road. As proposed, the solar array is set back 100 to 150 feet from the highway and will be arranged in orderly rows. The solar collector panels will be relatively low to the ground, with a maximum height of 15 feet. The nearest fenced boundary of the solar array is approximately 35 feet west of the shoulder of OR 19 and 300 feet south of the Weatherford Barn. The nearest fenced boundary of the Phase 2 collector substation, battery storage system, and operations and maintenance building is approximately 550 feet east of the Weatherford Barn. SHPO determined the proposed Phase 2 facilities arrangement would have a significant adverse impact on the Weatherford Barn.

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To avoid a significant adverse impact, the certificate holder will continue to consult with the Oregon Department of Energy (Department) and SHPO on the relocation of proposed Phase 2 facilities to determine if a location exists that will result in no significant impact to the setting, feeling, and association of the Weatherford Barn. If no feasible facility location exists that avoids these impacts, the certificate holder will implement one of the mitigation actions provided in Section VI.

VI. Mitigation Measures

1. Mitigation Option 1: Historic Barn Survey

The certificate holder would conduct a reconnaissance-level survey of up to 25 barns in Gilliam County built prior to 1950. This date is selected to focus the study on barns associated with the earlier period of the agricultural industry in the county. This project would include the following tasks.

Research – Prior to conducting the fieldwork, an architectural historian would review the Oregon Historic Sites Database to obtain background information about barns previously inventoried in Gilliam County. In addition to the review of historical literature, maps, and photos, this research would include communicating with the Gilliam County Historical Museum staff to determine if the museum had recommendations about noteworthy barns in the area. The architectural historian would communicate with SHPO to determine the type of forms on which properties would recorded.

Fieldwork – A field investigation would be conducted and would include (1) photographing barns identified from research and (2) photographing noteworthy barns identified in the field. Photographs would be taken from the public right-of-way, unless property owner allowed architectural historian on the property. Though some properties may be located within a complex of historic buildings associated with a farmstead, the inventory would only include the barn. Overview photographs showing the associated buildings as they relate to the setting of the barn would be included.

Reporting – Architectural historians would prepare a draft and final report including an overview of the agricultural history of Gilliam County, a summary of common barn types and forms found in the county, a description of the study area, methods used, summaries of inventoried properties, and a map showing their locations. The draft report would be reviewed by the Oregon SHPO. Comments would be addressed in a final report. Copies of inventory forms would be submitted to SHPO.

2. Mitigation Option 2: Local Historical Society Exhibit

The certificate holder would partner with a local historical society or other organization to display an exhibit on Gilliam County historic barns. The certificate holder would hire a consultant or museum to prepare a portable exhibit documenting the agricultural history of Gilliam County as it relates to the development of historic barns. The exhibit would provide architectural information about the different types, forms, materials and methods of construction of barns in the county. This project would involve research in local repositories including the Gilliam County Historical Museum and libraries to obtain historical photographs, maps, and other research materials. The exhibit would consist of text, photos, and graphical information mounted on portable display panels allowing it to be moved to different locations for display. The exhibit would initially be installed at the Gilliam County Historical Museum, which is

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dedicated to interpreting the agricultural history of the county. SHPO would be afforded the opportunity to review and comment on the display panels and content prior to fabrication.

3. Mitigation Option 3: Contribution to Historical Organization Dedicated to Preserving the Agricultural History of Gilliam County

The certificate holder would make a $25,000 contribution to the Gilliam County Historical Museum to support the construction of a new building being erected to house agricultural artifacts such as tractors and other equipment donated to the museum, which focuses on interpreting the agricultural history of Gilliam County, Oregon. The certificate holder developed this option in consultation with the Gilliam County Historical Museum. SHPO would receive annual reports on the status of mitigation within the duration provided in Section VII.

VII. Duration

Mitigation will be implemented within three (3) years from the start of Phase 2 construction. Prior to such time, the certificate holder shall consult with the Department or SHPO to confirm the mitigation option selected.

VIII. Amendment of the Plan

This *Phase 2 Historical Resource Mitigation Plan* may be amended from time to time by agreement of the certificate holder and the Energy Facility Siting Council (Council). SHPO will have the opportunity to review and participate in proposed amendments. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.

IX. References

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Oregon Historic Sites Database. 2017. *Weatherford Barn*. *Site Information*. Accessed July 18, 2017. http://heritagedata.prd.state.or.us/historic/index.cfm?do=v.dsp_siteSummary&resultDisplay=37317.

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Startz, Kathleen. 1987. "Weatherford Barn." *Oregon Inventory of Historic Properties*. Historic Resource Survey Form.

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