BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Application for Site Certificate for the Boardman Solar Energy Facility	))))	PROPOSED ORDER ON APPLICATION FOR SITE CERTIFICATE

December 29, 2017

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ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
ASC	Application for Site Certificate for the Boardman Solar Energy Facility
BMP	Best Management Practice
BPA	Bonneville Power Administration
Council	Oregon Energy Facility Siting Council
dBA	A-weighted decibel
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EFSC	Oregon Energy Facility Siting Council
ESCP	Erosion and Sediment Control Plan
EFU	Exclusive Farm Use
GSU	Generator Step-up
GCZO	Gilliam County Zoning Ordinance
HMP	Habitat Mitigation Plan
kV	Kilovolts
MW	Megawatt(s)
MCZO	Morrow County Zoning Ordinance
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance Building
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
pASC	Preliminary Application for Site Certificate
RAI	Request for Additional Information
SAG	Special Advisory Group
USFWS	United States Fish and Wildlife Service

I. INTRODUCTION

The Oregon Department of Energy (Department or ODOE) issues this proposed order in accordance with Oregon Revised Statute (ORS) 469.370(1), based on its review of the Application for Site Certificate (ASC) for the proposed Boardman Solar Energy Facility (proposed facility) and comments and recommendations received by state agencies, local governments, and tribal governments. The applicant is Boardman Solar Energy LLC (Applicant), a wholly-owned subsidiary of Invenergy Solar Development LLC. Invenergy Solar Development LLC is a wholly-owned subsidiary of Invenergy LLC (parent company).

A site certificate is a binding agreement between the State of Oregon and the applicant, authorizing the applicant to design, construct, operate, and retire a facility on an approved site, incorporating all conditions imposed by the Energy Facility Siting Council (EFSC or Council) on the applicant.[1] A site certificate issued by the Council binds the state and all counties, cities and political subdivisions of Oregon in regard to the issues that are included in and governed by the site certificate. Once the Council issues the site certificate, any affected state agency, county, city or political subdivision must, upon submission by the applicant of the proper applications and payment of the proper fees, but without hearing or other proceeding, promptly issue the permits, licenses and certificates addressed in the site certificate.[2] The Council has continued authority over the site for which the site certificate is issued 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 the site certificate.[3]

The proposed facility qualifies as an "energy facility" under the definition in ORS 469.300(11)(a)(D)(ii) as it includes a proposed solar photovoltaic power generation facility that would use more than 100 acres located on land that is not cultivated, but predominately

[1] ORS 469.300(26).
[2] ORS 469.401(3).
[3] ORS 469.430.

composed of soils that are in capability classes III and IV.[4,5] Approval of a site certificate by the Council is required for the construction, operation, and retirement of energy facilities.[6]

In addition to the conditions recommended in this proposed order, the certificate holder is subject to the conditions and requirements contained in the rules and standards of the Council and in local ordinances and state laws in effect on the date the site certificate is executed. Under ORS 469.401(2) and Oregon Administrative Rule (OAR) Chapter 345 Division 27, upon a clear demonstration 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. The Council recognizes that many specific tasks related to the design, construction, operation, and retirement of the proposed facility would be undertaken by the certificate holder's agents or contractors. Nonetheless, the certificate holder remains responsible for ensuring compliance with all provisions of the site certificate.

The Council does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate, including design-specific construction or operating standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.[7]

Based upon its review, including recommended conditions of compliance and conclusions presented in this proposed order, the Department recommends that the Council approve a final order on the ASC and issue a site certificate for the proposed facility.

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[4] ORS 469.300(11)(a)(D)(i) defines an energy facility subject to Council jurisdiction as a solar photovoltaic power generation facility that would use more than 100 acres located on high-value farmland as defined in ORS 195.300. The Applicant asserts in ASC Exhibit K that the entire site boundary would be located within high-value farmland pursuant to the ORS 195.300(10)(f)(C) high-value farmland definition. ORS 195.300(10)(f)(C) defines high-value farmland as: 1) land zoned exclusive farm use; 2) within Columbia Valley viticultural areas as described in 27 C.F.R. 9.74 within the State of Oregon; 3) no more than 3,000 feet above mean sea level; 4) with an aspect between 67.5 and 292.5 degrees; and, 5) slope between zero and 15 percent. In ASC Exhibit K, the Applicant does not consider the elevation, slope, and aspect requirements of ORS 195.300(10)(f)(C), and relies solely on the Columbia Valley viticultural area to define the bounds of high-value farmland within the site boundary and surrounding area. Based on the Department's evaluation of high value farmland pursuant to ORS 195.300(10)(f)(C) and the area to be used by the proposed energy facility, or site boundary, it is unclear if the proposed energy facility would use more than 100 acres of high-value farmland. However, as discussed in this section, the proposed facility is subject to Council jurisdiction under ORS 469.300(11)(a)(D)(ii). The proposed facility would also use more than 320 acres, and as such, would be Council jurisdiction under ORS 469.300(11)(a)(D)(iii). ASC Exhibit K, Table K-1, shows the soil capability classifications within the site boundary.

[5] The definitions contained in ORS 469.300 and OAR 345-001-0010 apply to terms used in this proposed order.

[6] ORS 469.320.

[7] ORS 469.401(4).

II. PROCEDURAL HISTORY

II.A. Expedited Review of Small Capacity Facilities

On August 17, 2016, the Department received a Request for Expedited Review for a Small Capacity Facility for the proposed Boardman Solar Energy Facility, a solar photovoltaic energy generation project with a peak generating capacity of approximately 75 megawatts (MW). The Department reviewed the request and on August 26th, 2016 notified the Applicant that the request for expedited review of the Application for Site Certificate (ASC) for the proposed Boardman Solar Energy Facility was granted.[8]

Under the expedited review process, an applicant is not required to submit a Notice of Intent. In an expedited review, an applicant submits a Preliminary Application for a Site Certificate (pASC) based on the OAR 345-021-0010 informational requirements. The Department issues a Project Order after reviewing the pASC. Procedurally, submission of the ASC and the Department's review of the ASC are the same for expedited review as for non-expedited review of ASCs.

Pursuant to ORS 469.370(10) and OAR 345-015-0160, the Department issued a Project Order on May 9, 2017, which specified the state statutes and administrative rules, and local, state, and tribal laws, regulations, ordinances and other requirements applicable to the siting of the proposed facility.

II.B. Application for Site Certificate

The Department received the pASC on January 13, 2017. On January 19, 2017, the Council appointed the Morrow County Board of Commissioners and Gilliam County Court as the Special Advisory Groups (SAGs) for the proposed facility.[9] The Department distributed the pASC to reviewing agencies and requested comments on the pASC no later than February 23, 2017. Additionally, an announcement was posted on the Department's website, notifying the public that the pASC had been submitted.

Pursuant to OAR 345-015-0190(1), on March 14, 2017 the Department determined the pASC to be incomplete. On March 14 and April 4, 2017, the Department issued Requests for Additional Information.[10] The Applicant began providing revised pASC exhibits and responses to the

[8] Pursuant to ORS 469.370(10), a facility meeting the definition of a small capacity energy facility may request expedited ASC review. A small capacity energy facility is an energy facility with an average electric generating capacity of less than 100 megawatts. If the Department determines that the facility meets the eligibility requirements described in OAR 345-015-0300, the Council shall grant expedited review of the ASC.
[9] BSEAPPDoc3 2017-01-19; BSEAPPDoc4 2017-01-19.
[10] BSEAPPDoc23 2017-03-14; BSEAPPDoc30 2017-04-04

information requests beginning on April 21, 2017 and submitted the remainder of requested information to the Department on August 29, 2017. After reviewing the revised pASC exhibits, the Department determined the pASC to be complete on August 29, 2017 and the Applicant filed a complete ASC on September 1, 2017. Under OAR 345-015-0190(5), an ASC is complete when the Department finds that an applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards.

Public notice of the complete ASC was issued on September 5, 2017, with notice posted in the East Oregonian on September 6, 2017.[11] The Department held a public information meeting on the complete ASC on September 20, 2017 in Boardman, Oregon. Pursuant to OAR 345-015-0200, the Department distributed copies of the complete ASC to reviewing agencies, along with a request for agency reports on the complete ASC no later than October 6, 2017. The Department received comments from six reviewing agencies, including the SAGs.

On October 19, 2017 the Council appointed Alison Greene Webster, J.D. as the hearing officer to conduct the public hearing on the draft proposed order and to conduct the contested case proceeding.[12]

II.C. Council Review Process

On November 13, 2017, the Department issued the draft proposed order for public comment. Notice of the draft proposed order public hearing and request for comments was issued on the same day and distributed to all persons on the Council's general mailing list, to the special list established for the proposed facility, to an updated list of property owners supplied by the Applicant, and to a list of reviewing agencies as defined in OAR 345-001-0010(52). The Department also published the notice of the draft proposed order public hearing and request for comments in the East Oregonian, a newspaper of general circulation in the area of the proposed facility.

On December 14, 2017, hearing officer Alison Webster conducted a public hearing on the draft proposed order at Boardman City Hall in Boardman, Oregon. Five of the seven Council members were either present or on the phone. The record of the public hearing opened on November 13, 2017 (the date of notice issuance) and closed at the conclusion of the public hearing on December 14, 2017 at approximately 6:17 PM. In addition to accepting written comments during the comment period, the hearing officer accepted oral testimony at the public hearing. The Council reviewed the draft proposed order and comments received on the record of the public hearing at its regularly scheduled Council meeting on December 15, 2017.

[11] BSEAPPDoc70. 2017-09-05
[12] BSEAPPDoc68. 2017-10-19

Attachment B of this proposed order includes an index of the comments submitted on the record, including written comments and oral testimony received during the December 14, 2017 public hearing. Issues raised that are within the Council's jurisdiction are addressed under the applicable standards section below. Issues raised that are outside the Council's jurisdiction or are not applicable to the Council's decision on this site certificate application are not further addressed in this proposed order.[13,14]

On December 29, 2017, the Department issued this proposed order, which takes into consideration Council comments provided during the Council's review of the draft proposed order, 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), and agency consultation. Concurrent with the issuance of the proposed order, the Department issued a notice of contested case and a public notice of the proposed order.[15] Only those persons who comment in person or in writing on the record of the public hearing may request to participate as a party or limited party in the contested case proceeding. 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 applicant an adequate opportunity to respond."[16] At the conclusion of a contested case proceeding, the hearing officer will issue a proposed contested case order stating the hearing officer's findings of fact, conclusions of law and recommended site certificate conditions on the issues raised in the contested case. The Council may adopt, modify or reject the hearing officer's proposed contested case order.[17] Based upon Council's direction to adopt, modify or reject the hearing officer's proposed contested case order, the findings of the hearing officer's proposed contested case order, and any modifications requested by Council, are then incorporated into the Council's final order on the ASC.

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[13] General statements of support for the facility received on the record of the public hearing are not applicable to the Council's decision on this site certificate application and are therefore not addressed in the proposed order.
[14] In oral testimony on the record of the public hearing, Morrow County Planning Director Carla McLane asked how EFSC's process can ensure that Council land use decisions (such as granting a goal exception) end up being reflected in local comprehensive plans and codes, given that counties are no longer required to undergo the periodic review process [the periodic evaluation and revision of a local comprehensive plan]. Ms. McLane asked if this is something the Council could address through rulemaking. BSEAPPDoc83 DPO Hearing SAG Comment McLane 2017-12-14. While the Department is evaluating if Ms. McLane's request is within the Council's authority to address through the rulemaking process, this request is outside of the scope of the Council's decision on this site certificate application and is therefore not addressed in the proposed order.
[15] See ORS 469.370(4) and OAR 345-015-0014.
[16] ORS 469.370(3).
[17] OAR 345-015-0085.

Following the contested case proceeding, the Council will issue a final order either approving or denying the ASC based upon the standards adopted under ORS 469.501, and any additional state statutes, rules, or local government regulations or ordinances determined to be applicable to the facility in the Project Order.[18] 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.[19]

III. DESCRIPTION OF THE PROPOSED FACILITY

The information presented in this section is based upon details provided in the ASC. Section III.A describes the location and site boundary of the proposed facility, and the corridor of the proposed 115 kilovolt (kV) transmission line; and, Section III.B describes the proposed energy facility and related and supporting facilities.

III.A. Location and Site Boundary

As defined in OAR 345-001-0010, "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; "site" means all land upon which an energy facility and its related or supporting facilities is located or proposed to be located.[20] **"**Corridor" means a continuous area of land not more than one-half mile in width and running the entire length of a proposed transmission line or pipeline.

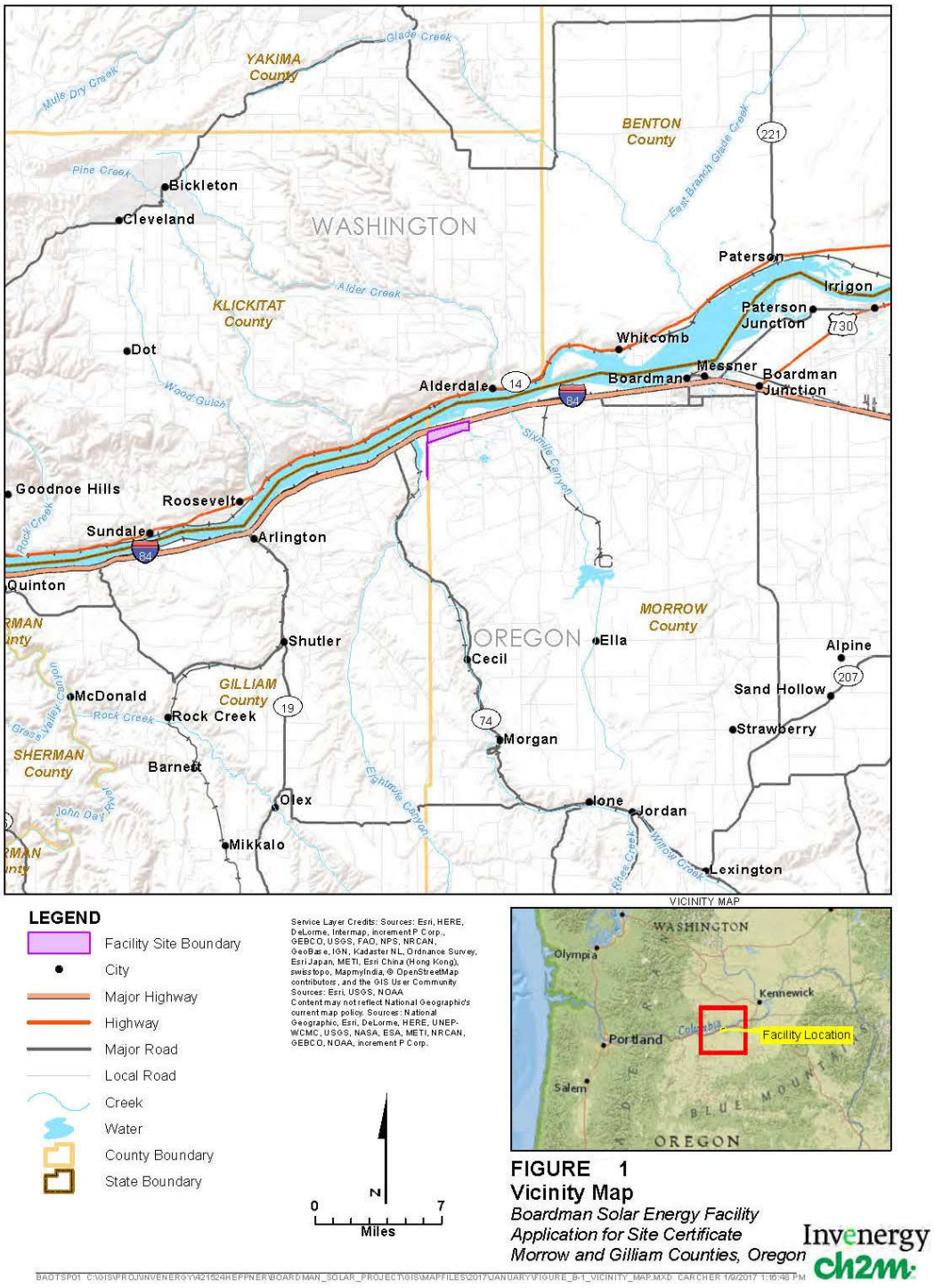
The Applicant provided locational information and maps of the proposed facility in ASC Exhibit C. A map showing the proposed site boundary is included on Figure 1.[21] As presented on the figure, the shaded purple area represents the proposed site boundary. The yellow lines represent county boundaries, of which the proposed facility crosses one (separating Gilliam and Morrow counties). The location of proposed facility components, as described in Section III.B, *The Facility*, of this proposed order is presented on Figure 2.

[18] ORS 469.370(7).
[19] ORS 469.403.
[20] ORS 469.300(25)
[21] Figure 1 was obtained from ASC Exhibit B Figure B-1.

As explained in ASC Exhibit B, the Applicant proposes to construct a 2.1-mile 115 kV transmission line within a new 150-foot right of way, adjacent to an existing 100-foot right of way. Based on the Applicant's representation and consistent with OAR 345-025-0010, the Department recommends Council approve a 2.1-mile transmission line corridor (see Site Specific Condition 2 below).[22]

[22] OAR 345-025-0010 establishes a site-specific condition directing Council to specify an approved corridor in the site certificate for transmission line or pipeline energy facilities, or related and supporting transmission lines or pipelines, authorizing construction and operation anywhere within the approved corridor.

Figure 1: Proposed Facility Vicinity Map



III.B. The Facility

Facility Overview

As stated in ASC Exhibit B, the proposed facility includes a solar photovoltaic power generation facility and related and supporting facilities, with a peak generating capacity of approximately 75 MW, and an average electric generating capacity of approximately 25 MW. The proposed energy facility would be comprised of 30 module blocks. Each module block would consist of multiple components including; the solar modules themselves, trackers, racks, posts, cabling, inverters, and transformers. The area under and around each solar module installation would have a gravel or other non-combustible base.

Related or Supporting Facilities

The proposed facility includes the following related or supporting facilities: [23]

- Underground Electrical Collection System
- Substation, Control House and Generator Step-up Transformer
- 115 kV Transmission Line (approximately 2.1 miles long) and Private Service Road
- Point of Interconnection (POI)
- Operations and Maintenance (O&M) Building
- Private Access Road
- Service Roads, Gates and Security Fence
- Additional Temporary Construction Areas

The location of proposed facility components as described in this section is presented on Figure 2 below.[24]

Electrical Collection System

The proposed electrical collection system would be installed underground, buried at a minimum of 3-feet below ground, and would connect the electrical output of the proposed facility to the proposed facility substation. Underground alternating current (AC) electrical cables would be arranged in several branch circuits, each consisting of three 34.5 kV single conductor cables with jackets, connecting the solar module blocks at each inverter and

[23] BSEAPPDoc71. The description of the related and supporting facilities included here is based on the information in ASC Exhibits B, C, M, and K. 2017-09-01.

[24] Figure 2 was obtained from ASC Exhibit C Figure C-1.

transformer to a switch in the substation. Cable lengths would vary given how far the module blocks are from the proposed facility substation.

Substation, Control House and Generator Step-up Transformer

The proposed facility substation and control house would be located in the southwest corner of the proposed site boundary, within the perimeter fence of the proposed energy facility, on an approximately 0.60-acre area. The proposed substation yard would have a gate opening to provide access to the proposed 115 kV transmission line.

The proposed facility substation would include: generator step-up (GSU) transformer, protective relay and metering equipment, utility and customer revenue metering, and a station service transformer which would provide power to the substation and control house. The proposed substation would include three open-air isolation switches that would connect the collection cables to the main 34.5 kV bus, a 34.5 kV main bus open-air isolation switch, the 34.5 to 115 kV GSU, and a 115 kV circuit breaker. The proposed control house would be a custom-designed, weatherproof structure, equipped with a heating, ventilation, and air conditioning system and would be used to store fire and safety equipment such as smoke detectors, fire extinguishers, and an eyewash station.

The proposed GSU transformer would be located within the proposed facility substation, would require 10,000 gallons of transformer oil for operation, and would increase the output voltage from the module blocks (34.5 kV) to the voltage of the proposed 115 kV transmission line.

115 kV Transmission Line and Private Service Road

The proposed 115 kV transmission line would initiate in the southwest corner of the proposed site boundary at the proposed facility substation and would extend approximately 2.1 miles south to a proposed POI to interconnect the proposed energy facility to the grid. The proposed 115 kV transmission line would be supported by approximately 27 steel monopoles ranging from 70 to 135 feet in height, spaced approximately 400 feet apart.

A new, permanent 2.1-mile long, 10-foot wide unimproved private service road would be constructed within the existing 100-foot wide transmission line easement to provide access from the proposed energy facility to the proposed 115 kV transmission line during construction and operation.[25]

[25] BSEAPPDoc71. ASC Exhibit K, p. K-31. 2017-09-01.

Point of Interconnection

The proposed POI would consist of a line tap where the proposed 115 kV transmission line would intersect with the existing Bonneville Power Administration (BPA) Boardman-Alkali 115 kV transmission line. The line tap would include three 115 kV disconnect switches on poles in approximately 10,000 square feet of unfenced land, just north of the Boardman-Alkali line.

Operations and Maintenance Building

The proposed O&M building would be located in the southeastern side of the proposed site boundary and would be within a 10,000 square foot area just inside the main access gate. The proposed O&M building would consist of a single story, approximately 3,000 square foot structure, which would include an office space, a high bay warehouse area, storage, bathroom, and a breakroom. Water would be supplied either by an on-site well (providing no more than 5,000 gallons per day), or aboveground water tanks if the water supply is brought in from offsite. The bathroom, kitchen and utility sink would drain into an on-site septic system. An equipment storage area and a gravel parking lot providing parking for employees, visitors, and emergency response vehicles would be located adjacent to the building.

Private Access Road

Proposed private access roads include approximately 1,500 feet of upgraded or newly constructed road to provide access to the proposed facility. Approximately 600 feet of an existing 8-foot-wide dirt road, extending off of existing Threemile Canyon Road, would be upgraded and approximately 900 feet, extending from the upgraded dirt road section to the proposed facility main access gate, would be newly constructed.

Service Roads, Gates and Security Fence

Proposed service roads would generally be 20 feet wide, with an internal turning radius of 28 feet and less than 10 percent grade. The proposed service roads would be located throughout areas within the site boundary to provide vehicle and equipment access during construction and operation. A proposed perimeter service road would be constructed around the perimeter of the proposed facility and would be 50-feet wide.

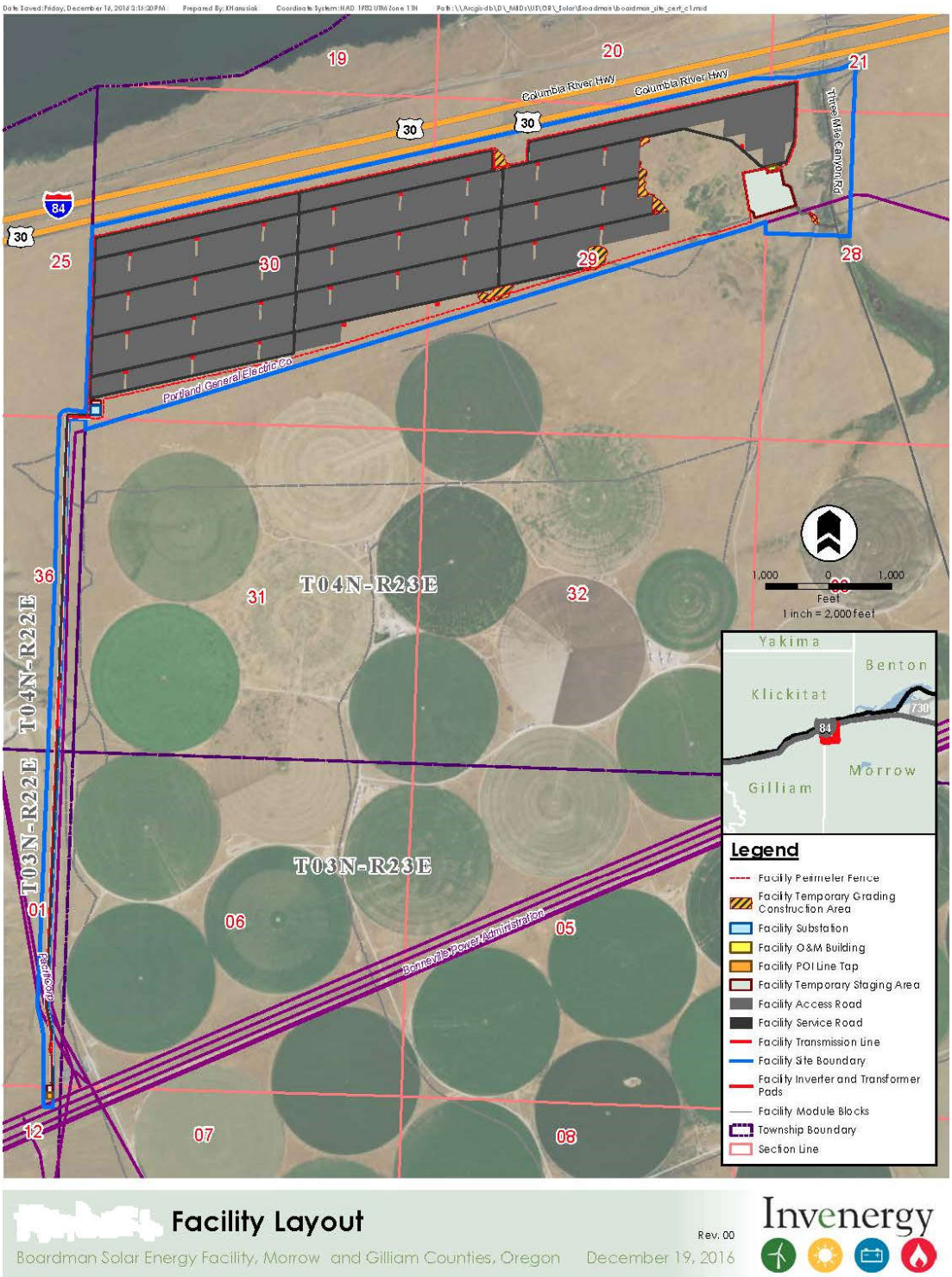
The proposed perimeter service road would be bordered by a proposed 7-foot high chain-link security fence. There would be two locked security entrance gates in the fence – one where the access road meets the proposed energy facility in the southeast corner, and one where the proposed 115 kV transmission line meets the proposed substation in the southwest corner.

Additional Temporary Construction Yards

Additional temporary construction yards would be located south of the proposed O&M building and along the access road, within an approximately 10-acre main area. The proposed temporary construction yards would be graded with a gravel surface, with temporary fencing. The proposed temporary construction yards would be used to store supplies and equipment.

There would also be a 10,000 square foot temporary staging area for the proposed facility substation and a 10,000 square foot temporary staging area for the POI line tap.

Figure 2: Proposed Facility Layout



IV. EVALUATION OF COUNCIL STANDARDS

As discussed above, ORS 469.320 requires a site certificate from the Council before construction of a "facility." ORS 469.300(14) defines "facility" as an "energy facility together with any related or supporting facilities." The proposed Boardman Solar Energy Facility qualifies as an "energy facility" under the definition in ORS 469.300(11)(a)(D)(ii) because it is a solar photovoltaic power generation facility that would use more than 100 acres of land that is not cultivated, but predominately composed of soils that are in capability classes III and IV.[26,27]

To issue a site certificate for a proposed facility, the Council must determine that "the facility complies with the applicable standards adopted by the council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh any adverse effects on a resource or interest protected by the applicable standards that the facility does not meet."[28] The Council must also determine that the proposed facility complies with all other applicable Oregon statutes and administrative rules, as identified in the project order, excluding requirements governing design or operational issues that do not relate to siting and excluding compliance with requirements of federally-delegated programs.[29,30] Nevertheless, the Council may consider these programs when assessing compliance with its own standards and other applicable rules.[31]

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

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[26] ORS 469.300(11)(a)(D)(i) defines an energy facility subject to Council jurisdiction as a solar photovoltaic power generation facility that would use more than 100 acres located on high-value farmland as defined in ORS 195.300. As discussed Section IV.E., *Land Use* of this order, the proposed facility would be located partially on high-value farmland because it is located in the Columbia Valley American Viticulture Area (AVA) and portions of the topography in the site boundary meet the elevation, slope, and aspect requirements of ORS 195.300(10)(f)(C); however, based on the Department's evaluation, it is unclear if the proposed energy facility would use more than 100 acres of high-value farmland as defined in ORS 195.300(10)(f)(C). However, as discussed in this section, the proposed facility is subject to Council jurisdiction under ORS 469.300(11)(a)(D)(ii). See also Footnote 4 of this proposed order.

[27] The definitions contained in ORS 469.300 and OAR 345-001-0010 apply to terms used in this proposed order.

[28] ORS 469.503(1).

[29] As stated above, such matters include design-specific construction or operation standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.

[30] ORS 469.401(4); ORS 469.503(3).

[31] The Council does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate. However, the Council may rely on the determinations of compliance and the conditions in the permits issued by these state agencies and local governments in deciding whether the facility meets other standards and requirements under its jurisdiction.

the 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."[32] The Council implements this statutory framework by adopting findings of fact, conclusions of law, and conditions of approval concerning the proposed facility's compliance with the Council's Standards for Siting Facilities at OAR 345, Divisions 22, 24, 26, and 27.

This proposed order includes the Department's initial analysis of whether the proposed facility meets each applicable Council Standard (with mitigation and subject to compliance with recommended conditions, as applicable), based on the information in the record. This proposed order also includes the Department's consideration of the comments and additional evidence received on the record of the draft proposed order.

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

> *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:*
>
> > *(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);*
> >
> > *(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.*
> >
> > ** * **
>
> *(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with 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*

[32] ORS 469.401(2).

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 complies with the requirements of EFSC statutes and the siting standards adopted by the Council and that the facility complies with all other Oregon statutes and administrative rules applicable to the issuance of a site certificate for the proposed facility, as identified in the project order.

In this proposed order, the Department recommends findings of fact and conclusions of law based on a staff evaluation of the proposed facility's compliance with all statutes, administrative rules and ordinances applicable to the issuance of this site certificate. As discussed above, the Department consulted with other agencies during review of the ASC to aid in the evaluation of the proposed facility's compliance with statutes, rules and ordinances otherwise administered by other agencies.[33] Additionally, the Department relied upon the reviewing agencies' special expertise in evaluating the proposed facility's compliance with the requirements of the Council's standards.

OAR 345-022-0000(2) and (3) apply to ASCs where an applicant has shown that the proposed facility 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 Applicant does not assert that the proposed facility 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]

Under OAR 345-015-0085(8), the site certificate is effective upon execution by the Council and the applicant. ORS 469.370(12) requires the Council to "specify in the site certificate a date by which construction of the facility must begin." ORS 469.401(2) requires that the site certificate contain a condition "for the time for completion of construction." Under OAR 345-027-0013[34], in order to avoid expiration of the site certificate, the certificate holder must begin construction

[33] The Applicant requested, and the Department concurred, that the ASC could be processed under expedited review. Therefore, the NOI process is not applicable and reviewing agencies were first consulted following receipt of the pASC.

[34] The draft proposed order referenced OAR 345-027-0000; however, based on a Council decision in October 2017 to reorganize the OAR 345, Division 27 rules, the correct rule reference here is OAR 345-027-0013.

of the facility no later than the construction beginning date specified by Council in the site certificate. "Construction" is defined in ORS 469.300(6) to mean "work performed on a site, excluding surveying, exploration or other activities to define or characterize the site, the cost of which exceeds $250,000." OAR 345-010-0010(12) adopts the statutory definition.

The Applicant proposes to begin construction of the proposed facility by October 1, 2018 and to complete construction by December 31, 2019. As proposed, the construction phase of the proposed facility would occur over a 15 month period.[35] However, based on the Department's experience with large energy facilities, a number of unforeseen factors can cause delays to a facility's construction commencement and completion timelines, such as financial, economic, or technological changes. In addition, the Council has decided during its review of previous energy facility ASCs that an applicant should have up to three years to commence construction, and no more than six years to complete construction from the effective date of a site certificate execution. The Department's recommendation takes these factors into consideration, and balances it against the need to establish a reasonable timeline for other reasons, such as the fact that Council standards are subject to change in the future. Therefore, the Department recommends that the Council set a three year deadline after the issuance of the site certificate for the Applicant to begin construction, and a three year deadline after construction commencement for the Applicant to complete construction.

Accordingly, and in compliance with OAR 345-025-0006(4), the Department recommends that the Council adopt the following condition:[36]

> **General Standard Condition 1 [OAR 345-025-0006(4)]:** The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.
> (a) Facility construction shall commence within three years after the site certificate is executed by the Council Chair. Within 7 days of construction commencement, the certificate holder shall provide the Department written verification that it has met the construction commencement deadline. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before 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.

[35] BSEAPPDoc71. ASC Exhibit B, p. B-7. 2017-09-01.
[36] The draft proposed order referenced OAR 345-027-0020(4); however, based on a Council decision in October 2017 to reorganize the OAR 345, Division 27 and Division 25 rules, the correct rule reference here is OAR 345-025-0006(4).

(b) Construction of all facility components shall be completed within three years after construction commencement. Within 7 days of construction completion, the certificate holder shall provide the Department written verification that it has met the construction completion deadline.

Mandatory Conditions in Site Certificates [OAR 345-025-0006][37]

OAR 345-025-0006 lists certain conditions that the Council must adopt in every site certificate. Some mandatory conditions directly implement a Council standard and are therefore applied in this proposed order within the discussion of the relevant standard. In addition, pursuant to OAR 345-025-0006(10), the Council shall include as conditions in the site certificate all representations in the ASC and supporting record the Council deems to be binding commitments made by the Applicant, as necessary to avoid or minimize a potential impact.[38] Mandatory conditions that are not otherwise addressed in the evaluation of compliance with specific standards are discussed below, in the context of the Council's General Standard of Review. As provided in OAR 345-025-0006(1), "the Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27."

The following are mandatory conditions required pursuant to OAR 345-025-0006:[39,40]

Mandatory Condition 1 [OAR 345-025-0006(2)]: The certificate holder shall submit a legal description of the site to the Oregon Department of Energy and the Morrow County Planning Department within 90 days after beginning operation of the facility.

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[37] Based on a Council decision in October 2017 to reorganize the OAR 345, Division 27 and Division 25 rules, the correct reference to the Council's Mandatory Conditions is to OAR 345, Division 25. See also footnotes 35 and 37.
[38] Applicant representations deemed necessary to satisfy an applicable standard are included in the appropriate corresponding section of this proposed order.
[39] The language of Mandatory Condition 3 is based upon the language of OAR 345-025-0006(5), but was modified to exclude specific reference to pipelines and wind energy facilities because the proposed energy facility does not include pipelines or wind energy components. The mandatory condition language of OAR 345-025-0006(10) was not included as a recommended condition because it provides direction to Council to impose as site certificate conditions applicant representations. The Department recommends that Council conclude that while the condition is established as a mandatory condition, that it is necessarily the intent of the mandatory condition (not the specific language of the condition) that should be imposed as a site certificate condition. As described in the findings of this proposed order, as necessary and appropriate, the Department recommends Council impose as conditions those applicant representations necessary to demonstrate compliance with an applicable rule, standard or other requirement.
[40] In a comment on the record of the public hearing, the Morrow County Special Advisory Group requested modifications to recommended Mandatory Conditions 1 and 5 to require the certificate holder to provide Morrow County Planning Department with a legal description of the site, and to require that the certificate holder dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility in accordance with Morrow County's Solid Waste Management Plan. BSEAPPDoc81 DPO SAG Comment Morrow County 2017-12-13. The Department agrees with the County's request and has updated the conditions from the draft proposed order to this proposed order accordingly.

The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.

Mandatory Condition 2 [OAR 345-025-0006(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.

Mandatory Condition 3 [OAR 345-025-0006(5)]: Except as necessary for the initial survey or as otherwise allowed for transmission lines 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 the transmission line associated with the energy facility 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 the certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line occurs during the certificate holder's negotiations to acquire construction rights on another part of the site.

Mandatory Condition 4 [OAR 345-025-0006(6)]: 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.

Mandatory Condition 5 [OAR 345-025-0006(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 in accordance with the applicable site certificate provisions and the Morrow County Solid Waste Management Plan.

Mandatory Condition 6 [OAR 345-025-0006(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 subsidence.

Mandatory Condition 7 [OAR 345-025-0006(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 to propose and implement corrective or mitigation actions.

Mandatory Condition 8 [OAR 345-025-0006(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.

Mandatory Condition 9 [OAR 345-025-0006(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.

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.[41]

[41] Site-Specific Conditions at OAR 345-025-0010(1)-(3), and (6)-(7) do not apply to the proposed facility based on facility energy source/type (solar photovoltaic power generation facility with related and supporting facilities including a proposed 115 kV transmission line).

Because the proposed facility includes a 115 kV transmission line, the Department recommends the Council adopt the following site specific conditions:[42]

> **Site Specific Condition 1 [OAR 345-025-0010(4)]:** Because the facility includes a transmission line as a related or supporting facility under Council jurisdiction, the following conditions apply:
>
> (a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011 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.
>
> **Site Specific Condition 2 [OAR 345-025-0010(5)]:** The certificate holder is authorized to construct the 2.1 mile 115 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor extends the 2.1 mile length of the 115 kV transmission line route and is as described in ASC Exhibit B, Section B.4.2 and as presented on Figure 1 of the Site Certificate.

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 site certificate and the certificate holder must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.[43]

[42] Based on a Council decision in October 2017 to reorganize the OAR 345, Division 27 and Division 25 rules, the correct reference to the Council's Site Specific Conditions is to OAR 345, Division 25.
[43] Applicable rule requirements established in OAR Chapter 345, Division 26 include OAR 345-026-0005 to OAR 345-026-0170.

The Department recommends that the Council adopt the following condition to support the Department's review of ongoing site certificate compliance, in accordance with OAR Chapter 345, Division 26:[44]

> **General Standard Condition 2:** At least 90 days prior to beginning construction (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department and the Morrow County Planning Department a compliance plan documenting and demonstrating actions completed or to be completed to satisfy the requirements of all site certificate terms and conditions and applicable statutes and rules. The plan shall be provided to the Department for review and compliance determination for each requirement. The Department may request additional information or evaluation deemed necessary to demonstrate compliance.

Conclusions of Law

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

IV.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*

[44] In a comment on the record of the public hearing, the Morrow County Special Advisory Group requested modifications to recommended General Standard Condition 2 to require the certificate holder to provide Morrow County Planning Department with the compliance plan. BSEAPPDoc81 DPO SAG Comment Morrow County 2017-12-13. The Department agrees with this request and has updated the condition from the draft proposed order to this proposed order accordingly.

an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.

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

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

Findings of Fact

Subsections (1) and (2) of the Council's Organizational Expertise standard require that the applicant demonstrate its ability to design, construct, and operate the facility in compliance with Council standards and all site certificate conditions, as well as its ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant'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 the applicant's reliance upon third party permits.

To demonstrate compliance with the Council's Organizational Expertise standard, the Applicant provided evidence regarding the Applicant's experience and organizational expertise to construct, operate and retire the facility in ASC Exhibit A (Applicant Information); Exhibit D (Applicant's Organizational, Managerial, and Technical Expertise); Exhibit E (Permits Required for Construction and Operation); Exhibit M (Financial Assurance); and Exhibit W (Retirement and Restoration).

Construction, Operation and Retirement of the Proposed Facility

The Applicant (Boardman Solar Energy LLC), a wholly owned subsidiary of Invenergy Solar Development LLC, relies upon the organizational expertise of its parent company, Invenergy LLC (Invenergy) to demonstrate compliance with the Organizational Expertise standard.[45] To demonstrate its organizational expertise, the Applicant described Invenergy's past performance in constructing and operating solar projects in North America, including two solar projects in Canada, and five in the United States.[46] As presented in ASC Exhibit D, key personnel that worked on the 50 MW Luning Solar Project will be the development, permitting, transmission, interconnection, energy marketing, finance, engineering, project construction, and operations and maintenance staff for the proposed facility. The Applicant states that the senior executives have worked together for over two decades, and that each member has more than 25 years of experience in the energy generation industry.[47] The Applicant reports that neither the Applicant nor its parent company have received any complaints or citations in connection with the development, construction, or operation of any solar projects.[48] Additionally, the Applicant states that Invenergy has developed over 68 wind projects in North American and Europe, totaling 7,654 MW.[49]

While the Applicant has not selected an architect, engineer, prime contractor, or a major component vendor for the proposed facility, the Applicant states in ASC Exhibit D that it would rely upon its parent company's previous industry experience and extensive relationships with several civil and electrical engineers, solar module and racking manufacturers, and construction contractors to select qualified partners with experience in the solar industry.[50] Because the ultimate responsibility for compliance with the site certificate would lie with the certificate holder, but it is recognized that the certificate holder would hire various contractors to design and build components of the proposed facility, the Department recommends that Council adopt the following conditions that clarify and confirm that the responsibility of compliance with the site certificate would be with the certificate holder.

Organizational Expertise Condition 1: During design, construction, operation, and retirement, the certificate holder shall contractually require all contractors and subcontractors to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. The contractual obligation shall be required of each contractor and subcontractor prior to that firm working on the facility. Such contractual

[45] Invenergy LLC is an independently owned company that develops, owns, and operates power generation and energy storage facilities across North America and Europe.
[46] BSEAPPDoc71. ASC Exhibit D, p. D-1. 2017-09-01.
[47] BSEAPPDoc71. ASC Exhibit D, p. D-2. 2017-09-01.
[48] BSEAPPDoc71. ASC Exhibit D, p. D-3. 2017-09-01.
[49] BSEAPPDoc71. ASC Exhibit D, p. D-1. 2017-09-01.
[50] BSEAPPDoc71. ASC Exhibit D, p. D-3. 2017-09-01.

provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.

Organizational Expertise Condition 2: Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder.

Organizational Expertise Condition 3: In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the Department.

Because the Applicant relies on mitigation to meet the Council's Fish and Wildlife Habitat standard, in ASC Exhibit D, the Applicant discusses its parent company's experience designing habitat mitigation projects for the Willow Creek Wind Project and the Luning Solar Energy Facility. The Applicant describes Invenergy's experience working with its consultant, Northwest Wildlife Consultants, to design and prepare a habitat mitigation plan for the Willow Creek Wind Project for a parcel within the Olex Conservation Opportunity Area in Gilliam County. In Attachment C of this proposed order (Draft Habitat Mitigation Plan), the Applicant proposes a habitat mitigation area that would be located within the same conservation opportunity area for which the Applicant, together with its consultant, have previous experience designing a habitat mitigation plan, securing a conservation easement, and managing the parcel for native habitat conservation and protection of regionally important biological diversity.[51]

The Applicant's ability to retire the proposed facility and to restore the site to a useful, nonhazardous condition is evaluated in Section IV.G, *Retirement and Financial Assurance*, of this order.[52] In addition, the Applicant's ability to construct and operate the proposed facility in a manner that protects public health and safety is addressed in Section IV.C, *Structural Standard*; Section IV.M, *Public Services;* and Section IV.Q, *Siting Standards for Transmission Lines*, of this order.

[51] Proposed order Attachment C Draft Habitat Mitigation Plan, p. 5.

[52] The Department recommends the Council find that the Applicant would satisfy the requirements of the Retirement and Financial Assurance standard subject to compliance with recommended conditions.

ISO 900 or ISO 14000 Certified Program

OAR 345-022-0010(2) is not applicable because the Applicant is not proposing to design, construct or operate the proposed facility according to an ISO 9000 or ISO 14000 certified program.[53]

Third-Party Permits

The Applicant identified one local permit and four state permits that may be required for construction and operation of the proposed facility which are not included in or governed by the site certificate, and would be obtained by third-party contractors.[54] These permits are listed in ASC Exhibit E, and include a permit for an on-site sewage septic tank, an oversized load permit from Oregon Department of Transportation (ODOT) for transporting oversized materials on state highways, a conditional use permit and General Water Pollution Control Facilities Permit (WPCF- 1000) related to a potential temporary concrete batch plant that would possibly be used during construction, and a potential General Water Pollution Control Facilities Permit (WPCF 1700-B) for washwater discharge if solar module washing is necessary during operation.

The Oregon Department of Environmental Quality commented on the complete ASC that the Applicant's understanding (stated in ASC Exhibit V) that the wash water generated by periodically washing down equipment within the O&M building could be disposed of using the proposed onsite septic system and drain field is incorrect. The agency stated that equipment wash water is not permitted to be discharged to the domestic drain field. However, this wash water may be able to be permitted and disposed under the same WPCF 1700-B wash water permit the Applicant acknowledges it would need if it elects to wash the solar modules during operations.[55]

As described above, the Applicant has not selected its contractors for construction and operation of the proposed facility. The Applicant, however, describes that only a qualified contractor (or contractors) with the ability to demonstrate a reasonable likelihood of securing the required third-party permits would be selected.[56] Under OAR 345-022-0010(4), if the third party contractor does not have the necessary permits at the time of the Council action on the ASC, the Council may issue a site certificate "subject to the condition that the certificate holder shall not commence construction…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."

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[53] BSEAPPDoc71. ASC Exhibit D, p. D-3. 2017-09-01.
[54] BSEAPPDoc71. ASC Exhibit E, pp. E-7 and E-8. 2017-09-01.
[55] BSEAPPDoc64 Complete ASC Reviewing Agency Comment DEQ Nadler 2017-09-14.
[56] BSEAPPDoc71. ASC Exhibit E, pp. E-7 and E-8. 2017-09-01.

The permit for an on-site sewage septic tank and the oversized load permit that may be necessary and secured by third-party contractors, discussed above and in ASC Exhibit E, are mostly ministerial and non-discretionary. However, while outside EFSC jurisdiction, the conditional use permit and WPCF-1000 Permit related to a potential temporary concrete batch plant, and a WPCF-1700-B Permit for washwater discharge for maintenance equipment washdown (as well as solar module washing if the Applicant elects to wash the modules during operations) would be subject to the discretion and conditions of Morrow County and Oregon Department of Environmental Quality. In accordance with OAR 345-022-0010(4), to validate that the Applicant's third-party contractor has secured the above-referenced necessary permits and that the Applicant has a contract or other arrangement for access to the resource or service secured by the permit, the Department recommends that the Council adopt the following condition:

Organizational Expertise Condition 4:

(a) At least 30 days prior to construction, the certificate holder shall provide to the Department the following:
   1. Written confirmation that its third-party contractors have obtained all necessary local and state permits for the temporary concrete batch plant, if required during facility construction, and wastewater discharge. These permits are expected to include a Conditional Use Permit for Temporary Concrete Batch Plant from Morrow County and a General Water Pollution Control Facilities Permit for Temporary Concrete Batch Plant concrete washout water from Oregon Department of Environmental Quality.
   2. Proof of agreements between the certificate holder and the third-party regarding access to the resources or services secured by the permits or approvals identified prior to construction per sub(a) above.

(b) During operation, provide written confirmation that its third-party contractors have obtained a General Water Pollution Control Facilities Permit for washwater discharge from maintenance equipment washdown (as well as from solar module cleaning, if solar panel washing will occur) from Oregon Department of Environmental Quality and proof of an agreement between the certificate holder and the third-party for access to the service secured by the permit.

For the reasons discussed in the above section, and subject to compliance with the recommended conditions included in the this section, the Department recommends that Council 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.

Conclusions of Law

Based on the evidence in the record, and subject to compliance with the recommended conditions of approval, the Department recommends that the Council find that the Applicant would satisfy the requirements of the Council's Organizational Expertise standard.

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

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

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

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

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

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

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

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

Findings of Fact

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

facility to avoid dangers to human safety and the environment from these hazards.[57] Pursuant to OAR 345-022-0020(2), the Council may not impose the Structural Standard in OAR 345-022-0020(1) to approve or deny application for a solar energy facility; however, the Council may apply the requirements of the standard to impose site certificate conditions. Under the mandatory condition in OAR 345-025-0006(12), the certificate holder must 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.[58]

As established in the project order, the analysis area for the Structural Standard is the area within the site boundary. "Site boundary," as defined in OAR 345-001-0010(55), is the area within the perimeter of the proposed facility, its related or supporting facilities, all temporary laydown and staging areas, and all micrositing corridors proposed by the applicant."

The Applicant provided information regarding the seismic characteristics of the site and an assessment of seismic and geologic hazards and other requirements of the Structural Standard in ASC Exhibit H. In addition, as required under OAR 345-021-0010(1)(h)(C), the Applicant has committed to conducting additional subsurface explorations to confirm the anticipated soil conditions and provide final design recommendations.[59] To ensure compliance with these required commitments, the Department recommends that the Council adopt the following condition, requiring that the Applicant conduct the site-specific pre-construction final design geotechnical investigation, in consultation with the Department and the Oregon Department of Geology and Mineral Industries (DOGAMI):

> **Structural Standard Condition 1:** At least 90-days prior to construction, unless otherwise agreed to by the Department, the certificate holder shall submit to the Department and DOGAMI a pre-construction site-specific geological and geotechnical investigation report (report), for review and concurrence that the facility site has been adequately characterized and the facility has been designed to avoid seismic, soil and geologic hazards. The report shall at a minimum include:
> (a) Review of available data from previous geotechnical explorations in the vicinity of the facility site.
> (b) Review of available geologic information from published sources.

[57] OAR 345-022-0020(3) does not apply to this proposed facility because the facility is a not a special criteria facility under OAR 345-015-0310.

[58] The Council does not preempt the jurisdiction of any state or local government over matters related to building code compliance.

[59] BSEAPPDoc71. ASC Exhibit H, H.3.3. A Council rulemaking affecting OAR 345-021-0010(1)(h) went into effect on October 18, 2017. Because the Applicant filed the complete ASC prior to that date, some of the references in ASC Exhibit H to specific portions of OAR 345-021-0010(1)(h) are not consistent with the updated rules. The Department uses the updated rule references in this proposed order.

(c) Discussion of geotechnical field exploration conducted within the site boundary, including soil borings, test pits, infiltration tests, and if necessary, geophysical testing.
(d) Discussion of additional soil samples collected for classification and, if necessary, laboratory testing.
(e) Calculation of the bearing capacity of the soils.
(f) Stability analyses.
(g) Engineering recommendations for construction of the structures.
(h) Determination of the final site class(es) at the locations where facility components would be constructed.

The Applicant states that the proposed facility would be designed to meet or exceed the minimum standards required by the current International Building Code (IBC) as modified by the current Oregon Structural Specialty Code (OSSC) and local agencies.[60] Designing the proposed facility to the current versions of these codes would support meeting the Structural Standard. As such, based on the Applicant's commitment, the Department recommends the Council adopt the following condition, which requires the certificate holder to design the facility in accordance with the versions of the IBC, OSSC, and local building codes in effect at the time of construction:

> **Structural Standard Condition 2:** The certificate holder shall design, engineer, and construct the facility in accordance with the versions of the International Building Code, Oregon Structural Specialty Code, and local building codes in effect at the time of construction.

In a comment on the complete ASC, DOGAMI stated that the agency found the information in ASC Exhibit H to be adequate.[61] Following a Council decision to amend rule language [including the ASC Exhibit H requirements in OAR 345-021-0010(1)(h)], DOGAMI stated that the agency did not have any concerns related to the new OAR 345-021-0010(1)(h) information requirements for an evaluation of the proposed facility's disaster resiliency and of climate change impacts on the proposed facility.[62] The Department provides the following assessment of each of the Structural Standard requirements.[63]

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[60] BSEAPPDoc71. ASC Exhibit H, p. H-13 and H-15. 2017-09-01.
[61] BSEAPPDoc62. Complete ASC Reviewing Agency Comment DOGAMI Wang 2017-09-11.
[62] At its September 21-22, 2017 meeting, the Council approved amended language for OAR 345-021-0010(1)(h), OAR 345-022-0020, OAR 345-027-0020, and OAR 345-050-0060. The new rules went into effect on October 18, 2017.
[63] As noted previously, EFSC recently completed a rulemaking related to Exhibit H and the Structural Standard. The Department's assessment in this proposed order is based upon the updated rule language.

OAR 345-022-0020(1)(a): The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site;

OAR 345-022-0020(1)(a) requires the certificate holder to adequately characterize the seismic hazard risk of the site. ASC Exhibit H describes the geologic setting of the analysis area, which generally consists of basalt bedrock with a discontinuous surficial layer of windblown loess deposits. The potential seismic hazards in the vicinity of the facility site result from three seismic sources: Cascadia Subduction Zone (CSZ) interplate events, CSZ intraslab events, and crustal events.[64]

The Applicant explains in ASC Exhibit H that new construction should be designed for the maximum considered earthquake (MCE), according to the IBC and as amended by the OSSC.[65] The MCE has a 2-percent probability of exceedance in 50 years (or an approximately 2,475-year return period) and would have a peak ground acceleration (PGA) of 0.18g at the bedrock surface in the analysis area.[66] This value of PGA on rock is an average representation of the acceleration for all potential seismic sources (crustal, intraplate, or subduction).[67]

As stated in ASC Exhibit H, the Applicant developed seismic design parameters in accordance with the IBC, and based on existing subsurface information would design the facility for Site Class B (rock profile).[68] By designing the proposed facility to the IBC and OSSC guidelines for Site Class B, the proposed facility would be designed for no life-threatening structural damage from either the vibrational response of the structure or from secondary hazards associated with ground movement or failure (such as landslides, lateral spreading, liquefaction, fault displacement, or subsidence) in the event of the MCE. The Applicant states that it is generally assumed that if significant structural damage can be prevented, the risk to human safety would be minimal.[69]

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[64] BSEAPPDoc71. ASC Exhibit H, p. H-6. 2017-09-01.
[65] The Applicant performed the ASC Exhibit H analysis in accordance with the current building code requirements (current as of both the date of filing the complete ASC and release of this Order) contained in the 2014 OSSC.
[66] BSEAPPDoc71. ASC Exhibit H, Section H.6.1. The Department notes that ASC Exhibit H, Table H-1, states that the PGA is 0.19g. The Applicant informed the Department that the slight discrepancy is due to differences between the building code design convention and USGS seismic hazard mapping tool results. 2017-09-01. BSEAPPDoc53. Structural Standard and Exhibit H information clarification 2017-07-26.
[67] BSEAPPDoc71. ASC Exhibit H, p. H-5. 2017-09-01.
[68] BSEAPPDoc71. ASC Exhibit H, p. H-9. The Applicant states that once site-specific geotechnical subsurface information is collected, the actual site class determination may improve or worsen. 2017-09-01.
[69] BSEAPPDoc71. ASC Exhibit H, H-9. 2017-09-01.

ASC Exhibit H, Section H.6 contains the Applicant's assessment of potential earthquakes and seismic activity in the vicinity of the proposed site boundary. As described, potential seismic hazards in the vicinity of the proposed site boundary include three types of earthquakes: crustal, intraslab, and interplate events. Of these, the CSZ interplate events have the potential to produce the largest magnitude earthquake, up to 9.0 magnitude. The other types of earthquakes can be expected to produce up to 7.2 magnitude (see ASC Exhibit H, Table H-3). The Applicant's assessment shows that the maximum probable earthquake (a 10 percent chance of exceedance in 50 years, or a 475-year nominal recurrence interval) is the 9.0 magnitude CSZ interplate event. However, as shown in ASC Exhibit H Tables H-1 and H-3, the epicentral distance of such an event is approximately 192 miles from the site boundary and the corresponding PGA is 0.08g. The probabilistic seismic hazard analysis for the maximum considered earthquake (a two-percent probability of exceedance in 50 years or a 2,475-year nominal recurrence period), as conducted by the Applicant, results in an expected 6.0 magnitude earthquake with a 9 mile epicentral distance from the site boundary and a PGA of 0.19g.[70]

> *OAR 345-022-0020(1)(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);*

ASC Exhibit H contains a discussion of the seismic hazards with the potential to affect the proposed facility as well as the Applicant's proposed mitigation measures.

Fault Displacement

The Applicant states in ASC Exhibit H that no potentially active faults have been mapped within the site boundary.[71] In their May 2017 email, DOGAMI stated that, with regards to the proposed facility location, there are no specific faults or earthquake sources of DOGAMI has concern.[72] As such, fault rupture would not be considered a significant hazard to the proposed facility.

Ground Shaking

The greatest historical event known for the analysis area is the 1700 Cascadia megathrust earthquake, which caused Modified Mercalli Intensity (MMI) V shaking in the analysis area. The

[70] BSEAPPDoc53. Structural Standard and Exhibit H information clarification 2017-07-26.
[71] BSEAPPDoc71. ASC Exhibit H, p. H-7. 2017-09-01.
[72] BSEAPPDoc47 DOGAMI Wang review of pASC Exhibit H 2017-05-12.

Applicant states that MMI and MMI V intensity shaking are not anticipated to cause significant damage to the proposed facility components, and quotes in part the United States Geologic Service (USGS) description of the MMI V shaking, which is "felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop."[73] MMI III intensity shaking, which is associated with shaking that is "felt quite noticeably by persons indoors" and "many people do not recognize is an earthquake," is the predominant level of ground shaking anticipated within the analysis area based on the historical record. The Applicant states that little or no structural damage is anticipated from MMI III intensity shaking, and proposed facility components would be designed for the seismic potential of the area.[74]

As described in Section IV.A, *General Standard of Review,* Mandatory Condition 6 requires the certificate holder to 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 probably seismic events [OAR 345-025-0006(12)]. Additionally, Mandatory Condition 7 requires the certificate holder to notify the Department, the state building codes division, and DOGAMI promptly if site investigations or trenching reveal that conditions of foundation rocks differ significantly from those described in the ASC; if so, additional consultation and mitigation may be required [OAR 345-025-0006(13)]. Finally, as previously discussed in this proposed order, the Department recommends that the Council adopt Structural Standard Condition 2, which would require the certificate holder to design, engineer, and construct the facility in accordance with the versions of the IBC, OSSC, and local building codes in effect at the time of construction.

Liquefaction

The Applicant states that liquefaction potential at the site is estimated to be nonexistent due to relatively low ground-shaking potential within the site boundary and a lack of groundwater and saturated sediments.[75]

Landslides

The Applicant states that moderate landslide susceptibility is indicated along the slopes of Threemile Canyon and the Willow Creek drainage, but that field reconnaissance confirmed the lack of landslide terrain within the site boundary. The risk of landslides within the site boundary

[73] BSEAPPDoc71. ASC Exhibit H, p. H-8. 2017-09-01. BSEAPPDoc48. USGS webpage The Modified Mercalli Intensity Scale. 2017-07-12.
[74] BSEAPPDoc71. ASC, Exhibit H, p. H-10. 2017-09-01. BSEAPPDoc48 USGS webpage The Modified Mercalli Intensity Scale. 2017-07-12.
[75] BSEAPPDoc71. ASC Exhibit H, p. H-10. 2017-09-01.

is anticipated to be low due to the flat terrain of the site (generally less than five percent) and shallow, stable bedrock.[76] The Applicant commits to constructing the solar modules, road, and transmission line poles in flat-lying areas, and as such, the risk of landslide hazard to the proposed facility is low.[77]

Based on the evidence provided, and subject to compliance with the recommended conditions referenced above, the Department recommends the Council conclude that the Applicant can design, engineer, and construct the proposed facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site.

> *OAR 345-022-0020(1)(c) and (d): (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).*

The Applicant characterizes the potential non-seismic geologic and soil-related hazards that could affect the proposed facility in ASC Exhibit H. The hazards considered include landslides, volcanic activity, soil erosion, and soil collapse or piping soils. Based upon the list of mitigation measures for non-seismic hazards provided by the Applicant in ASC Exhibit H, Section H.9, the Department recommends the Council adopt the following condition:

> **Structural Standard Condition 3:** The certificate holder shall:
> (a) Prior to construction, design the facility to avoid potential nonseismic hazards.
> (b) Prior to construction, in accordance with Structural Standard Condition 1, conduct subsurface investigations to characterize the soils and use the resulting data to adequately plan and design appropriate mitigation measures.
> (c) Prior to construction, create detailed geologic hazard maps to aid in laying out facilities and provide copies of maps to the Department.
> (d) During design, construction and operation, provide warnings to the Department and DOGAMI in the event a potential or imminent hazard is discovered.
> (e) Prior to operation, provide evidence to the Department that insurance has been obtained that provides coverage of the facility for non-seismic geologic and soil-related hazards.

[76] BSEAPPDoc71. ASC Exhibit H, p. H-10 and H-11. 2017-09-01.
[77] BSEAPPDoc71. ASC Exhibit H, p. H-11 and H-13. 2017-09-01.

Landslides

Landslide hazards are described above, and the Department does not anticipate any differing landslide hazard risk between landslides triggered by seismic and non-seismic events. As described above, the landslide risk to the proposed facility within the site boundary is low.

Volcanic Activity

The closest volcano, Mount Hood, is located approximately 90 miles west of the proposed facility. The Applicant states that no direct or indirect impacts of volcanic activity are expected to occur within the proposed site boundary due to the distance from potentially active volcanoes.[78] The Applicant commits to temporarily shutting down the proposed facility in the event of a volcanic eruption with the potential to damage or affect facility components. Therefore, the Department recommends that the Council adopt the following condition:

> **Structural Standard Condition 4:** In the event of a volcanic eruption that could damage or affect facility components:
> (a) During construction, the certificate holder shall temporarily cease construction activities if necessary to protect equipment and human health.
> (b) During operation, the certificate holder shall shut down the facility until safe operating conditions return.

Soil Erosion

The Applicant states that the potential for wind and water erosion within the proposed site boundary is generally moderate or high.[79] ASC Exhibit I, Section I.4 contains a number of best management practices (BMPs) that would be incorporated by the Applicant to reduce erosion. In addition, construction of the proposed facility is subject to the requirements of a National Pollutant Discharge Elimination System (NPDES) 1200-C stormwater construction permit, as discussed in the Soil Protection standard section of this proposed order. NPDES permits require development and implementation of an erosion and sediment control plan (ESCP) including BMPs for controlling erosion. A draft of the ESCP is included in ASC Exhibit I, Attachment I-1.

Recommended Soil Protection Condition 1 would require the Applicant to conduct all work in compliance with a final ESCP, submitted as part of the NPDES 1200-C permit, and approved by the Oregon Department of Environmental Quality (DEQ). Recommended Soil Protection Condition 2 would require the Applicant to implement an SPCC Plan and Hazardous Materials Spill Prevention Program during operations. Compliance with recommended Soil Protection

[78] BSEAPPDoc71. ASC Exhibit H, p. H-11. 2017-09-01.
[79] BSEAPPDoc71. ASC Exhibit H, p. H-12. 2017-09-01.

Conditions 1 and 2 would reduce potential soil erosion impacts from proposed facility construction and operation.

Collapsing Soils

If the solar modules are supported by steel posts, the posts would be driven into bedrock; alternatively, concrete foundations would be used if soils conditions require it.[80] The transmission line structures would be constructed on flat-lying basalt with a thin or discontinuous cover of loess.[81] The Applicant states that silty soils, including the discontinuous mantle of loess overlying basalt bedrock within the analysis area, are subject to collapsing or piping when wetted, which can have a detrimental effect on structures constructed on these soils. Soil collapse or piping potential is anticipated to be low or nonexistent from construction within the site boundary given that the layer of loess over bedrock is generally very thin or absent.[82] The Applicant has committed to implementing mitigation measures in the event that localized areas of soils with collapsing or settling potential are identified during construction.[83] Therefore, the Department recommends that the Council adopt the following condition:

> **Structural Standard Condition 5:** During construction, if localized areas of soils with collapsing or settling potential are identified, the certificate holder shall overexcavate the soils and replace them with compacted structural fill; place impermeable material around the facility foundations to prevent wetting or saturation; or place the foundations deeper on a stable bearing layer (such as basalt rock).

Based upon the evidence provided, and subject to compliance with recommended conditions referenced above, the Department recommends the Council find that the Applicant has adequately characterized the potential geologic and soil hazards of the facility 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 that the Applicant can design, engineer, and construct the proposed facility to avoid dangers to human safety and the environment presented by the identified hazards.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0020(2), the Department recommends that the Council include the conditions listed above in the site certificate to address the Council's Structural Standard.

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[80] *Id.*
[81] BSEAPPDoc71. ASC Exhibit H, p. H-5. 2017-09-01.
[82] BSEAPPDoc71. ASC, Exhibit H, p. H-12. 2017-09-01.
[83] BSEAPPDoc71. ASC, Exhibit H, p. H-14. 2017-09-01.

IV.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 Applicant's assessment of potential soil impacts and compliance with the Soil Protection standard are included in ASC Exhibit I. Additional information related to the proposed facility's potential effects to soils and proposed mitigation measures, as described by the Applicant, can be found in ASC Exhibit G (Materials Analysis) and Exhibit K (Land Use).

The analysis area for the Soil Protection standard is the area within the site boundary. The Applicant states that of the 798 acres within the site boundary, the proposed facility would result in approximately 486 acres of permanent disturbance, and 59 acres of temporary disturbance (which would be restored after construction).[84] All disturbed land is considered Category 4 habitat.[85]

Existing Soil Conditions and Land Use

Existing soil conditions within the analysis area are described and shown in ASC Exhibit I, specifically in Exhibit I Section I.1 and on the associated figure in that exhibit, Figure I-1. Exhibit I, Table I-1 describes the soils units, including the erosion potential, of the various soil types located within the analysis area. The Applicant classifies soil types using Natural Resources Conservation Service (NRSC) Soil Survey Geographic Database and associated soil surveys for Morrow and Gilliam counties. As stated in Exhibit I, Table I-1, there are four predominant soil types in the proposed site boundary. As noted in Exhibit I, Section I.3.2, the soils types in the proposed site boundary have a moderate to high potential for susceptibility to wind and water erosion, and during construction in particular there is a risk for erosion from both wind and water until soils are stabilized. Mitigation measures to reduce erosion risk are described below in this proposed order.

As described throughout the ASC and this proposed order, the predominant land use within the proposed site boundary is seasonal cattle grazing. The land is not irrigated.

[84] BSEAPPDoc71. ASC Exhibit I, p. I-3. 2017-09-01.
[85] BSEAPPDoc71. ASC Exhibits I and P. 2017-09-01.

Potential Adverse Impacts to Soil

ASC Exhibit I includes the Applicant's assessment of how the proposed facility may impact soils.

Construction

Construction of the proposed facility would permanently disturb approximately 486 acres to account for the footprint of the solar modules and associated related and supporting facilities, and an additional 59 acres would be temporarily disturbed during construction and restored following completion of construction. Construction could also lead to soil erosion from wind or rain, and there would be a risk to soils from spills or leakage of chemicals, petroleum products such as diesel fuel, or other materials.[86] The proposed facility is subject to the requirements of the NPDES 1200-C general stormwater permit, which requires the development and implementation of an ESCP to minimize impacts to soils and the environment. Mitigation measures and recommended site certificate conditions are discussed below.

Operation

The Applicant states that proposed facility operation would have no impact on soil erosion, as operations would be confined to cleared and graveled surfaced areas at the facility, and no additional ground disturbance is anticipated to occur during facility operation that could lead to erosion.[87] The Applicant also states that while it is uncertain of the potential need to wash solar modules during operation, it is conservatively estimated that the modules would be washed up to twice per year. Water used during washing would be allowed to evaporate and seep into the ground in accordance with a General Water Pollution Control Facilities Permit (WPCF) 1700-B, Washwater Discharge from Equipment Cleaning, to be obtained by a third-party contractor prior to conducting washing.[88] As discussed in Section IV.B., *Organizational Expertise* of this order, the Applicant would also need to seek coverage for washwater discharge from maintenance equipment washdown under the WPCF 1700-B permit. The permit would be issued by DEQ and would not be included in or governed by the site certificate.

In addition, as discussed in Section IV.A., *General Standard of Review* of this order, Mandatory Condition 5 requires the Applicant to restore vegetation to the extent practicable and landscape all areas disturbed by construction. Restoration of temporarily impacted areas would further reduce the potential for erosion during facility operation.

The proposed energy facility would include up to 30 transformers, each containing approximately 650 gallons of oil. In addition the GSU-transformer installed in the proposed facility substation would contain approximately 10,000-gallons of transformer oil. The Applicant states that the oil, and all materials, would be stored in accordance with U.S. Environmental Protection Agency and U.S. Occupational Safety and Health requirements, and that a hazardous

[86] BSEAPPDoc71. ASC, Exhibit I, p. 1-3 to I-6, and ASC, Exhibit G, p. G-1 to G-5. 2017-09-01.
[87] BSEAPPDoc71. ASC Exhibit I, p. I-5. 2017-09-01.
[88] BSEAPPDoc71. ASC Exhibit I, p. I-5. 2017-09-01.

materials spill prevention program would be developed and implemented to reduce the risk of material spills. Smaller quantities of other hazardous materials including lubricants and cleaners would also be stored and used onsite during proposed facility operation. Hazardous materials management is further discussed in the mitigation section below.

Measures to Mitigate Potential Adverse Impacts to Soils

Erosion Concerns

As described above and in the ASC, proposed facility construction would result in direct permanent and unavoidable impacts to soils. However, there are a number of measures the Applicant proposes to implement to reduce erosion from both wind and stormwater. Proposed facility construction must be conducted in accordance with an NPDES 1200-C Construction Stormwater Permit, including an associated ESCP. The NPDES 1200-C Construction Stormwater Permit Application and ESCP are included in Exhibit I, Attachment I-1. 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. The NPDES 1200-C permit applies during construction, and is intended to regulate and manage stormwater. The Applicant submitted its NPDES 1200-C permit application, including the ESCP, to DEQ in December 2016. Based on its evaluation of the NPDES permit application and associated ESCP, DEQ notified the Applicant and the Department in January 2017 that DEQ expects to be able to issue the NPDES 1200-C construction stormwater permit for the proposed facility within 30 days of receiving the site certificate and review of the final version of the ESCP.[89]

Compliance with the NPDES 1200-C permit and ESCP, as approved by DEQ, would reduce erosion and soil impacts. The Department recommends that the Council adopt Soil Protection Condition 1, requiring the Applicant to implement all provisions of the NPDES 1200-C permit and the final ESCP, as approved by DEQ:[90]

Soil Protection Condition 1:

(a) Prior to construction, the certificate holder shall obtain a National Pollutant Discharge Elimination System General Permit 1200-C from the Oregon Department of Environmental Quality, and shall provide the Department and Morrow County Planning Director a copy of the DEQ-approved NPDES 1200-C permit.

(b) Prior to construction, the certificate holder shall submit to the Department and Morrow County Planning Director for review and approval a topsoil management

[89] BSEAPPDoc71. ASC Exhibit I, Attachment I-1. 2017-09-01.

[90] Recommended Soil Protection Condition 1(b) is imposed to satisfy the OAR 660-033-0130(38)(f)(B) requirements, which specify that 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 would demonstrate that the proposed energy facility would not "result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property."

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.

(c) During construction, the certificate holder shall conduct all work in compliance with the final Erosion and Sediment Control Plan as approved by DEQ in the NPDES 1200-C permit.

Concerns Related to Spills

During proposed facility construction and operation, hazardous materials would be stored, used and generated onsite. Petroleum and other potentially hazardous materials to be used at the site include diesel or gasoline during construction (up to 500 gallons), lubricating oils (up to 50 gallons during construction and operation), paint (up to 50 gallons during construction), and cleaning solvents (up to 20 gallons during construction and up to 50 gallons during operation).[91] In addition, the proposed facility would use transformer oil in each transformer (approximately 650 gallons) and in the generator step-up transformer (approximately 10,000 gallons) installed at the proposed facility substation.[92]

The Applicant states that it would manage and guard against transformer-related oil spills during proposed facility operation by developing and implementing a Spill Prevention, Control and Countermeasure (SPCC) Plan. The Applicant also proposes to develop and implement a hazardous materials spill prevention (HMSP) program to manage spill risks from other hazardous materials that could spill and impact soils and the environment during construction and operation. While not specifically addressed in ASC Exhibit G or I, the Department assumes that the Applicant's proposed SPCC Plan is required under DEQ's federally-delegated Hazardous Waste Program, and as identified in ASC Exhibit CC per OAR Chapter 340, Division 100-113. An SPCC Plan is required under DEQ's federally-delegated program for facilities that store, transfer, use or consume oil or oil products, in quantities greater than 1,320 gallons; and, in the event of a spill or discharge, could reasonably be expected to discharge oil to navigable waters of the U.S. or adjoining shoreline.

The Council may appropriately consider federally-delegated programs in the context of its own standards to ensure public health and safety, resource efficiency and protection of the environment, and in this instance, ensuring the protection of navigable waters. Because the Applicant proposes to develop and implement an SPCC Plan and, because the quantity of oil to

[91] BSEAPPDoc71. ASC Exhibit G, Tables G-1 and G-2. 2017-09-01.

[92] BSEAPPDoc71. ASC Exhibit B, p. B-2 and p. B-4. 2017-09-01.

be stored onsite (within transformers) during operation exceeds 1,320-gallons and because, in the event of an anticipated spill, oil discharge could reasonably be expected to impact navigable waters of the U.S., the Department recommends that Council adopt the following condition: [93]

> **Soil Protection Condition 2:** Prior to facility construction, the certificate holder shall:
> (a) Submit to the Department its Spill Prevention, Control and Countermeasure (SPCC) Plan for operations, developed to comply with OAR Chapter 340, Division 100-113 and 142.
> (b) Provide evidence that a Hazardous Materials Spill Prevention Program will be implemented during construction and operation, which includes at a minimum training for personnel on proper handling, storing, transporting, and disposing of hazardous materials; hazardous materials storage requirements; and, cleanup procedures.

During proposed facility construction, fuel (diesel or gasoline) would be stored onsite for refueling construction equipment, and would be stored in double-walled tanks.[94] During operation, the generator step-up transformer would be located within a concrete catchment system sized 1.25 times the quantity of oil held inside the transformer, to minimize potential impacts from an unanticipated spill.[95] Moreover, the area where permanent energy facility components would be installed would be graveled or have an otherwise non-combustible base and would be cleared of vegetation. Based upon Applicant representations and compliance with recommended conditions, any potential spill is likely to be limited and contained, and considered unlikely to leave the site boundary.

Other Risks to Soils

The proposed facility would include an O&M building with an onsite septic system to manage sewage waste. As described in ASC Exhibit E, the Applicant or its contractor would obtain the necessary permit for the septic system directly from DEQ or the responsible local agency and therefore would not be included in or governed by the site certificate. However, if not properly installed and managed, a septic system could adversely impact soils. Therefore, the Department recommends the Council adopt the following condition, requiring the Applicant or its contractor to secure necessary septic system permits from DEQ prior to proposed facility construction. The O&M building septic system must be constructed in accordance with the DEQ permit requirements. The Applicant states in ASC Exhibit E that the septic system would have a daily sewage flow of less than 2,500 gallons per day.

> **Soil Protection Condition 3:** Prior to construction of the septic system at the O&M building, the certificate holder shall secure any necessary septic system permits from

[93] BSEAPPDoc71. ASC Exhibit G, p. G-4. 2017-09-01.
[94] BSEAPPDoc71. ASC Exhibit G, p. G-1. 2017-09-01.
[95] BSEAPPDoc71. ASC Exhibit B, p. B-2. 2017-09-01.

DEQ or the responsible local agency, for a septic system designed with a discharge capacity of less than 2,500 gallons per day. The certificate holder shall provide copies of the necessary permits to the Department.

As noted above and described by the Applicant in ASC Exhibit B and Exhibit O, the Applicant may wash the solar modules during facility operation. Water for module washing would be purchased from the City of Boardman. The decision to wash the modules, as stated by the Applicant, depends on the effects of dirt and dust on energy production.[96] If the modules are washed, the Applicant states it would be done with only water and 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. As discussed at the beginning of this section, this process is covered by a WPCF 1700-B permit, which is issued by DEQ and would be secured by the Applicant's third-party contractor outside of the site certificate process.[97] As discussed in Section IV.B., *Organizational Expertise* of this order, the Applicant would also need to seek coverage for washwater discharge from maintenance equipment washdown under the WPCF 1700-B permit. If improperly implemented or managed, it is possible that equipment washing and module washing could adversely affect soils, and as such, the Department recommends the Council impose Organizational Expertise Condition (4)(b), requiring the Applicant provide to the Department a copy of the WPCF 1700-B permit and proof of an agreement to access resources secured by the permit, prior to equipment washing and module washing.

Monitoring Program

The final DEQ-approved ESCP would include regular inspection requirements. As stated in ASC Exhibit I, the inspections would verify that the management practices and measures are in good condition and working as intended. Specific inspection requirements of the ESCP include: inspecting the stabilized construction entrance for tracked sediment, inspecting sediment barrier fences (silt fences) and cleaning and repairing as necessary, completion of an inspection report after each inspection, and implementing an employee training program to educate workers on the requirements of the ESCP, including monitoring requirements. Recommended Soil Protection Condition 1 would ensure that the procedures and measures included in the ESCP are implemented.

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

[96] BSEAPPDoc71. ASC Exhibit O, p. O-2. 2017-09-01.
[97] BSEAPPDoc71. ASC Exhibit E, p. E-2 and ASC Exhibit O, pp. O-2 and O-3. 2017-09-01.

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 proposed facility would comply with the Council's Soil Protection standard.

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

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

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

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

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

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

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

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

For this site certificate, the certificate holder has requested a Council determination under ORS 469.504(1)(b),[98] which requires:

> *(A) The facility 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, and with any Land Conservation and Development Commission administrative rules and goals and any land use statutes that apply directly to the facility under ORS 197.646.*
>
> *(B) For an energy facility or a related or supporting facility that must be evaluated against the applicable substantive criteria pursuant to subsection (5) of this section, that the proposed facility does not comply with one or more of the applicable substantive criteria but does otherwise comply with the applicable statewide planning goals, or that an exception to any applicable statewide planning goal is justified under subsection (2) of this section.*
>
> *(C) For a facility that the council elects to evaluate against the statewide planning goals pursuant to subsection (5) of this section, that the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under subsection (2) of this section.*

ORS 469.504(5) provides, in relevant part that:

> *Upon request by the State Department of Energy, the special advisory group established under ORS 469.480 shall recommend to the council, within the time stated in the*

[98] The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504. In *Save Our Rural Oregon*, the Oregon Supreme Court held that, "under ORS 469.504(1)(b) and (5), the Council may choose to determine compliance with statewide planning goals by evaluating a facility under paragraph (A) or (B) or (C), but…it may not combine elements or methods from more than one subparagraph, except to the extent that the chosen subparagraph itself permits."
The Council may find compliance with statewide planning goals under ORS 469.504(1)(b)(A) if the Council finds that the proposed facility "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." Under ORS 469.504(1)(b)(B) the Council must determine whether the proposed facility "otherwise [complies] with the applicable statewide planning goals." In *Save Our Rural Oregon*, the Oregon Supreme Court held that "paragraph (B) necessarily requires an evaluation of the same applicable substantive criteria as paragraph (A) and, to the extent those criteria are not met, directs the council to consider statewide planning goals." However, as noted above, the Council may not evaluate a proposed facility under both subparagraph (A) and subparagraph (B).

request, the applicable substantive criteria under subsection (1)(B)(A) of this section. If the special advisory group does not recommend applicable substantive criteria within the time established in the department's request, the council may either determine and apply the applicable substantive criteria under subsection (1)(b) of this section or determine compliance with the statewide planning goals under subsection (1)(b)(B) or (C) of this section.

Findings of Fact

Under OAR 345-021-0010(1)(k), an applicant must elect to address the Council's Land Use standard by obtaining local land use approvals under ORS 469.504(1)(a) or by obtaining a Council determination under ORS 469.504(1)(b). As stated in the ASC, the Applicant elected to have the Council make the land use determination under ORS 469.504(1)(b) and OAR 345-022-0030(2)(b) for the proposed facility. The Applicant provides an analysis of compliance with the Council's Land Use standard in ASC Exhibit K.[99]

The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504. Under ORS 469.504(1)(b)(A), the Council may find compliance with statewide planning goals if the Council finds that the proposed facility "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." The Applicant submitted a preliminary application for site certificate (pASC) on January 13, 2017. As described in ASC Exhibit C, the proposed facility would be located in portions of Morrow and Gilliam counties; therefore, Morrow and Gilliam counties are the affected local governments for purposes of the evaluation necessary for compliance with the Council's Land Use standard.

The land use analysis begins with the identification of "applicable substantive criteria" from the affected local governments. The Council appointed the Morrow County Board of Commissioners and the Gilliam County Court, the governing bodies of Morrow and Gilliam counties, respectively, as the Special Advisory Groups (SAGs) for the proposed facility on January 19, 2017.[100] The Department provided notice of the pASC and ASC to the SAGs on January 23, 2017 and September 5, 2017, respectively. Morrow County provided applicable substantive criteria including provisions from the Morrow County Zoning Ordinance (MCZO) and 2016 Morrow County Comprehensive Plan. Gilliam County provided applicable substantive criteria including goals and policies established in Gilliam County's Comprehensive Plan and

[99] BSEAPPDoc71. ASC Exhibit K. 2017-09-01.
[100] BSEAPPDoc3 and BSEAPPDoc4, SAG Appointment Gilliam and Morrow Counties, 2017-01-19.

provisions from the Gilliam County Zoning Ordinance (GCZO). The Applicant indicates that ASC Exhibit K demonstrates that the proposed facility would comply with all of the applicable substantive criteria in Gilliam County; and, explains that because the proposed energy facility would "preclude more than 12 acres of high-value farmland or 20 acres of other land from commercial farm use" within Morrow County, the applicable substantive criteria of MCZO Section 3.010(D)(4) would not be met.[101] Based upon non-compliance with MCZO Section 3.010(D)(4), the Applicant requests an exception to Statewide Planning Goal 3 which, if Council finds is justified pursuant to ORS 469.504(1)(b)(B), would authorize the use of more than 12 acres of high-value farmland and more than 20 acres of other land within Morrow County. An evaluation of the Applicant's requested goal exception is presented in this section (see Section IV.E.4).

A conditional use permit is required in Morrow County for the construction and operation of the proposed energy facility. A Type I (administrative review) approval is required in Gilliam County for the construction and operation of the proposed 2.1 mile 115 kV transmission line and its associated use (i.e., proposed private service road, POI line tap and staging area). Because the Council will make the land use decisions, each county's issuance of its land use approvals would be governed by the site certificate. In accordance with ORS 469.401(3), after issuance of a site certificate, Morrow and Gilliam counties shall "upon submission by the applicant of the proper applications and payment of proper fees, but without hearings or other proceedings" promptly issue the related permits and approvals, subject only to the conditions set forth in the site certificate.

Section IV.E.1 addresses the applicable substantive criteria from the MCZO and Morrow County Comprehensive Plan. Section IV.E.2 addresses the applicable criteria from the GCZO and Gilliam County Comprehensive Plan. Section IV.E.3 addresses state rules directly applicable to the proposed facility.

IV.E.1. Morrow County

The majority of the proposed facility would be located entirely within Morrow County, with the exception of the proposed 115 kV transmission line and its associated private service road, and the POI line tap and 10,000 square foot staging area which would be located within Gilliam County. As described in ASC Exhibit B and depicted in the ASC Exhibit C figures, the following components of the proposed energy facility and its related and supporting facilities would be

[101] As explained in ASC Exhibit B and Section III.B, *The Facility* of this order, the components of the proposed energy facility and its related and supporting facilities to be located within Morrow County include 30 module blocks (each consisting of; the solar modules, trackers, racks, posts, cabling, inverters, and transformers); underground electrical collection system; substation, control house, and generator step-up transformer; O&M building; private access road; service roads, gates, and security fence; and, additional temporary construction areas.

located within Morrow County: 30 module blocks (each consisting of; the solar modules, trackers, racks, posts, cabling, inverters, and transformers); underground electrical collection system; substation, control house, and generator step-up transformer; O&M building; private access road; service roads, gates, and security fence; and, additional temporary construction areas.

Morrow County Applicable Substantive Criteria

The Council appointed the Morrow County Board of County Commissioners as a SAG pursuant to ORS 469.480(1). On behalf of and as authorized by the SAG, the Morrow County Planning Director identified applicable substantive criteria to be considered by the Applicant in ASC.[102] The applicable substantive criteria in effect on the date the Applicant submitted the ASC are presented in Table LU-1, *Morrow County Applicable Substantive Criteria* below.

Table LU-1: Morrow County Applicable Substantive Criteria

Morrow County Zoning Ordinance (MCZO)	
Article 1 – Introductory Provisions	
Section 1.050	Zoning Permit
Article 3 – Use Zones	
Section 3.010	Exclusive Farm Use, EFU Zone
Section D	Conditional Uses Permitted
Section G	Dimensional Standards
Section H	Yards
Section I	Transportation Impacts
Section 3.200	Significant Resource Overlay Zone
Section 3.300	Historic Buildings and Sites
Article 4 – Supplementary Provisions	
Section 4.020	Sight Distance
Section 4.040	Off-Street Vehicle Parking Requirements
Section 4.050	Off-Street Parking and Loading
Section 4.060	Design and Improvement Standards – Parking Lots
Section 4.165	Site Plan Review
Article 6 – Conditional Uses	
Section 6.015	Requirements Under a State Energy Facility Site Certificate
Section 6.020	General Criteria
Section 6.025	Resource Zone Standards for Approval
Section 6.030	General Conditions
Section 6.040	Permits and Improvements Assurance
Section 6.050	Standards Governing Conditional Uses

[102] BSEAPPDoc17. 2017-02-22

Morrow County Comprehensive Plan
Agricultural Policy 1 and 4 Energy Policies 3 and 9 Economic Element Policy 2A, 3A, 4B, 5A and 6C

IV.E.1.1 Morrow County Zoning Ordinance (MCZO)

The Applicant assessed the components of the proposed facility within Morrow County's Exclusive Farm Use zone as "commercial utility facilities for the purpose of generating power for public use by sale" under the MCZO, Section 3.010(D)(14). These components include the proposed solar module blocks (each consisting of; the solar modules, trackers, racks, posts, cabling, inverters, and transformers); underground electrical collection system; substation, control house, and generator step-up transformer; O&M building; private access road; service roads, gates, and security fence; and, additional temporary construction areas.

The following analysis addresses the applicable substantive criteria identified in the MCZO.

MCZO Section 1.050 Introductory Provisions, Zoning Permit

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

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

The construction and operation of the proposed facility would alter or change the existing land use by more than 100 square feet. Therefore, the Applicant would be required to obtain a zoning permit, which would be subject to administrative review under the provisions of MCZO Article 4.165. As described below, the Department recommends Council impose Land Use Condition 3 to ensure the Applicant obtains all necessary local permits, including the zoning permit. Moreover, the Department presents its evaluation of the Applicant's MCZO Section 4.165 compliance assessment below. Based upon compliance with recommended Land Use Condition 3 and consistency with MCZO Section 4.165 provisions, the Department

recommends that the Council find that the proposed facility would satisfy the MCZO Section 1.050 provision.

MCZO Section 3.010 Exclusive Farm Use, EFU Zone

> *Section 3.010.D. CONDITIONAL USES PERMITTED.*
> *In an EFU Zone, the following uses and their accessory uses are permitted subject to demonstration of compliance with the requirements of Article 6 of this ordinance and Section (G) below:*
>
> > *Section 3.010(D)(14) Commercial utility facilities for the purposes of generating power for public use by sale. A power generation facility shall not preclude more than 12 acres of high value farmland or 20 acres of other land from commercial farm use unless an exception is approved pursuant to OAR 660 Division 4.*

With the exception of the proposed 115 kV transmission line, its associated private service road, and the POI line tap and 10,000 square foot staging area to be located within Gilliam County, and addressed under the "utility facility necessary for public service" land use category, all components of the proposed energy facility, including its related and supporting facilities, would be a "commercial utility facility for the purposes of generating power for public use by sale." This use is permitted in the EFU Zone, "subject to demonstration of compliance with the requirements of Article 6 of this ordinance and Section (G)."

MCZO Section 3.010(D)(15) identifies "commercial utility facilities for the purposes of generating power for public use by sale" as a conditional use in the EFU zone and establishes limits of 12 acres for high value farmland or 20 acres for other commercial farm land, depending upon the soil capability of the land. The Applicant's analysis presented in ASC Exhibit K relies upon this land use category for evaluating compliance with the local code and a demonstration of compliance with the Council's Land Use standard. The Applicant explains that the area to be occupied by the proposed energy facility in Morrow County's EFU zone would preclude more than 12 acres of high-value farmland, and would preclude more than 20 acres of land from commercial farm use and therefore under the MCZO an exception to Goal 3 of the statewide planning goals would be needed.[103]

[103] BSEAPPDoc71. As explained in ASC Exhibit K, the Applicant identifies that the proposed site boundary would be located within the 11-million acre Columbia Valley American Viticulture Area (AVA) and therefore the land within the site boundary is considered high-value farmland pursuant to ORS 195.300(10)(f)(c). 2017-09-01. The Department notes that pursuant to ORS 195.300(10)(f)(C), land that is within an exclusive farm use zone within the Columbia Valley AVA is not considered high-value farmland solely because it is within the Columbia Valley AVA. ORS 195.300(10)(f)(C) includes the following five specific criteria that apply for determining whether the land is

Section 3.010(G) Dimensional Standards. In an EFU Zone, the following dimensional standards shall apply: (Standards 1 through 6 omitted for brevity)

The EFU Dimensional Standards relate to parcel size, the creation of new parcels and the siting of dwellings within big game habitat. The proposed energy facility would not require the partition or subdivision of a property or the development of dwellings. Therefore, the Applicant states that Section 3.010(G) contains no applicable substantive criteria for purposes of the requested site certificate. Based upon the standards included in Section 3.010(G), the Department agrees and recommends that the Council conclude the MCZO Section 3.010(G) would not apply to the proposed energy facility.

Section 3.010(H) Yards. In an EFU Zone, the minimum yard setback requirements shall be as follows:

1. *The front yard setback from the property line shall be a minimum of 100 feet if the property line is adjacent to an intensive agricultural use except as approved by the Commission; otherwise, front yards shall be 20 feet for property fronting on a local minor collector or marginal access street ROW, 30 feet from a property line fronting on a major collector ROW, and 80 feet from an arterial ROW unless other provisions for combining accesses are provided and approved by the County.*

2. *Each side yard shall be a minimum of 20 feet except that on corner lots or parcels the side yard on the street side shall be a minimum of 30 feet, and for parcels or lots with side yards adjacent to an intensive agricultural use the adjacent side yard shall be a minimum of 100 feet, except as approved by the Commission.*

3. *Rear yards shall be a minimum of 25 feet, except for parcels or lots with rear yards adjacent to an intensive agricultural use rear yards shall be a minimum of 100 feet, except as approved by the Commission.*

4. *Stream Setback. All sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be*

considered "high-value farmland:"1) land zoned exclusive farm use; 2) within Columbia Valley viticultural areas as described in 27 C.F.R. 9.74 within the State of Oregon; 3) no more than 3,000 feet above mean sea level; 4) with an aspect between 67.5 and 292.5 degrees; and, 5) slope between zero and 15 percent. Based on this definition, only certain portions of the proposed facility site qualify as high-value farmland.

set back from the high- water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.

The EFU Yard Setback Requirements under MCZO Section 3.010(H)(1-3) apply to "open spaces on a lot" (i.e., "yards") and establish minimum distances from the front, side and rear yards. The Applicant states that the proposed facility would be designed to meet the setback requirements established in MCZO Section 3.010(H). The EFU Yard Setback Requirements under MCZO Section 3.010(H)(4) apply to sewage disposal installations, structures, and buildings; and establish a minimum setback distance of 100 feet from any stream or lake. The Applicant describes that the proposed on-site septic system and all permanent buildings and structures would be located at least 100 feet from the nearest stream, which is located along the east side of Threemile Canyon Road. Based on the Applicant's representation, and to ensure compliance with MCZO Section 3.010(H), the Department recommends that the Council adopt Land Use Condition 1 and 2:

Land Use Condition 1: Prior to construction, the certificate holder shall submit maps and distance tables (e.g., identify the distance from north, south and east facility perimeter fenceline to nearest property) demonstrating that facility components within Morrow County satisfy the following front, side, and rear yard setback distances, and stream setback distance:

(a) The south side of the facility perimeter fenceline shall be setback a minimum of 100-feet from adjacent land uses designated as intensive agricultural use.
(b) The north side of the facility perimeter fenceline shall be setback a minimum of 25-feet from adjacent land uses designated as intensive agricultural use.
(c) The east and west sides of the facility perimeter fenceline shall be setback a minimum of 20-feet from adjacent land uses.
(d) All permanent buildings and structures, including the onsite septic system, shall be set back a minimum of 100-feet from the high-water line or mark along all streams and lakes within and adjacent to the site boundary.

Land Use Condition 2: Within 90-days after beginning commercial operation, the certificate holder shall provide to the Department, Morrow County Planning Department, and Gilliam County Planning Department the actual latitude and longitude location or Stateplane NAD83(91) coordinates of each facility component and a summary of as-built changes in the facility compared to the pre-construction final facility design.

Section 3.010(I) Transportation Impacts

1. *Traffic Impact Analysis (TIA). In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger car equivalent trips per day. Heavy vehicles – trucks, recreational*

vehicles and buses – will be defined as 2.2 passenger car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a State Highway, use ODOT standards. (MC-C-8-98)

The EFU Transportation Impact Analysis (TIA) under MCZO Section 3.010(I) applies to projects that would generate more than 400 passenger equivalent trips per day. Based on the Applicant's assessment, short-term, construction-related traffic would generate approximately 398 passenger car equivalents per day. Therefore, the Department recommends that, based on estimated construction-related traffic, Council conclude that the Applicant is not required to prepare a TIA to satisfy the requirements of Section 3.010(1) during proposed facility construction. However, the Department notes that the Applicant's evaluation of 398 maximum passenger car equivalents per day during proposed facility construction includes an adjustment for car-pooling that, based on the Department's analysis, if not applied would equate to 698 passenger car equivalents per day.

As explained in ASC Exhibit U, the Applicant proposes various measures to be implemented during proposed facility construction to mitigate potential traffic-related impacts on surrounding roadways, which the Applicant expresses would be limited to Threemile Canyon Road and access points from I-84 to Threemile Canyon Road. The Applicant proposed measures expected to reduce passenger car equivalent trips per day include carpooling, providing adequate signage, maintaining at least one travel lane at entrance and exit points to public roads at all times, and coordination with the local land owner of Threemile Canyon Road for alternative route and access to the Willow Creek Wildlife Area. The Department recommends that these measures be incorporated into a Construction Traffic Management Plan, to be reviewed and approved by the Department prior to construction, under Public Services Condition 4. Recommended Public Services Condition 4 also includes a requirement that the Construction Traffic Management Plain include traffic management measures or other recommendations based upon pre-construction consultation with the Morrow County Public Works Department. The Department recommends that the Council find that compliance with recommended Public Services Condition 4 would minimize construction traffic related impacts.

Recommended Public Services Condition 5 requires that the Construction Traffic Management Plan, as approved by the Department, be implemented and adhered to during construction. Because maximum passenger car equivalent trips per day would exceed 400 before adjusting for carpooling, to further ensure that the requirements of MCZO Section 3.010(1) would not be triggered during proposed facility construction, recommended Public Services Condition 6 provides the Department, in consultation with Morrow County Public Works Department, the authority to impose additional mitigation in the event requirements of the Construction Traffic Management Plan are not adequately satisfied, based upon the Department's review of the Applicant's (certificate holder's) submittal of compliance demonstration documentation.

Long-term operational traffic would generate approximately 4 passenger car or pickup truck trips per day, with infrequent heavy vehicle trips and would not trigger the requirements of Section 3.010(1). The Department recommends that, based on estimated operational traffic, Council conclude that the Applicant is not required to satisfy the requirements of Section 3.010(1).

Section 3.200 Significant Resource Overlay Zone (SRO)

A. PURPOSE. The purpose of the Significant Resource Overlay Zone is to provide a mechanism to recognize and protect resources deemed significant in Morrow County and listed in the Morrow County Comprehensive Plan Inventory of Significant Resources. (MC OR-1-2013)

MCZO Section 3.200 establishes a significant resource overlay zone for sites designated by Morrow County as a Significant Resource protected under Goal 5 of the Morrow County Comprehensive Plan. Categories include but are not limited to wetlands, wildlife habitat, groundwater resources, natural areas, wilderness areas, riparian corridors, and historic resources. The Applicant asserts that the proposed facility would not be located in an SRO zone. Based on the Applicant's representation that the proposed facility would not be located within any SRO zones identified within Morrow County, the Department recommends that Council conclude that the development restrictions identified in MCZO Section 3.200 are not applicable.

Section 3.300 Historic Buildings and Sites

A. Alteration/Demolition Permits. A permit is required for alteration or demolition of any structure listed in the Comprehensive Plan inventory of significant historic resources.

MCZO Section 3.300 establishes permit requirements for alteration or demolition of a significant historic resource, as identified in the Morrow County Comprehensive Plan. The Applicant asserts that, based upon review of Morrow County's Comprehensive Plan inventory of significant historic resources, the proposed energy facility would not result in alteration or demolition of any structure. Based on the Applicant's representation, the Department recommends that the Council conclude that Section 3.300 would not apply.

<u>MCZO Article 4 Supplementary Provisions</u>

Section 4.020 Sight Distance

In all zones, adequate sight distance shall be maintained at the intersection of two roads (public or private), a road intersecting a private driveway, or a road crossing a railroad.

3. *The intersectional sight distance shall:*

   a. *Be based on an eye height of 3.5 feet and an object height of 4.25 feet above the road; and*
   b. *Be assumed to be 10 feet from the near edge of pavement or the extended curb line or the near edge of the graveled surface of a gravel road to the front of a stopped vehicle.*

4. *Minimum intersectional sight distance shall be equal to ten (10) times the vehicular speed of the road such as in the table below.*

INTERSECTIONAL SIGHT DISTANCE	
MPH	*DISTANCE CROSSROAD (FT)*
25	*250*
30	*300*
35	*350*
40	*400*
45	*450*
50	*500*
55	*550*

The Intersection Sight Distance requirements under MCZO Section 4.020(A) apply to new or improved access roads where two roads (public or private) intersect. Morrow County confirmed that MCZO Section 4.020(A) applies to the proposed access road improvements, specifically the intersection of Threemile Canyon Road and the improved road to the Willow Creek Wildlife Area, and at the intersection of the access road to the proposed facility and the road to the Willow Creek Wildlife Area.[104] In ASC Exhibit K, the Applicant asserts that adequate sight distance would be maintained at these intersections.

MCZO Section 4.020 establishes minimum intersectional sight distance requirements. To ensure that the proposed access road improvements meet these requirements, and to ensure safe vehicle transport on public/private road intersection, the Department recommends the Council impose Public Service Condition 6. Recommended Public Services Condition 6 establishes a requirement for the certificate holder to provide engineering drawings to the Department and Morrow County Public Works demonstrating that the access road improvements meet the minimum intersectional sight distance requirements pursuant to MCZO Article 4.020.

[104] BSEAPPDoc42. 2017-05-26.

Section 4.040 Off-Street Vehicle Parking Requirements

Because vehicle parking facilities can occupy large amounts of land, they must be planned and designed carefully to use the land efficiently while maintaining the visual character of the community. 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 space shall be provided as follows unless greater requirements are otherwise established. When the requirements are based on the number of employees, the number counted shall be those working on the premises during the largest shift at peak season. Fractional space requirements shall be counted as a whole space. Off-street parking spaces may include spaces in garages, carports, parking lots, and/or driveways if vehicles are not parked in a vehicle travel lane (including emergency or fire access lanes), public right-of-way, pathway or landscape area. The County may allow credit for "on- street parking", as provided in Section 4.050. For uses not specified in Table 4.040-1, parking requirements shall be determined by the use in Table 4.040-1 found to be most similar in terms of parking needs.

MCZO Section 4.040 establishes minimum parking requirements for industrial land use and requires one space per employee on the largest shift. The Applicant asserts that adequate parking space would be provided at the main temporary staging area for construction workers and at the proposed O&M building for operational workers, and that parking areas would be designed to meet MCZO Section 4.040 requirements.

The main temporary staging area during construction would be a 10-acre site located south of the proposed O&M building. As described in ASC Exhibit U, the Applicant estimates that proposed facility construction would require up to 250 temporary workers and up to 45 trucks per day, which the Department conservatively assumes would necessitate adequate parking area for at least 295 vehicles. Moreover, as explained in ASC Exhibit U, the Applicant estimates that proposed facility operations would result in two permanent employees and that, worst-case, could require up to five parking spaces.

The Department assumes that a typical parking space would be 9 by 18 feet, or 162 square feet. Based on the maximum number of construction and operational workers (295 and 5 vehicles, respectively), the parking area required to meet MCZO Section 4.040 for proposed facility construction and operation would be approximately 47,790 square feet (less than 2 acres) and 810 square feet (less than 1 acre), respectively. Therefore, based on the Applicant's representation of compliance with MCZO Section 4.040 and the Department's evaluation of area available within the 10-acre staging area and 10,000 square foot area adjacent to the proposed O&M building, the Department recommends that Council find that areas proposed to be used during construction and operation of the proposed facility would meet MCZO Section 4.040 off-street vehicle parking requirements.

Section 4.050 Off-Street Parking and Loading

Buildings or structures to be built or substantially altered which receive and distribute materials and merchandise by trucks shall provide and maintain off-street loading berths in sufficient number and size to handle adequately the needs of the particular use. Off-street parking areas used to fulfill the requirements of this Ordinance shall not be used for loading and unloading operations except during periods of the day when not required to care for parking needs. General provisions are as follows:

A. The provisions and maintenance of off-street parking and loading space is a continuing obligation of the property owner. Should the owner or occupant of any lot or building change the use to which the lot or building is put, thereby increasing off-street parking and loading requirements, it shall be a violation of this Ordinance to begin or maintain such altered use until such time as the increased off-street parking or loading requirements are complied with.

B. Requirements for types of buildings and uses not specifically listed in this Ordinance shall be determined by the Planning Commission based upon the requirements for comparable use listed.

C. Required parking spaces shall be available for the parking of passenger automobiles of residents, customers, patrons, and employees only, and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business or use.

MCZO Section 4.050 establishes requirements for new buildings or structures receiving and distributing materials to provide and maintain adequate off-street parking and loading berth areas. The Applicant asserts that the proposed facility would be constructed to comply with MCZO Section 4.050 requirements.

As explained in ASC Exhibit U, proposed facility construction would result in loading and unloading during equipment delivery; proposed facility operation would result in loading and unloading from delivery trucks, although these activities would not occur daily. Based upon the analysis presented above under MCZO Section 4.040, the Department considers the 10-acre staging area to be used during proposed facility construction, and the 10,000 acre area adjacent to the proposed O&M building to be used during proposed facility operations, to represent adequate area needed to satisfy the MCZO Section 4.050 off-street parking and loading area requirements. Therefore, based on the Applicant's representation of compliance with MCZO Section 4.050 and the Department's evaluation of area available within the 10-acre staging area for construction and 10,000 square feet area adjacent to the O&M building, the Department recommends that Council find that areas proposed to be used during construction and operation of the proposed facility would satisfy the MCZO Section 4.050 off-street parking and loading requirements.

Section 4.060 Design and Improvement Standards – Parking Lots

(a) *Except for single-family and duplex dwellings, areas used for parking for more than two vehicles shall have durable and dustless surfaces adequately maintained.*

(b) *Except for parking in connection with single-family and duplex dwellings, parking and loading areas adjacent to or within a residential zone or adjacent to a dwelling shall be designed to minimize disturbance to residents by the erection between the uses of a sight-obscuring fence or planted screen of not less than six (6) feet in height except where vision clearance is required.*

(c) *Parking spaces along the outer boundaries of a parking lot shall maintain a minimum setback from the property line of five feet, unless a greater setback is specified for a structure in the zoning district, and shall be contained by a bumper rail or by a curb which is at least four inches high.*

(d) *Access aisles shall be a minimum of 24 feet wide for two-way traffic. The minimum aisle width for emergency vehicle access (with one-way traffic) is 20 feet.*

(e) Except for single-family and duplex dwellings, groups of more than two parking spaces shall be so located and served by a driveway that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.

(f) Service drives to off-street parking areas shall be a minimum of 24 feet wide for two-way traffic flow, and 20 feet wide for one-way traffic flow. The number of service drives shall be limited to the minimum that will accommodate anticipated traffic.

(g) Driveways shall maintain minimum sight distance per the standards of Section 4.020 of this Ordinance.

(h) The standards set forth in the table below shall be the minimum for parking lots approved under this Ordinance (all figures are in feet except as noted). The letters in the first row of the table correspond to the letters in the following diagram. [Table not included for brevity]

MCZO Section 4.060 establishes requirements for areas used for parking or parking lots. The Applicant asserts that the proposed parking areas during construction and operation would comply with MCZO Section 4.060 requirements and states that, as required under MCZO Section 4.060(F) and (G), the proposed facility access road would be 20-feet wide, would satisfy the site distance requirements of MCZO Section 4.020, and would not require maneuvering within a street ROW. Based on these representations, and the Department's evaluation of MCZO Section 4.020 above, the Department recommends that the Council find

that the proposed permanent parking areas would be designed and constructed in accordance the applicable MCZO Section 4.060 requirements.

Section 4.165 Site Plan Review

A. Purpose. The purpose of Site Plan Review (ministerial review) is based on clear and objective standards and ensures compliance with the basic development standards of the land use district, such as building setbacks, lot coverage, maximum building height, and similar provisions. Site Plan review also addresses conformity to floodplain regulations, consistency with the Transportation System Plan, and other standards identified below.

C. Applicability. Site Plan Review shall be required for all land use actions requiring a Zoning Permit as defined in Section 1.050 of this Ordinance. The approval shall lapse, and a new application shall be required, if a building permit has not been issued within one year of Site Review approval, or if development of the site is in violation of the approved plan or other applicable codes.

The Site Plan Review is the county's ministerial review conducted prior to issuance of a zoning permit, defined under MCZO 1.050 as "an authorization issued prior to a building permit, or commencement of a use subject to administrative review, stating that the proposed use is in accordance with the requirements of the corresponding land use zone." The Applicant would be required to secure zoning, building and Conditional Use permits from Morrow County prior to construction of the proposed energy facility.[105] Therefore, the Department recommends the Council adopt the following as a condition to the site certificate:

Land Use Condition 3: Before beginning construction, the certificate holder shall provide to the Department copies of issued local permits including:
(a) All necessary zoning, building, Type I (administrative review), and Conditional Use Permit from Morrow and Gilliam counties; and,
(b) Copies of 12-month extensions, if requested by certificate holder.

D. Review Criteria.

1. The lot area shall be adequate to meet the needs of the establishment.

The site boundary encompasses approximately 798 acres, of which approximately 759 acres would be located within Morrow County and the remaining 39 acres would be located within

[105] Pursuant to ORS 469.401(3), the county must issue a zoning permit upon submittal of the proper applications and fees, but without hearings or other proceedings and subject only to conditions set forth in the site certificate.

Gilliam County. The Applicant asserts that based on the siting and design of the proposed energy facility, the land leased within Morrow County would provide adequate space to meet the needs of the proposed energy facility. Based on the Applicant's analysis, the Department recommends that the Council find that the Applicant has secured a site adequate to meet the needs of the proposed energy facility and would satisfy MCZO Section 4.165(D)(1).

2. The proposed land use is permitted by the underlying land use district.

The Applicant asserts that the land uses of the proposed energy facility would be permissible within Morrow County. Based on the analysis provided above related to MCZO 3.010(D)(15) and (16) and the findings in this section of this proposed order, the Department concurs and recommends that the Council find that the Applicant has demonstrated that the proposed energy facility would be permissible within Morrow County.

3. The land use, building/yard setback, lot area, lot dimension, density, lot coverage, building height and other applicable standards of the underlying land use district and any sub-district(s) are met.

As presented in ASC Exhibit K, the Applicant proposes to design and construct the proposed energy facility in accordance with applicable substantive criteria identified by Morrow County, including the EFU dimensional standards at Section 3.010(G) and yard setback requirements at Section 3.010(H). Based on the Applicant's representations, the Department recommends that the Council find that the Applicant could design and construct the proposed energy facility in accordance with applicable substantive criteria identified by Morrow County.

4. Development in flood plains shall comply with Section 3.100 Flood Hazard Overlay Zone of the Ordinance.

The proposed O&M building would consist of a single-story, approximately 3,000 square foot structure; the proposed control house would be a custom-designed, weatherproof structure with exterior walls and interlocking roof panels. Both of these proposed buildings would meet the definition of a structure pursuant to MCZO Section 3.100.[106] However, neither the proposed O&M building nor any components of the proposed energy facility or proposed site boundary would be located within flood hazard areas of Morrow County. The Applicant explains that while the proposed energy facility would be located within a moderate to low risk flood area as defined by FEMA Flood Insurance Rate Maps, these FEMA flood areas are not regulated or included within Morrow County's flood hazard areas. Therefore, the Applicant asserts that review criteria under MCZO Section 4.165(D)(4) and

[106] MCZO Section 3.100 defines "structure," as "a walled and roofed building including a gas or liquid storage tank that is principally above ground."

flood hazard overlay zone requirements per MCZO Section 3.100 would not apply to the proposed energy facility. Based on the Applicant's analysis, the Department recommends that the Council find that the review criteria under MCZO Section 4.165(D)(4) and flood hazard overlay zone requirements per MCZO Section 3.100 would not apply to the proposed energy facility.

> 5. *Development in hazard areas identified in the Morrow County Comprehensive Plan shall safely accommodate and not exacerbate the hazard and shall not create new hazards.*

The Natural Hazards Element of the Morrow County Comprehensive Plan identifies hazard areas as "areas that are subject to natural events that are known to result in death or endanger the works of man, such as stream flooding, ocean flooding, ground water, erosion and deposition, landslides, earthquakes, weak foundation soils and other hazards" unique to the area in question.

Flood hazards are addressed above in response to MCZO Section 4.165(D)(4); as described above and in ASC Exhibit K, the proposed facility would not be located within a flood hazard area identified with the Morrow County Comprehensive Plan, which represents the only hazard areas currently identified within the Morrow County Comprehensive Plan. Other potential geologic hazards, identified in the MCCP Natural Hazards Element, are discussed in ASC Exhibit H and addressed in the Structural Standard of this proposed order. Based on the Applicant's analysis of flood and geologic hazards and taking into consideration the conditions proposed in the Structural Standard, the Department concurs that the proposed energy facility would safely accommodate and would not exacerbate existing hazards or create new ones. Therefore, the Department recommends that the Council find that the Applicant has demonstrated that the design of the proposed energy facility would comply with the MCZO 4.165(D)(5) review criteria.

> 6. *Off-street parking and loading-unloading facilities shall be provided as required in Section 4.040 and 4.050 of the Morrow County Zoning Ordinance. Safe and convenient pedestrian access to off-street parking areas also shall be provided as applicable.*

The Applicant explains that construction-related vehicle parking would be provided within a 10-acre temporary staging area, and operational-related vehicle parking would be provided next to the O&M building. The parking areas would be graveled areas; however, the Applicant has not proposed to construct permanent parking facilities. Section 4.040 establishes minimum parking requirements for an industrial use as one space per employee during the largest shift. The Applicant explains that the components of the proposed energy facility would be designed and constructed with adequate off-street parking and would comply with MCZO Section 4.040 and 4.050 standards. To ensure the proposed parking areas satisfy the requirements of MCZO Section 4.040 and 4.050, and to ensure adequate traffic safety and

minimize potential impacts to public providers of traffic service, the Department recommends the Council impose Public Services Conditions 4 through 7. Based on the Applicant's representations and subject to compliance with recommended Public Services Conditions 4 through 7, the Department recommends that the Council find that the Applicant has demonstrated that the design of the proposed energy facility would comply with MCZO 4.165(D)(6) review criteria.

> *7. County transportation facilities shall be located, designed and constructed in accordance with the design and access standards in the Morrow County Transportation System Plan.*

The Applicant has not proposed to construct or modify any public roads in Morrow County. However, the Applicant represents that any private road improvements would be designed and constructed consistent with Morrow County development standards. Therefore, to ensure consistency with county road design and access standards, the Department recommends that the Council adopt Public Services Condition 7, as described in Section IV.M., *Public Services* of this order. However, because the proposed access road modifications would not occur on public roads, the Department recommends that the Council conclude the MCZO 4.165(D)(7) review criteria would not apply.

> *8. Site planning, including the siting of structures, roadways and utility easements, shall provide, wherever practicable, for the protection of trees eight inch caliper or greater measured four feet from ground level, with the exception of noxious or invasive species, such as Russian olive trees.*

The Applicant explains that construction and operation of the proposed energy facility would avoid, to the extent practicable, removal or impacts to trees eight inch caliper or greater measured four feet from ground level. Further, the Applicant describes that land area within the proposed site boundary is predominately mixed grassland with scattered shrubs and is almost entirely devoid of trees with the exception of mostly nonnative Russian olive trees and some willow trees. Based on the Applicant's statement of avoidance and minimization of impact, the Department recommends that the Council find that the Applicant has demonstrated that the proposed energy facility would comply with MCZO Section 4.165(D)(8).

> *9. Development shall comply with Section 3.200 Significant Resources Overlay Zone or 3.300 Historic Buildings and Sites protecting inventoried significant natural and historic resources.*

The proposed energy facility would be located entirely on private land, none of which is designated an SRO zone; further, the Applicant identifies that there were no structures listed in the MCCP inventory of significant historic resources within the proposed site boundary or

analysis area. Therefore, the Applicant asserts and the Department agrees that the provisions of MCZO Section 3.200 and 3.300 would not apply.

> *10. The applicant shall determine if compliance is required with Oregon Water Resources Department water quantity and/or Oregon Department of Environmental Quality water quality designations.*

Proposed facility construction would result in temporary water use for concrete mixing, dust control, and drinking/sanitation. Proposed facility operation would result in long-term water use from the O&M building (office use) and solar module/panel washing. The Applicant explains that water-related permits would be required for construction and operation of the proposed facility. These permits include an Onsite Sewage Disposal Construction Installation Permit for the proposed onsite sewage disposal system and a General Water Pollution Control Facilities Permit (WPCF) 1700-B Permit for releasing water used to wash the solar panels to the ground.[107] As discussed in Section IV.B., *Organizational Expertise* of this order, the Applicant would also need to seek coverage for washwater discharge from maintenance equipment washdown under the WPCF 1700-B permit. The Applicant describes that operational water use from the O&M building would be obtained from an on-site well that would provide no more than 5,000 gallons per day, and is therefore exempt from obtaining a permit from OWRD under OAR 537.545(1)(f).

Under MCZO Section 4.165(D)(10), the Applicant represents that compliance with Oregon Department of Environmental Quality water quality designations would be required; however, as represented in ASC Exhibit E, the obligation of compliance would be for third-party contractors responsible for obtaining the necessary water and wastewater permits described above. Therefore, the Department recommends that the Council find that while compliance with Oregon Department of Environmental Quality water quality designations would be required, the responsibility of compliance would be that of a third-party contractor and would be outside of the Council's jurisdiction for the proposed energy facility.[108]

[107] The Applicant identifies that a General WPCF 1000 would be required to manage wastewater and stormwater from a temporary batch plant, if one is required for construction. However, ASC Exhibit E indicates that any permits required for the temporary batch plant would be obtained by a third-party contractor. Therefore, because any permits obtained by a third-party would not be governed by the site certificate, the permit is not referenced.

[108] As presented in recommended Organizational Expertise Condition 4, the certificate holder would be required to provide evidence to the Department that all third-party permits have been obtained and that an agreement is in place providing the certificate holder access to the resource secured by the third-party permit.

11. The applicant shall determine if previous Code Enforcement violations have been cleared as applicable.

The Applicant states that there are no previous Code Enforcement violations for the proposed energy facility or proposed facility leased property. Therefore, the Applicant concludes, and the Department concurs, that the review criteria of MCZO 4.165(D)(11) would not apply to the proposed energy facility.

12. The applicant shall determine the method of disposal for solid waste, with staff providing information to the applicant about recycling opportunities.

As explained in ASC Exhibit K, construction waste would be collected, consolidated, recycled to the extent practicable, and then transferred and disposed at one of two public landfills: Arlington Landfill (also known as Columbia Ridge Recycling and Landfill) owned by Waste Management Services, Inc., of Oregon, located approximately 27 miles from the proposed energy facility, and Finley Buttes Landfill owned by Waste Connections, Inc., located approximately 30 miles from the proposed energy facility. Solid waste disposal would be provided by a private contractor. The Applicant asserts that consultation with Morrow County would occur to identify appropriate recycling opportunities for solid waste. Recommended Public Services Condition 2, as identified in Section IV.M., *Public Services*, of this order would ensure compliance with MCZO Section 4.165(D)(12) criteria. The Department recommends the Council find that, subject to compliance with recommended Public Services Condition 3, the Applicant demonstrates that the proposed facility would comply with MCZO Section 4.165(D)(12).

13. The applicant shall obtain the necessary access permit through the Public Works Department as required by Morrow County Resolution R-29-2000.

The Applicant states that it would obtain all necessary local permits prior to construction. Moreover, recommended Land Use Condition 3 would ensure all applicable local permits are obtained prior to construction. Based on compliance with the recommended condition, the Department recommends that the Council find that the Applicant demonstrates that the proposed energy facility would comply with MCZO 4.165(D)(13).

Based on the Applicant's analysis and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the Applicant has demonstrated that the proposed energy facility would comply with all applicable MCZO 4.165(D) review criteria.

E. Submittal Requirements. A site plan shall be submitted including all of the following information except for specific items determined at the pre-application review not to be

applicable. All site plans shall have dimensions clearly indicated. An applicant may provide the information on separate sheets, if necessary or desirable for clarity.

The County's site plan submittal requirements are not substantive criteria applicable to this review. Nonetheless, because the proposed energy facility would require a zoning permit, the Applicant is required under MCZO Section 4.164(C) to submit site plans with the required information at the time of Site Plan Review.

MCZO Article 6 Conditional Uses

Section 6.015 Requirements Under a State Energy Facility Site Certificate

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 shall incorporate only the standards and conditions in Morrow 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.

The Applicant requests a site certificate issued by the Council. The Applicant represents that upon issuance of the requested site certificate, it would request issuance of a conditional use permit for the proposed solar photovoltaic power generation facility as a commercial utility facility that generates power for public use by sale on EFU zoned land pursuant to Section 6.015. ORS 469.401(3) requires the county to issue the conditional use permit subject only to the conditions set forth in the site certificate. The Department recommends the Council impose Land Use Condition 3, provided above, requiring the certificate holder to submit to the Department copies of all applicable local permits issued by Morrow County prior to construction in a timely manner.

Section 6.020 General Criteria

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

A. The proposal will be consistent with the Comprehensive Plan and the objectives of the Zoning Ordinance and other applicable policies and regulations of the County.

B. If located within the Urban Growth Boundary of a city, that said city has had an opportunity to review and comment on the subject proposal.

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

MCZO Section 6.020 establishes a requirement for the governing body to weigh the appropriateness and desirability, or the public convenience or necessity to be served, against any adverse conditions that would result from authorizing the particular development at the location proposed. The Department recommends that the Council conclude, based on the recommended findings of fact and conclusions of law presented in the proposed order, that because the proposed facility would provide a desirable, renewable energy source (solar), and has reasonable access to the existing regional grid, and based upon compliance with recommended site certificate conditions, that the appropriateness and desirability of the proposed facility would outweigh any adverse conditions resulting from the proposed facility. In addition, the Department recommends that Council refer to the evaluation of the MCZO Section 6.020(A) – (C) criteria below to support the Council's evaluation of the appropriateness and desirability against any potential adverse conditions resulting from construction and operation of the proposed energy facility.

MCZO Section 6.020(A) requires that conditional use permit applications establish compliance with the MCCP, MCZO and other applicable policies and regulations of the county. Compliance with the provisions of the MCCP identified by Morrow County as applicable substantive criteria is discussed below. Compliance with zoning ordinance and other county policies and regulations is discussed throughout this section. Therefore this criterion is satisfied upon a determination that the proposed facility satisfies the identified applicable substantive criteria.

Subsection B applies only to conditional use permit applications within an urban growth boundary. The proposed facility would not be located within the urban growth boundary and therefore this criterion would not apply. Subsection C requires that the proposed facility not exceed carrying capacities of natural resources or public facilities. MCZO Section 1.030 defines "carrying capacity" as the "level of uses that can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem, and the quality of air, land and water resources." The Applicant addresses impacts on Morrow County public facilities in ASC Exhibit U. Those impacts are evaluated and addressed in Section IV.M, *Public Services* of this order. As discussed in that section, the proposed facility would not be likely to result in a significant adverse impact to the ability of service providers to provide the necessary services. The evaluation in Section IV.M, *Public Services* also includes recommended site certificate conditions that the Department considers sufficient to ensure the proposed facility would not exceed the carrying capacities of public facilities.

The Applicant addresses the proposed facility's impacts to soils, surface or groundwater resources, and protected plant and animal species and their habitats in ASC Exhibits I, J, O, P and

Q. Because the proposed facility would not include emission-generating equipment (criteria pollutants or greenhouse gas emissions), the proposed facility would not result in potential adverse air quality or emissions-related climate change impacts. The Department provides recommended findings of fact and conclusions of law based on an evaluation of those impacts in Sections IV.D, *Soil Protection*, IV.H, *Fish and Wildlife Habitat*, IV.I, *Threatened and Endangered Species*, IV.Q.T, *Removal-Fill Law*, and IV.Q.3, *Water Rights* of this order. As discussed in the relevant sections, the Department recommends that Council find that, subject to compliance with the recommended conditions, those natural resource Council standards would be satisfied. The identified sections also support a finding that, with the imposition of the conditions, the proposed energy facility would not exceed the carrying capacities of Morrow County natural resources. Therefore, the Department recommends that Council find that with recommended conditions the proposed energy facility would comply with MCZO Sections 6.020(A), (B) and (C).

Section 6.025 Resource Zone Standards for Approval

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

1. Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

2. Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

MCZO Section 6.025(A)(1) and (2) establish approval standards for all conditional uses within EFU zoned land. The Applicant confirms that there is no forest use or forest practices within the land use analysis area. Therefore, the Applicant identifies and addresses accepted farm practices and surrounding lands devoted to farm use.[109]

[109] The Morrow County conditional use standards are taken directly from ORS 215.296. Pursuant to ORS 215.203(2)(a) "farm use" means "the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof." "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife

In ASC Exhibit K, the Applicant identifies and describes surrounding lands devoted to farm use. The Applicant first generally notes that only the surrounding lands to the south and east of the proposed site boundary are used for farming. Farming practices include center pivot irrigation cultivated crops, including potatoes, onions, corn, and wheat. The Applicant then describes that areas within the proposed site boundary and to the east and southeast of the proposed site boundary are used for seasonal grazing; and, that the lands in the analysis area to the north and west of the proposed site boundary are not used for farming.

The Applicant asserts that the proposed facility would not force a significant change in accepted farm practices or significantly increase the cost of farm practices. The Applicant explains that construction and operation of the proposed energy facility would not alter or reduce the adjacent area under cultivation by Threemile Canyon Farms, would not necessitate relocating any access routes or farm irrigation infrastructure, and would not result in changes to the practices for planting, irrigating, fertilizing, or harvesting the cultivated crops. To further support its position, the Applicant provided in ASC Exhibit K, Attachment K-1, a letter from Marty Myers, General Manager of Threemile Canyon Farms. In the letter, Mr. Myers describes that construction and operation of the proposed facility would facilitate a higher and better use of the land, would concentrate solar development away from more productive farmland, and would not adversely impact or increase the cost of accepted farming practices within the vicinity.

Based upon the Applicant's analysis, the Department recommends that the Council find that proposed facility would satisfy the conditional use standards at MCZO Section 6.025(A).

Section 6.030 General Conditions

> *In addition to the standards and conditions set forth in a specific zone, this article, and other applicable regulations; in permitting a new conditional use or the alteration of an existing conditional use, the Commission may impose conditions which it finds necessary to avoid a detrimental impact and to otherwise protect the*

Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3)."

best interests of the surrounding area or the County as a whole. These conditions may include the following:

Morrow County is bound by an energy facility site certificate issued by the Council and must issue a conditional use permit subject only to the conditions included in the site certificate. However, in determining whether the proposed facility satisfies the applicable substantive criteria, the Council has the same authority that the Morrow County decision making body would have to impose conditions the Council finds necessary under the Morrow County General Conditions provisions. In its comments on the pASC, Morrow County specifically requested that the Applicant address the General Conditions identified in Section 6.030 and requested specific conditions related to signs, lighting, fences, and parking areas, and preservation of habitat or other significant natural resources.[110]

The analysis presented below is based upon the Department's review of the ASC, as the information was not directly provided by the Applicant in response to the Section 6.030 requirements.

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.

ASC Exhibit X addresses noise impacts from proposed facility construction and operation. ASC Exhibits L, R, and T address potential impacts from glare and air pollution. While the Council does not have an applicable standard that addresses odor-related or vibration-related impacts, construction and operation of the proposed facility would not be expected to generate odor or vibration impacts.

In Section IV.Q.1., *Noise Control Regulation* of this proposed order, the Department evaluates the proposed facility's compliance with the state noise standards and recommends that the Council find that the proposed facility would comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B). Based upon the information provided by the Applicant and the Department's analysis in Section IV.Q.1., the Department does not consider conditions necessary to limit potential noise impacts under this provision.

The Applicant has not specifically described or proposed outdoor lighting for the proposed facility. However, the Department assumes that minimal outdoor lighting would be necessary for safety and security and has recommended in Section IV.K of this order, Historic, Cultural and Archeological Resources Condition 4. Based on the analysis provided above, and taking into consideration recommended conditions in the identified sections of this proposed order, the

[110] BSEAPPDoc1. 2017-02-22.

Department does not recommend that the Council impose additional conditions under this provision.

B. Establishing a special yard or other open space or lot area or dimension.

The Department specifically recommends the imposition of setback conditions under Land Use Condition 1. The Applicant has not requested a division of land so lot area and dimensional standards are not applicable. Finally, the facility is proposed entirely on private land, none of which has been designated as open space. Therefore, the Department does not recommend that the Council impose additional conditions under this provision.

C. Limiting the height, size or location of a building or other structure.

The County has not recommended any specific conditions related to the height, size or location of any building or structure proposed by the Applicant. Therefore, the Department does not recommend that the Council adopt any additional conditions.

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

1. Where access to a county road is needed, a permit from Morrow County Public Works department is required. Where access to a state highway is needed, a permit from ODOT is required.

The Applicant proposes to improve an approximately 600-foot segment of private road for vehicle access to the proposed facility. The Applicant, however, is not proposing to develop or improve any access roads intersecting with county roads and state highways. As described above, however, the Applicant represents that new and improved private access roads would be designed and constructed in accordance with applicable Morrow County road standards, which would be imposed through recommended Public Services Condition 7. Therefore, the Department does not recommend that the Council impose additional conditions under this provision.

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

ASC Exhibit K identifies that the proposed facility would generate fewer than 400 trips per day during construction or operation, and determined that a TIA would not be required. To

minimize potential traffic-related impacts during proposed facility construction, the Applicant proposes various measures to reduce and mitigate potential traffic related impacts. The Department recommends that these measures be adopted and imposed by Council as Public Service Condition 4. Further, the Department recommends Council impose Public Services Condition 5, which would require the certificate holder to implement an approved Construction Traffic Management Plan during construction; submit monthly compliance demonstration reports to the Department for review and approval; and, provides the Department, in consultation with Morrow County Public Works Department, the authority to impose additional mitigation measures, such as a Traffic Impact Assessment as referenced in MCZO Section 3.010(1), in the event the Department considers the certificate holder's reported compliance demonstration to be insufficient or considers requirements of the Traffic Management Plan insufficient based upon actual passenger car equivalent trips per day. Based on the Department's recommended Public Services Condition 4 and 5, the Department does not recommend that the Council impose additional conditions under this provision.

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

1. It is the responsibility of the landowner to provide appropriate access for emergency vehicles at the time of development. (MC-C-8-98)

As presented in ASC Exhibit U, the Applicant explains that access roads would provide adequate access for emergency vehicles. The Department agrees, and does not recommend that the Council impose additional conditions under this provision.

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

The Applicant states that parking areas would be located and designed to comply with Morrow County standards. The Applicant is not proposing any screening or landscaping of the parking area in the ASC. Therefore, the Department does not recommend that the Council adopt additional conditions under this provision.

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

In the ASC, the Applicant has not identified whether a permanent sign would be installed. However, if permanent signage is installed, the Applicant would be required to design and install signs in accordance with the applicable requirements of MCZO Section 4.070. Because the Applicant has not proposed permanent signage for the facility, the Department does not recommend that the Council adopt additional conditions under this provision.

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

In the ASC, the Applicant has not identified locations where outdoor lighting would be installed. However, the Department assumes that the proposed facility would include some lighting for safety and security. In Section IV.K of this order the Department recommends the Council adopt Historic, Cultural and Archeological Resources Condition 4 to minimize and reduce potential facility lighting impacts related to interference with night sky. Based on compliance with the recommended condition, the Department does not recommend that the Council impose additional conditions under this provision.

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

The Applicant proposes to install a permanent 7-foot, chain-link fence around the perimeter of the proposed facility, which the Department considers sufficient screening to protect adjacent or nearby property from potential facility impacts. Further, based upon the minimal activity associated with installation and maintenance of a chain-link fence, the Department does not recommend that the Council impose additional conditions designating standards for these activities under this provision.

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

The proposed facility would be bordered by a 7-foot-high chain-link security fence. In a pASC comment, Morrow County requested that any fence installed at or over six feet in height be subject to a Morrow County Zoning Permit as a structure. Recommended Land Use Condition 3 establishes a requirement for the Applicant to obtain all applicable zoning and building permits, and a conditional use permit, from Morrow County for the proposed facility, and identifies that the proposed fence is included as a component of the proposed facility. Because the Applicant is required under Mandatory Condition 2 to construct and operate the proposed facility substantially as described in the site certificate, the Department considers this condition sufficient to ensure that the size, height, location and fence materials have been designated. Based on this reasoning, the Department does not recommend that the Council impose additional conditions under this provision.

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

The Applicant addresses impacts to water resources, wildlife habitat and other natural resources in ASC Sections J, O, P, and Q. The Department has evaluated those impacts and recommended conditions of approval in Sections IV.H., *Fish and Wildlife Habitat*, IV.I., *Threatened and Endangered Species*, IV.Q.2., *Removal-Fill Law*, and IV.Q.3., *Water Rights* of this

proposed order. The Department considers the proposed facility's impacts on existing trees and water resources to be minimal. As presented in Section IV.H. *Fish and Wildlife Habitat*, based upon the proposed mitigation and compliance with the recommended conditions, the Department considers the impacts from the proposed facility to vegetation and wildlife habitat to be in compliance with the Council's Fish and Wildlife Habitat standard. Therefore, the Department does not recommend that the Council impose additional conditions under this provision.

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

The Department does not recommend any other conditions of approval beyond those addressed above and recommended throughout this Land Use section and other sections of this proposed order.

> *Section 6.040 Permits and Improvements Assurance*
>
> *The Commission may require an applicant to furnish the County with a performance bond or such other form of assurance that the Commission deems necessary to guarantee development in accordance with the standards established and the conditions attached in granting a conditional use permit.*

Section 6.040 allows for a Conditional Use Permit to include, as a condition of approval, a performance bond or other assurances for facility retirement. This provision aligns with the requirements of the Council's Retirement and Financial Assurance standard. As described in Section IV.G., *Retirement and Financial Assurance*, of this proposed order, the Applicant would be required to submit a bond or letter of credit in an amount determined satisfactory by the Council, prior to construction, for the amount necessary to decommission the facility and restore the site to a useful, non-hazardous condition. Therefore, through compliance with the Council's standard, the Applicant would satisfy the requirements of MCZO Section 6.040.

IV.E.1.2 Morrow County Comprehensive Plan

Agricultural Lands Element

Agricultural Policy 1: It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit non-compatible nonagricultural development, and to maintain a high level of livability in the County.

The Applicant contends that due to the permanent use of approximately 485 acres of EFU zoned land within Morrow County, construction and operation of the proposed facility would not further the County's policy to preserve agricultural lands. However, the Applicant asserts that while a Goal 3 exception is necessary for the impact, information provided in ASC Exhibit K is sufficient to justify a Goal 3 exception and that the proposed facility impacts would not significantly increase the cost of accepted farming practice or have a significant adverse impact on accepted farming practices on surrounding agricultural lands. Therefore, the Applicant explains that the proposed facility would be compatible with agricultural development.

The Applicant generally states that the proposed energy facility would provide a renewable energy source while minimizing impacts on local farming practices' ability to further efficient development and economic growth, while balancing the County's need to protect agriculture as its main economic enterprise. The Applicant further explains that because the proposed energy facility would not exceed carrying capacities of natural resources or public facilities within Morrow County, it would therefore not have a significant adverse impact on "livability" in Morrow County

While the Applicant makes statements about the benefits and impacts of the proposed energy facility on agricultural lands, the most important factor is that solar photovoltaic power generation facility is expressly listed as a conditional use in EFU zones. As discussed in this Morrow County section and in the state statutes and rules section below, the Department recommends that the Council find that the proposed facility would satisfy all applicable substantive criteria, with the exception of MCZO Section 3.010(D)(16), but that the Council should consider a Goal 3 exception justified, and therefore the proposed use in the EFU zone should be authorized, subject to the recommended conditions included in this proposed order.

Based upon the analysis provided above, the Department recommends that the Council find that the proposed facility would be consistent with MCCP Agricultural Policy 1.

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

The Applicant states that the proposed facility would comply with the County's comprehensive and definitive criteria "to the maximum level possible." This comprehensive plan policy appears to be a directive to the County in its implementation of its plan. However, to the extent it is construed to be an applicable substantive criterion for purposes of the ASC, the Department agrees that the Applicant has identified, evaluated, and demonstrated compliance with the applicable substantive criteria to the maximum extent possible. The Department recommends that the Council find that the proposed facility is consistent with MCCP Agricultural Policy 4.

Economic Element

Economic Policy 2A: It shall be the policy of the County to maximize the utilization of the local work force as job opportunities increase.

The Applicant states that during the anticipated 15-month construction phase, approximately 100 to 250 people would be employed; and, during operation, approximately two full-time employees would be needed. These temporary and permanent jobs would contribute to the local tax base and economy, and the proposed facility would increase annual property tax revenue to Morrow and Gilliam counties. It is anticipated that some or perhaps most of the workforce would come from the local area. The Department agrees and recommends that the Council find that the proposed facility would be consistent with MCCP Economic Policy 2A.

Economic Policy 3A: It shall be the policy of the County to encourage local producers to new markets for local products and to seek out new products that are in demand in the market place and that can be produced locally.

The Applicant asserts that the proposed facility would add to and diversify the industrial portfolio of Morrow County, while minimizing impacts to farm and agricultural practices; and lease payments for use of the land on which the proposed energy facility would be located would provide a supplemental income source for local landowners without reducing the farmers' productive land base for farming operations. For these reasons, the Department recommends that the Council find that the proposed facility would be consistent with MCCP Economic Policy 3A.

Economic Policy 4B: It shall be the policy of the County to utilize appropriate mechanisms in implementing regulations to ensure that any development adjacent to or in the vicinity of the Boardman Airport is a compatible use and will not impede future growth of the airport.

The Applicant identifies that the proposed facility is in the vicinity of, but greater than five miles from, the Boardman Airport. However, the Applicant suggests that based upon the estimated construction-related traffic volume, compliance with applicable FAA regulations, and the distance of the facility to the airport, the proposed facility would be compatible with and would not impede future growth of the airport. For these reasons, the Department recommends that the Council find that the proposed facility would be consistent with MCCP Economic Policy 4B.

Economic Policy 5A: It shall be the policy of the County to utilize appropriate mechanisms in implementing regulations to reduce undesirable impacts from industrial and commercial developments, including the establishment of buffer zones or other mitigation measures if determined to be necessary.

The Applicant explains that the proposed facility site was selected to minimize undesirable impacts from industrial developments, and as presented in ASC Exhibit K would not result in

significant adverse impacts or significantly increase the cost of accepted farm practices. The Applicant further describes that mitigation measures have been proposed to address unavoidable impacts from the proposed development. The Department agrees and recommends that the Council find that the proposed facility would be consistent with MCCP Economic Policy 5A.

Economic Policy 6C: It shall be the policy of the County to require that development plans be based on the best economic information available, comply with applicable environmental standards, and take into account the effects of the development on the existing economy and available resources, including transportation and work force.

The Applicant describes that the proposed facility would utilize solar energy resources within Morrow County and would therefore monetize a local, renewable energy source without injury to environmental, economic, or other area resources. Based on the evaluation presented in the ASC of potential environmental impacts and impacts to other area resources, the Department does not consider that, without appropriate mitigation, the proposed facility would be constructed and operated without "injury to environmental or other area resources." However, the Applicant proposes mitigation measures and the Department recommends, as applicable, that those measures be imposed by the Council as site certificate conditions, in addition to other conditions determined necessary to satisfy the requirements of an applicable Council standard. Based upon compliance with the recommended site certificate conditions, as described throughout this order, and because local employment opportunities from proposed facility construction and operation would result in a local economic benefit, the Department recommends that the Council conclude that the proposed facility would be consistent with MCCP Economic Policy 6C.

Energy Conservation Element

Energy Conservation Policy 3: It shall be the policy of Morrow County, Oregon, to encourage development of solar and wind resources.

The Applicant states that the proposed facility is a solar photovoltaic power generation facility which would be consistent with MCCP Energy Conservation Policy 3. The Department agrees and recommends that the Council find that the proposed facility is consistent with MCCP Energy Conservation Policy 3.

Energy Conservation Policy 9: The County will encourage the development of alternative energy sources in County industries and businesses.

The Applicant states that it proposes to develop a solar photovoltaic power generation facility, which because it is a renewable energy source and not fossil-based, is considered an "alternative energy source" and is therefore consistent with MCCP Energy Conservation Policy

9. The Department agrees and recommends that the Council find that the proposed facility is consistent with MCCP Energy Conservation Policy 9

IV.E.2. Gilliam County

Related and supporting facilities to the energy facility proposed to be located within Gilliam County include the 115 kV transmission line and access road, and the POI line tap and 10,000-acre staging area.

The Council appointed the Gilliam County Court as a SAG pursuant to ORS 469.480(1). The applicable substantive criteria related to each type of proposed facility land use, in effect on the date the Applicant submitted the ASC, are presented in Table LU-2, *Gilliam County Applicable Substantive Criteria* below.

Table LU-2: Gilliam County Applicable Substantive Criteria

Gilliam County Comprehensive Plan and Land Development Ordinance (GCZO)	
Article 4 – Use Zones	
Section 4.020	Exclusive Farm Use, EFU Zone
Subsection A	High Value Farmland
Subsection D	Conditional Uses Permitted
Gilliam County Comprehensive Plan	
Goal 3 Agricultural Lands Goal 5 Natural Resources, Scenic, and Historic Areas, and Open Spaces Goal 8 Recreation Needs Goal 13 Energy Conservation	

ASC Exhibit K includes an evaluation of the following additional criteria from the GCZO for the proposed 115 kV transmission line and its accessory uses:

- GCZO Section 4.020 Exclusive Farm Use
  - Subsection C Planning Director Review
  - Subsection H Specific Review Criteria
  - Subsection J Property Development Standards
- GCZO Section 7.010 Conditional Uses
  - Subsection A General Approval Criteria and Conditions
- GCZO Section 7.020 Standards Governing Conditional uses
  - Subsection A Conditional Uses, Generally
  - Subsection Q Conditional Uses in Exclusive Farm Use Zones
- GCZO Section 8.140 Site Plan Review
  - Subsection A Purpose
  - Subsection B Procedure

- Subsection C Application Requirements
- Subsection D The Location, Dimensions and Methods of Improvement
- Subsection E Detailed Plan
- Subsection F Outdoor Storage and Activities, if Permitted in the Zone
- Subsection G Topographic Information
- Subsection H Drainage Plan
- Subsection I Identification of Proposed Trash Storage Locations
- Subsection J Location of All Existing and Proposed Utilities
- Subsection K Elevation Drawings
- Subsection L Approval Standards
- Subsection M The Development Will Not Result in Traffic Volumes That Will Reduce the Performance Standard
- Subsection N The Development Will Not Adversely Affect Agricultural or Forestry Use

As described below, the county cannot impose additional approval criteria for the proposed 115 kV transmission line and its accessory uses beyond the requirements that are directly consistent with ORS 215.274 because, as a utility facility necessary for public service under ORS 215.283(1)(c), the proposed 115 kV transmission line and its accessory uses are a permitted use subject only to the requirements of ORS 215.274 related to associated transmission lines.[111] Therefore, because the additional criteria included in ASC Exhibit K (also listed above), are not considered applicable substantive criteria for the proposed 115 kV transmission line and its accessory uses, it is not appropriate for the Department to recommend, or the Council to make, findings of compliance and conclusions of law. The Department, however, in its review of ASC Exhibit K, evaluated the Applicant's information and analysis provided in response to the above-identified county zoning provisions, and considers the information provided to be consistent with the requirements and that the information provided would adequately satisfy the requirements, if applicable. Additionally, representations included in an ASC are necessarily considered binding commitments and are therefore incorporated herein by reference into the proposed order and site certificate.[112] The Applicant's representations provided in response to the above-listed zoning provisions would be expected to be adhered to in accordance with Mandatory Condition 2 (see Section IV.A., *General Standard of Review* of this order) requiring the Applicant (certificate holder) to design, construct and operate the facility substantially as described in the site certificate.

Because the above-listed GCZO zoning provisions do not represent applicable substantive criteria for the proposed 115 kV transmission line and its accessory uses, additional evaluation is not included in this order.

[111] Brentmar v. Jackson County, 321 Or 481, 496 (1995).
[112] BSEAPPDoc71. ASC Exhibit K, Section K.5.2.1. p. K-27 – K-36. 2017-09-01.

IV.E.2.1 Gilliam County Zoning Ordinance (GCZO)

*GCZO Article 4 Use Zones***,** *Section 4.020 Exclusive Farm Use*

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.

In addressing applicable local requirements for facility components to be located on high-value farmland within Gilliam County's EFU zone, the Applicant correctly refers to ORS 195.300(10)(f)(C) and evaluates the impacts of the proposed 115 kV transmission line and access road to high-value farmland under GCZO Article 4, Section 4.020 and OAR 660, Division 33.

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.

16. Utility facilities necessary for public service subject to the provisions of ORS 215.275 and OAR 660-033-0130(16). No local legislative criteria shall be applied for consideration of establishing a utility facility necessary for public service.

The Applicant correctly considered the proposed 115 kV transmission line under the land use category for "utility facilities necessary for public service," separate and distinct from the "commercial utility facility" land use category applied to the solar power generation facility. The Applicant also considered the proposed transmission line service road under a separate land use category under GCZO Article 4**,** Section 4.020(C) for "transportation improvements on rural lands." The Department notes, however, that because GCZO Article 4**,** Section 4.020(D) establishes conditional uses permitted within an EFU zone, including "utility facilities necessary for public service," and applies to specific uses and their "accessory use," that the proposed transmission line service road is an accessory use and is therefore appropriately evaluated under GCZO Article 4**,** Section 4.020(D) and does not need to be evaluated as a separate land use category. The Department also considers the proposed POI and 10,000 square foot staging area to be an "accessory use" to the proposed 115 kV transmission line and also appropriately evaluated under the "utility facilities necessary for public services" land use category.

GCZO Section 4.020(D)(16)(b) mirrors the requirements of ORS 215.275.[113] The Applicant explains, and the Department agrees, that GCZO Section 4.020(D)(16)(b) does not apply to the proposed 115 kV transmission line because, based on the ORS 469.300 definition of an "associated transmission line," the requirements of ORS 215.274 apply instead of ORS 215.275.[114] The Department's evaluation of the Applicant's ORS 215.274 analysis is provided in Section IV.E.3 below.

Notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.274 are not applicable to the proposed 115 kV transmission line because, as a utility facility necessary for public service under ORS 215.283(1)(c), the use is permitted subject only to the requirements of ORS 215.274 and the County cannot impose additional approval criteria.[115]

IV.E.2.2 Gilliam County Comprehensive Plan

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*

[113] The specific text of GCZO Section 4.020(D)(16)(b) is provided in ASC Exhibit K and is omitted in this order for brevity.
[114] ORS 469.300(3) defines "associated transmission line," 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.
[115] Brentmar v. Jackson County, 321 Or 481, 496 (1995).

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 described above, GCZO Section 4.020(D)(16) establishes "utility facilities necessary for public service," as identified under ORS 215.283(1)(c), as a permitted use within EFU zoned land. Therefore, the Department recommends that Council conclude that the proposed 115 kV transmission line and "its accessory uses" including the proposed private service road and POI 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 establishes ODFW consultation when proposed land use actions may affect fish or wildlife habitats within natural resources, scenic and historic areas, and open spaces. The Applicant identifies that ODFW has been consulted because the Willow Creek Wildlife Area is a natural resource located in proximity to the proposed 115 kV transmission line. Potential impacts to the Willow Creek Wildlife Area from noise, traffic, water, wastewater and visual impacts of the proposed 115 kV transmission line were evaluated by the Applicant in ASC Exhibit L. Based on review of ASC Exhibit L and P, the Department recommends that the Council find that the proposed 115 kV transmission line and "its accessory uses" including the proposed private service road, POI, and staging area would be consistent with this policy.

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

This comprehensive plan policy appears to be 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" for the proposed 115 kV transmission line, the Department agrees with the Applicant's assertion that the proposed 115 kV transmission line would transmit an alternative source of energy and therefore, when considered together with the proposed facility, would support this policy. The Department recommends that the Council find that the proposed 115 kV transmission line and "its accessory uses" including the proposed private service road, POI, and staging area 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 it would block access to or otherwise have a significant adverse impact on public open space lands. Based on review of the impact evaluation included ASC Exhibit L and T, the Department agrees with the Applicant's evaluation and recommends that the Council find that the proposed 115 kV transmission line and "its accessory uses" including the proposed private service road, POI, and staging area would be consistent with this policy. As discussed in Section IV.L, *Recreation*, the Department recommends Recreation Conditions 1 and 2, which would require the site certificate holder maintain access and appropriate signage to the Willow Creek Wildlife Area during proposed facility's construction and operation.

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 on neighboring properties should be considered when reviewing applications for new energy generation facilities. The Applicant states that the, "transmission line is a component of the solar power generation facility as defined in OAR 660-033-0130(38)(e)." The Department disagrees with the Applicant's consideration of the proposed 115 kV transmission line as part of the energy generation facility under OAR 660-033-0130(38)(e), specifically because the rule states that the, "photovoltaic solar power generation facilities also include electrical cable collection systems *connecting the photovoltaic solar generation facility to a transmission line*.." [Emphasis added.] Therefore, because neither the proposed 115 kV transmission line nor its accessory uses would generate energy, the Department recommends that Council conclude that this policy is not applicable and does not represent an applicable substantive criteria that must be considered in this review. Regardless, the evaluation of potential impacts from the proposed facility, as discussed throughout the ASC and in this proposed order, considers neighboring properties. The design of the proposed

facility, and compliance with the recommended conditions, would reduce adverse impacts to neighboring properties.

IV.E.3. Directly Applicable State Statutes and Administrative Rules

Oregon Revised Statutes

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

As described in Section III.B., *The Facility*, the Applicant proposes a 115 kV transmission line extending approximately 2.1 miles to connect the proposed energy facility to a proposed POI with BPA's existing Boardman-Alkali 115 kV transmission line. The proposed 115 kV transmission line would be located entirely within Gilliam County and exclusively on EFU-zoned land.

The Department recommends the Council evaluate the proposed 115 kV transmission line as a "utility necessary for public service," a use permitted in EFU zoned land pursuant to ORS 215.283(c). If a utility facility necessary for public service is an associated transmission line as that term is defined in ORS 215.274 and ORS 469.300, the use may be established in EFU-zoned land as provided in ORS 215.274. ORS 469.300(3) defines an "associated transmission line" 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). Gilliam County has not adopted local code provisions to implement ORS 215.274. Therefore, the requirements of the statute apply directly to the proposed facility and the applicable portions are evaluated below.

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

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

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

ORS 215.274(3)(a) requires approval of the associated transmission line if the entire route is located on non-high value farmland or on nonarable land. High value farmland is defined in ORS 195.300. As explained in ASC Exhibit K, the proposed 115 kV transmission line would be located partially on high value farmland as defined in ORS 195.300(10)(f)(C). Therefore, the proposed 115 kV transmission line would not satisfy this requirement.

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

ORS 215.274(3)(b) requires approval of the associated transmission line if the entire route is co-located with an existing transmission line. As explained in ASC Exhibit K, the proposed 115 kV transmission line would not be co-located with an existing transmission line. Therefore, the proposed 115 kV transmission line would not satisfy this requirement.

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

ORS 215.274(3)(c) requires approval of the associated transmission line if the entire route parallels an existing transmission line corridor. As explained in ASC Exhibit K, the alignment of the proposed 115 kV transmission line would parallel Portland General Electric's (PGE) existing transmission line corridor for the entire length, with approximately 100-feet of minimum separation between centerlines. Therefore, the proposed 115 kV transmission line would satisfy this requirement.

d) The associated transmission line is located within an existing right-of-way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground.

ORS 215.274(3)(d) requires approval of the associated transmission line if the entire route is located within an existing above-ground linear facility right-of-way. As explained in ASC Exhibit K, the proposed 115 kV transmission line would parallel PGE's existing transmission line corridor; however, it would not be located within an existing above-ground linear facility right-of-way. Therefore, the 230 kV transmission line would not satisfy this requirement.

Because the proposed 115 kV transmission line would satisfy the requirement under ORS 215.274(3)(c), an evaluation of the subsection (4) factors is not necessary, and, in accordance with ORS 215.274(3), the Department recommends that the Council approve the land use review of the 115 kV transmission line.

Oregon Administrative Rules

OAR 660-033-0130(5) and (38) – Standards for Approval for Photovoltaic Solar Power Generation Facility in Exclusive Farm Use Zones

LCDC adopted specific rules for photovoltaic solar power generation facilities to address the specific impacts of these facilities on agricultural lands. LCDC's solar rules establish specific requirements for facilities that would preclude 12 or more acres of high-value farmland, or 20 acres of arable land, from use as a commercial agricultural enterprise under which an exception is required to be taken pursuant to ORS 197.732 and OAR Chapter 660, division 4. As explained in ASC Exhibit K, the proposed energy facility would be located on soils meeting the definition of "arable land" and, based on its location within the Columbia Valley AVA, and meeting certain requirements for elevation, slope, and aspect, portions of the proposed energy facility would also be located on "high-value farmland" pursuant to ORS 195.300(10(f)(C).[116] The evaluation required under OAR 660-033-0130(5) and (38) for proposed solar power generation facilities located on high-value farmland and arable land is presented below.

As relevant to the proposed energy facility, OAR 660-033-0130(5) provides that:

****Uses may be approved only where such uses:*
(a) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and
(b) Will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

In ASC Exhibit K, the Applicant identifies that the provisions of OAR 660-033-0130(5)(a) and (b) are identical to the provisions of MCZO Section 6.025(A)(1) and (2). The Department agrees and recommends that the Council find, based on the analysis and reasoning included in the evaluation of MCZO Section 6.025(A), that the proposed energy facility would satisfy the OAR 660-033-0130(5) provisions.

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

****A proposal to site a photovoltaic solar power generation facility shall be subject to the following definitions and provisions:*

[116] Pursuant to OAR 660-033-0130(38)(a) defines "arable land" as "land in a tract that is predominantly cultivated or, if not currently cultivated, predominantly comprised of arable soils." OAR 660-033-0130(38)(b) defines "arable soils" as "soils that are suitable for cultivation as determined by the governing body or its designate based on substantial evidence in the record of a local land use application, but "arable soils" does not include high-value farmland soils described at ORS 195.300(10) unless otherwise stated."

f) For high-value farmland described at ORS 195.300(10), a photovoltaic solar power generation facility shall not preclude more than 12 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 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.

OAR 660-033-0130(38)(f) 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. 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)(c) and OAR 345-022-0030(4).

OAR 660-033-0130(38)(f)(A) requires the Applicant to demonstrate that the proposed energy facility would not "create unnecessary negative impacts on agricultural operations conducted on any portion of the subject property not occupied by project components." The Applicant 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 energy facility 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, irrigating, fertilizing, or harvesting on adjacent property. The proposed energy facility site would be located on land leased from Threemile Canyon Farms 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.[117] As presented in ASC Exhibit K,

[117] In a comment letter on the record of the public hearing, 1000 Friends of Oregon stated that there "does not appear to be anything in the record indicated [sic] that water rights could not be transferred to this property…if

Attachment K-1, a letter from the General Manager of Threemile Canyon Farms describes that the site has historically only been used for winter/spring cattle grazing and that the proposed facility would not adversely impact or increase the cost of farm practices within the vicinity.[118] Based on the existing use of the proposed facility site, letter from the General Manager, and design of the proposed facility, the Department agrees with the Applicant's analysis and recommends that the Council conclude that the proposed energy facility 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).

OAR 660-033-0130(38)(f)(B) requires the Applicant to demonstrate that the proposed energy facility 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 Applicant must demonstrate compliance with the Council's Soil Protection standard, and based on Applicant representations in the ASC, the Department recommends the Council impose conditions that require implementation of a DEQ-approved Erosion and Sediment Control Plan during construction (see recommended Soil Protection Condition 1) and implementation of a Revegetation and Noxious Control Plan during operation (see recommended Condition Fish and Wildlife Condition 10). These plans include best management practices to be implemented during construction and operation 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. Consistent with the recommendations included for satisfying OAR 660-033-0130(38)(f)(B), recommended Soil Protection Condition 1

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this were [sic] land were irrigated it would likely be very productive cropland." BSEAPPDoc DPO Public Comment 1000 Friends of Oregon Darzen 2017-11-24. The area within the site boundary is predominantly Class III-IV soils if irrigated; however, the land within the site boundary is not irrigated and, as stated in the application, has never been irrigated (ASC Exhibit K, Section K.2). As discussed in ASC Exhibit K, transferring water rights from another portion of the subject tract to the site boundary would require the landowner to dry up an equivalent number of acres of the existing place of use. An irrigation system already exists to irrigate the existing place of use, and it does not extend to the area within the facility site boundary. In a comment on the preliminary ASC, DLCD stated: "The applicant has provided a good overview of water rights on the subject tract. We agree that transferring water rights from an existing pivot to the project area is not supported by our rules." BSEAPPDoc37-1 DLCD comments on June version of pASC Exhibit K 2017-06-28. Additionally, Greg Harris, representing Threemile Canyon Farms, LLC, commented on the record of the public hearing and confirmed that transferring water rights from another portion of the subject tract to the proposed facility site would necessitate drying up the area from where the water was transferred. BSEAPPDoc85 DPO Hearing Public Comment Harris 2017-12-14.

[118] Greg Harris, a representative from Threemile Canyon Farms, LLC, provided oral testimony on the record of the public hearing stating that the site is only grazed approximately 30 to 45 days per year, and that the proposed facility would not adversely affect any other farming operations. BSEAPPDoc85 DPO Hearing Public Comment Harris 2017-12-14.

also requires the Applicant to, prior to construction, submit to the Department and Morrow County Planning Director a construction-related topsoil management plan describing how topsoil would be stripped, stockpiled and clearly marked to maximize preservation of impacted topsoil. Based upon compliance with the recommended conditions, the Department recommends that the Council conclude that the proposed energy facility would satisfy the requirements under OAR 660-033-0130(38)(f)(B).

OAR 660-033-0130(38)(f)(C) requires the Applicant to demonstrate that the proposed energy facility would not "result in unnecessary soil compaction that reduces the productivity of soil for crop production." As explained in ASC Exhibit K, construction and operational related impacts would be limited within the proposed site boundary. Unnecessary soil compaction related impacts would be limited by the Applicant's use of existing or constructed access roads, limiting potential impacts from driving across or through productive soils used for crop production. The Applicant represents that revegetation activities implemented during operation would include scarification of compacted soils, which the Department recommends be imposed in Fish and Wildlife Habitat Condition 10. Based upon the design of the proposed facility and compliance with the recommended condition, 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) requires the Applicant to demonstrate that the proposed energy facility would not result in the "unabated introduction or spread of noxious weeds and other undesirable weed species." Based on Applicant representations, and to satisfy the requirements of this criteria and the Council's Fish and Wildlife Habitat standard, the Department recommends Council impose Fish and Wildlife Habitat Condition 10, requiring the Applicant to implement a Revegetation and Noxious Weed Control Plan, following receipt of approval from the Department in consultation with ODFW and county weed control authorities. Based upon compliance with the recommended condition, the Department recommends that the Council conclude that the proposed energy facility would not result in unabated introduction or spread of noxious weeds and other undesirable weed species and would satisfy the requirements under OAR 660-033-0130(38)(f)(D).

OAR 660-033-0130(38)(f)(E) requires the Applicant to demonstrate that: 1) non high-value farmland soils are not available on the subject tract; 2) siting the project on non high-value farmland soils, if present, would significantly impact the project's ability to operate; or 3) the site is better suited than other possible sites because it would allow continued operation of existing farmland.

The Applicant has not provided sufficient information for the Department to recommend that the Council find that non high-value farmland soils are not available on the subject tract. The Applicant has provided sufficient information for the Department to recommend that the Council conclude, that siting the project on non high-value farmland soils on any other part of the subject tract would significantly impact the project's ability to operate, and that the site is

better suited than other possible sites on the tract because it would allow continued operation of an existing commercial farm.

"Tract" is defined in LCDC rule as "one or more contiguous lots or parcels under the same ownership." OAR 660-033-0020(14). The Applicant's Figure K-1 depicts the ownership of the land within the site boundary and the surrounding area. The area within the site boundary is part of a much larger tract: a group of contiguous lots and parcels all owned by Threemile Canyon Farms, LLC. Although the Applicant does not provide the size of the tract, Figure K-1 indicates that it is, at a minimum, in excess of 50 square miles in size. The land within the site boundary is comprised of primarily non high-value farmland and a much smaller amount (but more than 12 acres) of high-value farmland.

Although the Department considers the OAR 660-033-0130(38)(f)(E)(i) and (ii) analyses in ASC Exhibit K insufficient, the Applicant's letter submitted on the record of the public hearing provides information on the limitations on siting the proposed facility on areas outside the site boundary but within the tract that are not considered high-value farmland.[119] These limitations include land that is managed for irrigated agriculture, within Boardman Farm Conservation Area, adjacent to the Boardman Bombing Range, or presents topographic and environmental challenges for siting a solar facility (including creeks and hills). The Applicant refers to the discussion in ASC Exhibit K at K-47 that explains how these features limit siting a solar facility on land within or in close proximity to these features.[120] The Applicant's assertions are supported by a figure attached to the comment letter showing the locations of non high-value farmland soils on the subject tract in relation to these features. Therefore, the Department recommends that the Council conclude that there is non high-value farmland outside the site boundary but within the subject tract [and therefore that the Applicant does not meet the requirements of OAR 660-033-0130(38)(f)(E)(i)], but that siting the project on non high-value farmland soils present on the subject tract outside of the site boundary would significantly impact the project's ability to operate successfully, and that therefore the requirements under OAR 660-033-0130(38)(f)(E)(ii) have been satisfied.

The Applicant has provided sufficient information for the Department to recommend that the Council find that the proposed site is better suited to allow continuation of an existing

[119] BSEAPPDoc82 DPO Comment Applicant 2017-12-14.

[120] The analysis in ASC Exhibit K at K-47 contains the Applicant's evidence of compliance with OAR 660-033-0130(38)(g)(A) regarding nonarable soils; however, because the Applicant's comment letter on the record of the public hearing briefly explains that these same limitations apply to non high-value farmland within the subject tract, the more detailed analysis in ASC Exhibit K at K-47, taken together with the evidence provided in the Applicant's comment letter, supports the Department's recommendation that Council find that the facility would comply with OAR 660-033-0130(38)(f)(E)(ii).

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. The Applicant has provided a letter from Marty Myers, General Manager of Threemile Canyon Farms, stating that the proposed site has never been irrigated. In comparison, much of the land within the subject tract is depicted in Figure K-1 as being under center-pivot irrigation. Moving the proposed site to any currently irrigated land within the subject tract would not allow for continuation of existing farm operations on these lands. The proposed site, in contrast, has limited productivity and has historically been used only for winter and spring cattle grazing (Attachment K-1), and grazing only occurs approximately 30 to 45 days per year.[121] Therefore, the Department recommends that the Council conclude that the proposed site is better suited than other lands within the subject tract to allow continuation of existing farm operations, and the requirements under OAR 660-033-0130(38)(f)(E)(iii) have been satisfied.[122]

OAR 660-033-0130(38)(f)(F) requires the Applicant to establish a 1-mile study area and evaluate the presence of other approved and developed solar facilities, and identifies specific evaluation criteria in circumstances where at least 48 acres of land within the study area have been developed for solar facilities. The Applicant 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 and therefore under OAR 660-033-0130(38)(f)(F)(i), no further action is necessary. The Department agrees with the Applicant'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) 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:*

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[121] Greg Harris, a representative from Threemile Canyon Farms, LLC, provided oral testimony on the record of the public hearing stating that the site is only grazed approximately 30 to 45 days per year. BSEAPPDoc85 DPO Hearing Public Comment Harris 2017-12-14.

[122] In a comment letter on the record of the public hearing, 1000 Friends of Oregon stated that the ASC appears to be missing information about the agricultural potential of the rest of the tract, as required by OAR 660-033-0130(38)(f)(E). BSEAPPDoc DPO Public Comment 1000 Friends of Oregon Darzen 2017-11-24. However, while the Department's draft proposed order agreed that the Applicant did not provide sufficient evidence that OAR 660-033-0130(38)(f)(E)(i) and (ii) had been met, OAR 660-033-0130(38)(f)(E) only requires that one of the three listed criteria be met [see the use of the word "or" between OAR 660-033-0130(38)(f)(E)(ii) and (iii)]. In addition, as described in this proposed order, the Applicant provided information on the record of the public hearing that the Department recommends Council find satisfies the requirements of OAR 660-033-0130(38)(f)(E)(ii).

(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.

OAR 660-033-0130(38)(g)(A) requires the Applicant 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.[123]

The Applicant explains that, although extremely limited, nonarable soils are present on the subject tract but are predominately located within the Boardman Farm Conservation Area that

[123] 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 it includes areas outside of the proposed site boundary area.

is permanently dedicated to conservation purposes by Threemile Canyon Farm under a Multi-Species Candidate Conservation Agreement with Assurances (CCAA) for Washington ground squirrel, ferruginous hawk, loggerhead shrike, and sage sparrow. As described in ASC Exhibit K, there is an area of nonarable land to the north of the Boardman Farm Conservation Area; however, this land is immediately west of and within restricted airspace for the US Naval Weapons System Training Facility commonly referred to as the Boardman Bombing Range, and the Applicant asserts that it is unlikely that the Department of Defense and Federal Aviation Administration would approve a solar project development in this location. Therefore, the Applicant asserts and the Department agrees that these nonarable soils in and north of the Boardman Conservation Area are not available for the proposed energy facility.

The Applicant further argues that siting the proposed energy facility on the limited nonarable soils present within the subject tract would significantly reduce operability because the nonarable soils are not located in proximity to the POI and some are along creeks or hills where construction and operation of a solar project would be difficult. The Applicant also expresses that the proposed site is significantly better suited to allow continuation of the existing commercial agricultural operation on the subject tract than any other location. The construction and maintenance of solar panels and associated equipment at the facility would not alter or reduce the area under cultivation by Threemile Canyon Farms elsewhere on the tract or surrounding areas also under their ownership, would not necessitate relocating any access routes or farm infrastructure (including irrigation equipment), and would not result in changes to the practices for planting, irrigating, fertilizing, or harvesting the circles. This explanation, in addition to the letter from Marty Myers, General Manager of Threemile Canyon Farms (Attachment K-1), demonstrates that proposed facility site is significantly 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.

Based on the above analysis, the Department recommends the Council conclude that because there are limited nonarable soils on the subject tract, siting the proposed energy facility on any alternate location within the tract would significantly reduce operability, 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.[124]

[124] In a comment letter on the record of the public hearing, 1000 Friends of Oregon stated that the ASC appears to be missing information about the agricultural potential of the rest of the tract, as required by OAR 660-033-0130(38)(g)(A). BSEAPPDoc DPO Public Comment 1000 Friends of Oregon Darzen 2017-11-24. However, the commenting organization does not specify what information about the agricultural potential of the rest of the tract is absent from the ASC, and as described in this order, the Applicant provided information in the ASC that the Department considers adequate to demonstrate that the provisions of OAR 660-033-0130(g)(A) would be satisfied. DLCD commented on the preliminary ASC requesting more explanation as to why nonarable soils in the subject

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.[125] 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)(c).

OAR 660-033-0130(38)(g)(C) requires the Applicant 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 Applicant 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 and therefore under OAR 660-033-0130(38)(g)(C)(i), no further action is necessary. The Department agrees with the Applicant'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) requires the Applicant 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.

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.*

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tract cannot be utilized for the proposed facility, and following Applicant revisions to Exhibit K, DLCD stated that the agency was satisfied that the Applicant had addressed DLCD's concerns. BSEAPPDoc37-1 DLCD comments on June version of pASC Exhibit K 2017-06-28.

[125] Note that for EFSC-jurisdictional facilities such as Boardman Solar Energy Facility, it is Council's statutes and rules that govern the goal exception process, found at ORS 469.504(2) and OAR 345-022-0030(4).

OAR 660-033-0130(38)(i) requires the governing body to impose a condition that the Applicant 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. To satisfy this provision, the Department recommends the Council impose Land Use Condition 4 as follows:

> **Land Use Condition 4:** Prior to construction, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland consistent with OAR 660-033-0130(38)(i).

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. The Department recommends several conditions of compliance requiring the Applicant to maintain a bond or letter of credit in amount and form satisfactory to the Council to restore the facility site following cessation of operation, as evaluated in Section IV.G., *Retirement and Financial Assurance*, of this order. Therefore, based upon conditions recommended in Section IV.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.

IV.E.4. Goal 3 Exception

The proposed facility would be sited on more than 12 acres of high-value farmland soils 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 energy facility 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 Applicant 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 Applicant 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 Applicant's reasons justification is based on the standards pursuant to OAR 660-004-0022(3), as presented below, which establish the types of reasons that may be used to justify certain types of uses not allowed on resource lands. However, to be clear, OAR 660-004-0022(3) does not specifically apply under the Council's Land Use standard and associated statutory authority. The Council has not established in rule, and the legislature has not established in statute, specific criteria used by the Council in deciding upon a goal exception under OAR 345-022-0030(4)(c). The Applicant's assessment, utilizing the criteria included at OAR 660-004-0022(3), is discussed below and is a useful and informative evaluation for considering a Goal 3 exception; however, as noted, the Department does not make its recommendations to Council based on a strict evaluation of compliance with OAR 660-004-0022(3), but rather the Department's recommendation is based on an assessment of a number

of factors and reasons that justify the Goal 3 exception under the Council's Land Use standard and OAR 345-022-0030(4)(c), as discussed further below.

> *OAR 660-004-0022(3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts may include, but are not limited to, the following:*
>
> *a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports;*
>
> *b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or*
>
> *c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages that support the decision.*

The Department notes that Division 4 of OAR 660 provides an interpretation of the Goal 2 exception process. As noted above, because OAR 345-022-0030(4) (and ORS 469.504(2)(c)) applies notwithstanding ORS 197.732 (which codifies the text of the Goal 2 exception process) or any rules of the Land Conservation and Development Commission (LCDC) pertaining to an exception process goal, OAR 660-004-0022(3) is not directly applicable to the evaluation of the Applicant's reasons justification. However, as discussed above, the Department considers the criteria to be a useful framework within which to evaluate information supporting the sufficiency evaluation of the Applicant's reasoning, but does not base its recommendations to Council on whether OAR 660-004-0022(3) has been satisfied. The Department takes no position on whether the proposed facility qualifies as a "rural industrial development" for purposes of a Goal 3 exception under LCDC's exceptions process.

Under OAR 660-004-0022(3)(a), the Applicant's reasons justification explains that the proposed industrial use from construction and operation of the energy facility is significantly dependent upon unique resources located on agricultural land, including excellent solar resources and access to the regional grid-interconnection system. ASC Exhibit K, Attachment K-5 presents graphical representations of regional solar resources, obtained from the U.S. Department of Energy. Attachment K-5 represents that annual solar radiation at latitude tilt within the proposed facility area is 5 to 5.5 kilowatt-hours per square meter per day, which appears to be the peak range within Morrow and Gilliam counties for the time period represented (1998-2005).

The Applicant asserts that the proximity of the proposed facility site to the existing regional grid system, approximately 2-miles, also represents a unique resource because it allows for interconnection via the proposed 115 kV transmission line following a reasonably direct route, which is both technically and economically feasible, from the energy facility to the regional grid system.

The Applicant also describes that the proposed facility site provides unique resources ideal for siting of a solar photovoltaic energy facility, based on its specific location with respect to Interstate 84 (I-84) topography, vegetation, and historic and current use of the site. The proximity of I-84 to the proposed facility site would allow for convenient vehicular access during construction and operation. Further, the flat terrain and vegetation including non-native grasses, and the fact that the proposed site is non-irrigated, not cultivated, and undeveloped offers unique, ideal conditions for solar module installation.

The Department questions the use of site conditions (topography, vegetation, and current/historic use) and proximity to the existing regional grid as representative of a "unique resource" on agricultural lands under OAR 660-004-0022(3)(a). Further, the Department questions whether the identified solar resources, specifically solar radiation level and solar latitude tilt, of the proposed facility site, represent a unique resource, as it was intended to be qualified under OAR 660-004-0022(3)(a). As presented in ASC Exhibit K, Attachment K-5, solar radiation levels within the proposed site boundary are similar to solar radiation levels covering most of eastern Oregon and do not represent a clear, unique resource limited to a specific location. Therefore, the Department does not consider the identified solar resources of the proposed facility site to be unique, nor the site-specific solar resources in conjunction with the above-described site conditions, to represent a unique resource for which the proposed facility is significantly dependent. While the Department considers this relevant information for the Council to consider when evaluating facility compliance with OAR 345-022-0030(4)(a) as to which "reasons justify why the state policy embodied in the applicable goal should not apply," the Department recommends that the Council find that the information and analysis provided under the Applicant's evaluation of OAR 660-004-0022(3)(a) is not by itself sufficient to justify a Goal 3 exception for the proposed facility under OAR 345-022-0030(4)(c). In addition, OAR 660-004-0022(3)(a) is not directly applicable to the proposed facility.

Under OAR 660-004-0022(3)(b), the Applicant's reasons justification explains that locating the proposed facility site within urban growth boundaries that are more densely populated would be incompatible, but provides minimal supporting analysis. The Department, therefore, does not consider the information provided sufficient for the Council to determine that this reasons justification is sufficient. The Department recognizes that the proposed facility site would require 759 contiguous acres which may not be available within an urban growth boundary or an appropriate use of the land established in an urban growth boundary generally established for future urban growth and development. However, the Department concludes that, in general, solar power generation facilities would not be hazardous or incompatible with densely populated areas and recommends that the Council find that the information and analysis

provided under the Applicant's evaluation of OAR 660-004-0022(3)(b) is insufficient to support or justify a Goal 3 exception for the proposed facility. In addition, OAR 660-004-0022(3)(b) is not directly applicable to the proposed facility.

Under OAR 660-004-0022(3)(c), the Applicant's reasons justification explains that the proposed facility site would have a significant comparative advantage due to its location, specifically its proximity to the existing regional transmission grid and I-84, the availability of solar resources, topographic and geographic resources, and its location on non-irrigated, non-productive, agricultural lands. The Applicant asserts that the proposed energy facility would benefit the local economy through employment opportunities, and would provide contributions to the local tax base. Based upon the information in the record, the Department agrees that the facility site would have a significant comparative advantage, and concludes that use of the land for the proposed facility site would have a significant comparative advantage due to its location, would benefit the local economy, and would cause only minimal loss of productive resource lands. While OAR 660-004-0022(3)(c) is not directly applicable to the proposed facility, the Department considers this relevant information for the Council to consider when evaluating facility compliance with OAR 345-022-0030(4)(a) as to which "reasons justify why the state policy embodied in the applicable goal should not apply," as further discussed below.

The Applicant's reasons justification also includes that the proposed facility would further advance important County and State policies supporting renewable energy development. ASC Exhibit K represents MCCP Energy Conservation Policies 3 and 9, which support renewable energy development. ASC Exhibit K suggests that State policy supporting renewable energy development is represented by the implementation of ODOE's 2005 Renewable Action Plan, Senate Bill (SB) 838, and SB 1547. Because County policy supports renewable energy development and State plans and senate bills establish goals for increasing the percentage of renewable energy sources in the source mix, the Department agrees that the proposed facility would be consistent with the identified policy goals. However, because the identified State and county policies do not address the specific location of facilities, nor direct facility development on agricultural lands, the Department does not consider consistency with State and county level policies to represent a qualified justification for a Goal 3 exception, as the goal exception requested is specific to the proposed facility, its location, and its overall impact to site-specific agricultural lands.[126] The Department therefore recommends that Council conclude that while development of the proposed facility as a renewable energy source would further and advance

[126] In ASC Exhibit K, the Applicant expresses that the proposed facility would further Statewide Planning Goal 13. In a comment on the complete ASC, DLCD stated, "Although Goal 13 requires consideration of renewable energy in planning efforts, it does not call for development of new renewable energy facilities or address where such facilities should be located. Goal 13 is thus consistent with Goal 3 and the longstanding Agricultural Land Use Policy statement in ORS 215.243 as it does not direct renewable energy to be sited in exclusive farm use zones." The Department agrees with this comment and recommends that Council not consider the Applicant's evaluation of Goal 13 consistency as supportive to the request for a Goal 3 exception. BSEAPPDoc65 Complete ASC Reviewing Agency Comment DLCD Murphy 2017-09-29.

County and State renewable energy resources policy goals, this is not considered a sufficient reason supporting or justifying a Goal 3 exception for the proposed facility.

As stated previously, OAR 660-004-0022(3) is not directly applicable to the evaluation of the Applicant's reasons justification, and therefore the Department does not base its recommendations to Council on whether OAR 660-004-0022(3) has been satisfied. ORS 197.732(2)(c)(A) and ORS 469.504(2)(c)(A) are nearly identical ("reasons justify why the state policy embodied in the applicable goals should not apply" and "reasons justify why the state policy embodied in the applicable goal should not apply," respectively). However, while OAR 660-004-0022 contains rules to implement the LCDC "reasons" standard [under ORS 197.732(2)(c)(A)], the Council's "reasons" standard codified in statute [under ORS 469.504(2)(c)(A)] does not have correspondingly specific implementing rules.[127] Therefore, the Council has broad discretion to interpret compliance with its Land Use standard, including interpreting OAR 345-022-0030(4)(a) as to which "reasons justify why the state policy embodied in the applicable goal should not apply." It is the Department's position that the information contained in Exhibit K and in the above analysis under OAR 660-004-0022(3)(c) – regardless of whether or not the facility would meet the burden of OAR 660-004-0022(3)(c) were that rule directly applicable to the evaluation of the Applicant's reasons justification – provide important information that support a recommendation to Council that a Goal 3 exception should be taken and justification as to why the state policy embodied in Goal 3 should not apply.

As described in Exhibit K and throughout this order, the Department relies upon a number of reasons to justify its recommendation to Council for compliance with the Land Use standard. These reasons include the substantial advantages of the proposed site location including access to solar resources; ideal topographic and geographic conditions; limited impacts to non-irrigated, non-productive agriculture lands; limited impacts to adjacent farmland operations; avoidance of impacts to riparian areas and high quality habitat; access to I-84; access to regional electric transmission grid-system; and benefits to the county economy. In the opinion of the Department, these reasons offset the negative consequences to agricultural land uses of siting the facility at the proposed location (i.e., removing the land within the site boundary from seasonal grazing use during the life of the facility). The Department therefore recommends that the Council find that the proposed facility meets the "reasons" standard under the Land Use standard [OAR 345-022-0030(4)(c)(A)] for a Goal 3 exception.

[127] The implementing rule [OAR 345-022-0030(4)(c)(A)] simply restates the statute [ORS 469.504(2)(c)(A)]: "Reasons justify why the state policy embodied in the applicable goal should not apply".

Comments Received on the Applicant's Goal Exception Request

1000 Friends of Oregon submitted a comment letter on the record of the public hearing.[128] The organization's comment letter concluded that "the threshold for a goal exception is high and is intended to discourage conversion of agricultural land, and especially usable agricultural land, from being converted for nonfarm uses. Although [the organization] believes this site may qualify for a goal exception, applicant has not sufficiently demonstrated that such exception is justified." The organization's specific comments related to the Applicant's goal exception request are discussed in this section of the proposed order. The Morrow County Special Advisory Group provided written and oral testimony on the record of the public hearing stating that Morrow County supports the granting of a Goal 3 exception in support of the Boardman Solar Energy Facility. The Applicant and Greg Harris, a representative of Threemile Canyon Farms, LLC, also provided comments on the record of the public hearing related to the Applicant's goal exception request, as discussed herein.[129,130]

1000 Friends of Oregon noted that the Applicant proposed to analyze the Goal 3 reasons exception under the "rural industrial" category in OAR 660-004-0022(3), but questioned whether the Applicant had demonstrated that the proposed facility is appropriately categorized as "rural industrial" based upon the number of jobs and amount of economic benefit to Morrow County which the facility would generate. In the case cited by 1000 Friends of Oregon throughout their comment letter – *1000 Friends of Oregon v. Jackson County*,_Or LUBA_(October 27, 2017) – the Oregon Land Use Board of Appeals (LUBA) noted that "DLCD stated in relevant part that it was 'uncertain whether or not a utility scale solar project is properly considered a rural industrial activity,' and while DLCD was not convinced that a solar facility is an industrial use, it was 'open to the discussion[.]'" LUBA further noted that DLCD's state agency brief on the case did not take any position on whether or not a utility-scale solar facility can be characterized as an industrial use for the purposes of OAR 660-004-0022(3). The Department takes no position on whether the proposed facility qualifies as a "rural industrial development" for purposes of a Goal 3 exception under LCDC's exceptions process. In addition, the Department notes that, whether or not the facility could be categorized as rural industrial for the purposes of OAR 660-004-0022(3), the LCDC rules pertaining to an exception process goal are not directly applicable to the evaluation of the Applicant's reasons justification.

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[128] BSEAPPDoc DPO Public Comment 1000 Friends of Oregon Darzen 2017-11-24.

[129] BSEAPPDoc81 DPO SAG Comment Morrow County 2017-12-13; BSEAPPDoc82 DPO Comment Applicant Stoel Rives 2017-12-14; BSEAPPDoc83 DPO Hearing SAG Comment McLane 2017-12-14; and BSEAPPDoc85 DPO Hearing Public Comment Harris 2017-12-14.

[130] In addition, Chuck Little, a local resident, commented on the record of the public hearing that the land within the site boundary has little agricultural value and is close to the Bonneville Power Administration grid. BSEAPPDoc84 DPO Hearing Public Comment Little 2017-12-14. Furthermore, Laura Miner, representing Boardman Solar Energy LLC, provided oral testimony stating that the Applicant has worked hard to site the proposed facility to avoid impacts to prime agricultural land, prime wildlife land, and prime recreational land. BSEAPPDoc82 DPO Comment Applicant 2017-12-14.

However, the information provided by the Applicant in its OAR 660-004-0022(3) evaluation is considered for informational purposes in the Department's evaluation of whether or not it recommends the Council find that the proposed facility meets the "reasons" standard under the Land Use standard [OAR 345-022-0030(4)(c)(A)] for a Goal 3 exception.

1000 Friends of Oregon agreed with the Department staff that the Applicant had not adequately demonstrated that the facility is dependent on a "unique resource" when evaluated under OAR 660-004-0022(3)(a). In addition, 1000 Friends of Oregon agreed with the Department staff that the Applicant had not demonstrated why the facility could not be located inside an urban growth boundary, when evaluated under OAR 660-004-0022(3)(b). The Applicant commented that "even a cursory review of inventories of available commercial or industrial lands in urbanized areas demonstrates that it would be difficult to find a site the size of the Facility site within an urban growth boundary." In addition, Morrow County commented that, "Morrow County Planning staff have also reviewed the letter…submitted by 1000 Friend of Oregon. At one point in the letter 1000 Friends suggests that 'solar development should be sited at or near the point of use or within the built environment, such as on existing industrial sites and otherwise unusable space.' Morrow County would not want to see some 600 acres of industrial land consumed with a use that is allowed conditionally on farm land. Other industrial uses currently sited within industrial use zones in Morrow County have a stronger beneficial economic impact than a solar energy development would."

1000 Friends of Oregon stated that the Applicant has not sufficiently demonstrated why the proposed facility site provides a comparative advantage under the Applicant's OAR 660-004-0022(3)(c) analysis given that there is no "locational attractor" that is not also available on urban lands. However, the organization also stated that LUBA recently determined that for a site to have comparative advantage, the "locational attractor" must be on rural lands in order to serve as a basis for an exception under this provision. In ASC Exhibit K, the Applicant describes that one of the advantages of the proposed facility location is its proximity to an energy facility (the regional electric transmission grid for interconnection). The proposed point of interconnection to the Bonneville Power Administration transmission system is located on rural land (see ASC Exhibit K, Figure K-2 Zoning Map showing that the point of interconnection would be located on land zoned EFU). Again, while OAR 660-004-0022(3)(c) is not directly applicable to the evaluation of the Applicant's reasons justification, the proximity of the proposed site boundary to the existing regional transmission grid is one of a combination of reasons why the Department recommends that the Council find that the proposed facility meets the "reasons" standard under the Land Use standard [OAR 345-022-0030(4)(c)(A)] for a Goal 3 exception. However, the Department does not take a position on whether or not LCDC's exceptions process rule in OAR 660-004-0022(3)(c) requires that an applicant demonstrate that there is no "locational attractor" available on urban lands, or whether or not that rule requires that the locational attractor be on rural lands in order to serve as a basis for an exception under LCDC's exceptions process.

1000 Friends of Oregon comment letter stated that "The past and potential for grazing on the property should not be overlooked. The applicant should include an analysis of the lost productivity from the conversion of the land and quantify this loss to the local agricultural economy." In the event that the organization's comment is in relationship to the language in OAR 660-004-0022(3)(c) stating, "Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use…", the Department notes that the letter from the landowner provided by the Applicant (ASC Exhibit K, Attachment K-1) states that the site has limited productivity, developing the facility on the proposed site will facilitate a higher and better use of the land and concentrate solar development off more productive farmland, the facility will not adversely impact farm practices within the vicinity of the facility, and construction and operation of the facility are not anticipated to result in any changes to ongoing operations at Threemile Canyon Farms. In oral testimony provided at the public hearing, a representative (Greg Harris) from Threemile Canyon Farms, LLC stated that the site boundary has never been irrigated, has no water rights, and that moving water to the site boundary would require drying up land that is more suitable for farming than the land within the site boundary. Mr. Harris stated that Threemile Canyon Farms, LLC only grazes cattle on the site approximately 30 to 45 days per year, and that the company does not consider the land suitable for any other type of agricultural use. The Applicant's analysis under OAR 660-004-0022(3)(c) references to ASC Exhibit K, Section K.5.1.2, which describes the economic benefits the facility would provide to Morrow and Gilliam counties. The Morrow County Special Advisory Group commented that construction of the facility would continue to grow and enhance energy production in Morrow County, and would bring jobs to eastern Oregon and reasonably priced electricity to the region. As discussed in this order, it is the Department's position that the information contained in Exhibit K and in the analysis under OAR 660-004-0022(3)(c) – regardless of whether or not the facility would meet the burden of OAR 660-004-0022(3)(c) were that rule directly applicable to the evaluation of the Applicant's reasons justification – provide important information that support a recommendation to Council that a Goal 3 exception should be taken and justification as to why the state policy embodied in Goal 3 should not apply.

Furthermore, in its comment letter, 1000 Friends of Oregon stated that the organization believes the Applicant has not sufficiently demonstrated why the proposed site provides a comparative advantage, given in part that the "applicant has not demonstrated how the site is different than other nearby rural lands, other than the fact that it does not have water rights. Because applicant has not provided an alternatives analysis of other potential sites nearby, there is no way to tell why this site, over other possible sites, actually provides an advantage due to its location." One of the requirements that would apply to an exception request under the ORS 197.732 LCDC exceptions process is the requirement to perform an alternatives analysis. 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, and therefore it is the requirements under ORS 469.504 (and not ORS 197.732) that apply. The Council's goal exception process under ORS 469.504(2) and OAR 345-022-0030(4) does not include a requirement for an alternatives analysis. This was also noted by Councilmember

Jenkins during the Council's December 15, 2017 meeting during the Council's review of the draft proposed order. Therefore, under the Council's exceptions process, an applicant does not have the burden of performing an alternatives analysis, as noted by Councilmember Jenkins during the Council's December 15, 2017 meeting.

After taking the comments from the various entities related to the goal exception request under careful consideration, the Department continues to recommend that the Council find an exception to Goal 3 is justified under OAR 345-022-0030(4)(c) and ORS 469.504(2)(c).

Significant Environmental, Economic, Social and Energy Consequences

Under OAR 345-022-0030(4)(c)(B) and ORS 469.504(2)(c)(B), in order for the Council to determine whether to grant an exception to a statewide planning goal, the Applicant must show that "the significant environmental, economic, social and energy consequences" of the proposed energy facility 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 Applicant asserts that the proposed facility has been designed to avoid impacts to special status species, riparian areas, and high quality habitat (the proposed facility is only anticipated to impact Category 4 habitat). Based on the Department's recommended findings of fact, conclusions of law, and conditions of approval presented in the proposed order related to environmental EFSC standards , the Department recommends that Council find that the proposed energy facility, including mitigation, would not cause significant adverse environmental consequences or impacts.

Economic Consequences

The Applicant 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 diversification of underlying landowner income sources. While existing area within the site boundary is used for grazing, the land is not irrigated and does not possess a water-right, is not used for productive agricultural crops, and does not produce significant economic benefits. Therefore, based on the Applicant's characterization of existing agricultural production and use, the Department recommends that the Council conclude that the proposed facility represents a net benefit compared to the site's existing uses and economic consequences.

Social Consequences

The Applicant 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. Based on distance and topographical features, the Applicant explains that the proposed facility would not be expected to result in significant adverse visual or noise impacts on any scenic resource, protected areas, or important recreational opportunity within the analysis areas. As demonstrated in the applicable sections of this proposed order, the Department agrees that impacts to scenic resources, protected areas, or 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 (including traffic impacts) in Section IV.M, *Public Services*. As discussed in that section, the Department recommends conditions of approval to minimize potential adverse impacts.

As discussed in Section IV.K., *Historic, Cultural and Archaeological Resources*, the Applicant also represents that it would implement measures to avoid direct impacts from construction, operation, or retirement of the proposed facility on cultural or archaeological resources identified as eligible or potentially eligible for NRHP listing, and the Department recommends that the Council adopt these representations as site certificate conditions. As described further in Section IV.K. of this order, following an evaluation of potential indirect impacts to the visual setting of these resources, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Applicant have reached a mutual agreement on the effects the proposed facility may have on historic properties of religious and cultural significance to the CTUIR.

Based on the Department's recommended findings of fact and conclusions of law, and recommended conditions of compliance, as presented in the proposed order under the Council's Scenic Resources standard; Historic, Cultural and Archeological standard; Public Services standard; and Recreation standard, the proposed facility would not cause significant adverse social consequences.

Energy Consequences

The Applicant represents that because the proposed facility would produce up to 75 MW of renewable, emissions-free energy, the energy consequences would be beneficial and would be consistent with Policy 3 of the MCCP Energy Conservation Element. Because the proposed facility would provide a source of renewable energy, the Department recommends that the Council conclude that the proposed facility would not cause significant adverse energy consequences, and would provide a positive energy consequence by producing clean, renewable electricity.

Based upon the above analysis, the Department recommends the Council find that the facility would meet the standard under OAR 345-022-0030(4)(c)(B).

Compatibility with Adjacent Land Uses

Under OAR 345-022-0030(4)(c)(C) (and ORS 469.504(2)(c)(C)), in order for the Council to determine whether to grant an exception to a statewide planning goal, the Applicant must show that the proposed facility is compatible with other adjacent land uses or will be made compatible through mitigation measures. The Applicant explains that adjacent land uses include: farm use, transportation use, transmission line use, and recreation use. The Department, however, recommends that the evaluation of the proposed facility's compatibility with adjacent land uses be based on both adjacent land use zone designations and land uses. As represented in ASC Exhibit K, Figure K-2, land use zone designations within the analysis area include EFU, general industrial, and public/federal; however, with the exception of EFU zoned lands, adjacent land use zone designations are separated from the proposed site boundary by I-84. Based upon the evaluation of impacts under Council standards, including noise, visual, traffic and transportation impacts, as presented in this proposed order, the proposed land use (commercial utility facility necessary for public service) would not be expected to be incompatible with adjacent land uses zoned general industrial and public/federal.

The proposed facility would not be expected to be incompatible with the existing transmission line use within the analysis area. Specifically, the proposed 115 kV transmission line would be parallel to PGE's existing 230 kV transmission but would be separated by a safety buffer distance. Moreover, the proposed facility would not be expected to cause a significant adverse impact to I-84, the land use to the north of the proposed facility. This is further discussed in Section IV. M, *Public Services*, as well as above in Section IV.E.1., *Morrow County* of this order.

The Department considers the proximity of the proposed facility to the Willow Creek Wildlife Area to be important when considering land use compatibility. The Applicant commits to providing access to the Willow Creek Wildlife Area during facility construction (further described in Section IV.L, *Recreation*, of this proposed order). As discussed in Section IV.F, *Protected Areas,* the proposed facility would not be expected to cause a significant adverse impact from noise, visual, traffic, water or wastewater disposal, to the Willow Creek Wildlife Area.

Finally, for adjacent and nearby farmland (the land generally to the south and east of the proposed facility), as described above [under the ORS 215.274 analysis], the Department recommends that the Council conclude that the proposed facility would not cause a significant change to accepted farm practices nor significantly increase the cost of accepted farm practices within the surrounding area. Moreover, the Applicant provided supporting evidence in ASC Exhibit K, Attachment K-1, from the General Manager of Threemile Canyon Farms, the adjacent land owner used for agricultural production, which included a letter stating that the proposed facility would not remove any land from productive economic use, that the proposed site would

facilitate a higher and better use of land, and that the proposed facility is compatible with adjacent farming practices. Therefore, the Department recommends that Council conclude that the proposed facility would be compatible with other adjacent land uses and land use zones and that the facility would meet the standard under OAR 345-022-0030(4)(c)(C).

Conclusions of Law

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

IV.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 facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040.[131] OAR 345-022-0040(3) is applicable to the proposed facility, as the proposed 115 kV transmission line would be routed within 500 feet of an existing utility right-of-way containing a 230 kV transmission line.

As required under OAR 345-021-0010(1)(L), the Applicant identifies protected areas within the analysis area and evaluated the following potential impacts during proposed facility construction and operation: noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions.[132] The analysis area is defined in the project order as the area within and extending 20 miles from the site boundary. The Applicant addresses protected areas in ASC Exhibit L.

The Applicant identifies nine protected areas within the proposed facility's analysis area. The protected areas considered under the Council's Protected Areas standard are listed in ASC Exhibit L on Table L-1.[133] The information from Table L-1 is presented in Table PA-1, *Protected Areas within Analysis Area* below.

[131] OAR 345-022-0040(2) does not apply to the proposed facility, as the facility's transmission line would not cross through a protected area.

[132] The proposed facility would not generate any emission plumes and would not result in visual impacts from air emissions. Therefore, visual impacts from air emissions resulting from facility construction or operation, including but not limited to impacts on Class I Areas as described in OAR 340-204-0050, are not applicable and therefore not addressed in this order.

[133] The Applicant included a Washington State Park in its table of protected areas. The park, Crow Butte State Park, is within the analysis area. However, under OAR 345-022-0040(h), only state parks listed by the Oregon Department of Parks and Recreation are considered under the EFSC Protected Areas standard. As such, Crow Butte State Park is not further addressed in the proposed order.

Table PA-1: Protected Areas within Analysis Area

Protected Area	Distance from Site Boundary (in miles)	Direction	Protected Area Designation Basis (OAR Reference)
Willow Creek Wildlife Management Area	0.5	West	345-022-0040(1)(p)
Horn Butte Area of Critical Environmental Concern	2.1	West	345-022-0040(1)(o)
Arlington Wayside	6.3	West	345-022-0040(1)(h)
Umatilla National Wildlife Refuge	6.1	Northeast	345-022-0040(1)(d)
Boardman Research Natural Area	11.8	Southeast	345-022-0040(1)(o)
Coyote Springs Wildlife Area	15	East	345-022-0040(1)(p)
Lindsay Prairie Preserve	19.8	Southeast	345-022-0040(1)(i)
Umatilla Fish Hatchery	19.9	Northeast	345-022-0040(1)(f)

The distances represented in the table do not include the proposed 115 kV transmission line, which per OAR 345-022-0040(3) is excluded from the Protected Areas standard. As presented in the table, all protected areas within the analysis area are over two miles from the proposed site boundary, except for the Willow Creek Wildlife Management Area (WMA).

Evaluation of Potential Facility Impacts to Protected Areas

Noise Impacts

Existing noise sources within the analysis area include the traffic on I-84, agricultural operations, trains, wind farms, recreational opportunities such as hunting, and a water pumping facility.[134] The Applicant states in ASC Exhibit L that noise from proposed facility construction would be essentially inaudible at protected areas located more than five miles from the site boundary, and noise during operation would be inaudible at all protected areas in

[134] BSEAPPDoc71. ASC Exhibit L. p.L-3. 2017-09-01.

the analysis area particularly when considered with existing noise sources in the area, particularly traffic on I-84, which is adjacent to the northern site boundary.[135]

Proposed facility construction could be audible at the Willow Creek WMA and Horn Butte Area of Critical Environmental Concern (ACEC). The Applicant estimates that construction noise would not likely exceed 44 dBA at Horn Butte ACEC, or 56 dBA at Willow Creek WMA.[136] The Department notes that while the DEQ noise regulations are not the standard used for analysis under the EFSC Protected Areas standard, it is a useful comparison and information source. The DEQ noise regulations prohibit permanent operational facility noise at sites not previously used for industrial purposes at greater than 55 dBA during daylight hours at noise sensitive receptors, and DEQ noise regulations also exempt noise during construction. As stated above, the anticipated construction noise at Horn Butte ACEC is 44 dBA, well under the DEQ noise regulations during daytime facility operation, and at Willow Creek WMA, the 56 dBA is one decibel above the DEQ noise regulations during daytime facility operation. Additionally, neither Willow Creek WMA nor Horn Butte ACEC would meet the definition of a "noise sensitive property," because these are not places normally used for sleeping or normally used as schools, churches, hospitals, or public libraries.[137] While the activities that normally occur at Willow Creek WMA or Horn Butte ACEC (including wildlife viewing, hunting, or hiking) benefit from a relatively quiet environment, as noted, there are a number of existing noise sources in the immediate area around the facility including I-84, SR-74, a railroad, wind farms, and agricultural operations. Finally, facility construction would be short-term and limited in duration, and when complete, facility operation is not anticipated to create audible noise at the protected areas in the analysis area.[138]

Based on the above analysis, the Department recommends that the Council find that proposed facility construction and operational noise would not be likely to result in significant adverse noise impacts to protected areas within the analysis area.

Traffic

As presented above in Table PA-1, *Protected Areas within Analysis Area*, most protected areas in the analysis area are over five miles from the proposed site boundary. ASC Exhibit L, Figure L-1, is a map of the protected areas in the analysis area, and the map shows that the main access route to all protected areas except Willow Creek WMA is via I-84, or via I-84 and SR-74 in the

[135] BSEAPPDoc71. ASC Exhibit L, p. L-3. 2017-09-01.
[136] *Id.*
[137] "Noise-sensitive property" is defined in the DEQ noise regulations at OAR 340-035-0015. The Department notes that while the DEQ noise regulations are not the standard used for analysis under the EFSC Protected Areas standard, it is a useful comparison and information source.
[138] I*d.*

case of Horn Butte ACEC. During construction, I-84 would also be the main route for construction crews and material delivery. However, considering that I-84 is a four-lane interstate highway designed to accommodate transportation of goods and travel by thousands of vehicles per day, any impact from proposed facility construction on access to protected areas in the analysis area (except for Willow Creek WMA) is anticipated to consist of very minor delays, if at all. During proposed facility operation, only approximately two permanent employees would work at the proposed facility, and occasionally deliveries would occur for materials and supplies.[139]

The main access route to the Willow Creek WMA is off Threemile Canyon Road and from a private road, a portion of which would be shared with the proposed facility access point. As described in ASC Exhibit L, as well as in ASC Exhibit U and T, during construction this 600-foot segment of existing road would be upgraded to accommodate facility construction vehicles. During the time when this segment of road is under construction, access to the Willow Creek WMA would be affected. In order to mitigate this impact, the Applicant proposes a number of measures that would allow continued access to Willow Creek WMA during facility construction. These measures are discussed in Section IV.L*, Recreation* of this order. Recommended Recreation Conditions 1 and 2 would require the certificate holder to work with Threemile Canyon Farms and ODFW to develop an alternative access route to the Willow Creek WMA and install appropriate signage to direct people to the area. Additionally, recommended Public Services Conditions 4 and 5 would require the certificate holder to develop and implement a traffic management plan, which would further reduce and mitigate potential traffic impacts to Willow Creek WMA.

Based on the above analysis and recommended conditions (Recreation Conditions 1 and 2, Public Services Conditions 4 and 5), the Department recommends that the Council find that potential traffic-related impacts during construction and operation of the proposed facility would not be likely to result in significant adverse impacts to any protected areas.

Water Use

Water would be used during proposed facility construction mainly for concrete mixing and dust control. Water would be sourced from a permitted local municipal supplier. Water would not be withdrawn from a protected area. During operation, the proposed facility would have minimal water needs that would be fulfilled likely through the use of a well at the O&M building, and if used, the Applicant estimates that the well would provide a maximum of 165 gallons per day during operation. The Applicant notes that during construction, water would be used for dust control and thus limit dust emissions that may otherwise impact the Willow Creek WMA and Horn Butte ACEC.[140] Based on the analysis presented here and in ASC Exhibit L, the Department recommends that the Council find that water use during construction and

[139] BSEAPPDoc71. ASC Exhibit U, p. U-2. 2017-09-01.
[140] BSEAPPDoc71. ASC Exhibit L, p. L-5. 2017-09-01.

operation of the proposed facility would not likely result in a significant adverse impact to any protected area.

Wastewater Disposal

As described in the ASC, the proposed facility would not be attached to a public or private sewer system. During construction, sewage would be managed by portable toilets and regularly pumped and cleaned by a contractor. During operation, the proposed facility would have an onsite septic system at the O&M building to manage sewage. The septic system would be designed in accordance with applicable DEQ or local permitting requirements, and the O&M building would be located on the eastern portion of the site, opposite from the nearest protected area, Willow Creek WMA (which is to the west of the proposed facility). Stormwater would be managed through BMPs and in accordance with the NPDES-1200-C and associated erosion and sediment control plan (further discussed in proposed order Section IV.D, *Soil Protection*). Additionally, if solar modules are washed, it would be done with non-heated water that also does not contain detergents, which would be allowed to infiltrate into the ground in accordance with a DEQ 1700-B General Water Pollution Control Facilities permit.[141,142] As discussed in Section IV.B., *Organizational Expertise* of this order, the Applicant would also need to seek coverage for washwater discharge from maintenance equipment washdown under the WPCF 1700-B permit. Considering the analysis presented here and by the Applicant in ASC Exhibit L, the Department recommends that the Council find that wastewater generated by the proposed facility during construction or operation would not be likely to result in a significant adverse impact to any protected area.

Visual Impacts

The Applicant conducted an assessment of the proposed facility's potential visual impacts to protected areas within the analysis area.[143] During construction, while it is possible that dust from construction could be visible from nearby protected areas if not controlled, the Applicant has committed to managing dust with water, and as such, construction activities are not expected to cause a significant adverse visual impact to any protected area. As described in ASC Exhibit L, due to distance, topography, vegetation screening, and existing development features, after construction is complete, the proposed facility is only expected to be visible from one protected area, Horn Butte ACEC.

[141] BSEAPPDoc71. ASC Exhibit L, p. L-5. 2017-09-01.
[142] As described in Section IV.D, *Soil Protection*, the 1700-B permit is not included in nor governed by the site certificate and would be secured by the Applicant's contractor.
[143] BSEAPPDoc71. ASC Exhibit L, p. L-6 to L-9. 2017-09-01.

While the Willow Creek WMA is 0.5 miles from the site boundary (see table PA-1), the area is located in a canyon at a lower elevation from the proposed facility. As described by the Applicant, the proposed facility would be located 0.5 miles from the top of the canyon. The Applicant included photographs in ASC Exhibit L, taken from the Willow Creek WMA informational kiosk and a main area where hunters and anglers might use the WMA. The photographs show that the proposed facility would not be visible from these locations.[144] As stated by the Applicant in ASC Exhibit L, the proposed facility is anticipated to be partially visible from one protected area, Horn Butte ACEC. As shown on Table PA-1, *Protected Areas within Analysis Area* at its nearest point, Horn Butte ACEC is over two miles from the proposed facility. The Applicant states in ASC Exhibit L (and elsewhere in the ASC) that the primary purpose of the ACEC is to provide habitat for the long-billed curlew. As also described in Section IV.L, *Recreation*, recreational activities that occur at the ACEC include off-road vehicle use, hiking, bird-watching, and rock collecting. While these activities could be affected by views of non-natural features like the proposed facility, it is noted that there are many other development features also visible from the ACEC, including wind turbines, roads, agricultural operations, and transmission lines. The Applicant states that, where the proposed facility would be visible from the Horn Butte ACEC, considering the distance to the proposed facility, the solar modules and fencing would likely only appear as a dark line on the horizon and not dominate the viewscape.

The Applicant describes in ASC Exhibit L (and elsewhere in the ASC), that it would use solar modules that incorporate anti-reflective technology, which would substantially reduce glare from the proposed facility. As described here, the proposed facility would only be partially visible from one protected area; anti-reflective technology would further reduce potential visual impacts to the Horn Butte ACEC.

Considering the analysis presented here and by the Applicant in ASC Exhibit L, the Department recommends that the Council find that the visual impacts of construction or operation of the proposed facility would not be likely to result in a significant adverse impact to any protected area.

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 proposed facility would not be likely

[144] BSEAPPDoc71. ASC Exhibit L, p. L-7. 2017-09-01.

to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Area standard.

IV.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.

To satisfy this standard, the Council must find that the site can be restored to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility and that the applicant has a reasonable likelihood of obtaining a bond or letter of credit, satisfactory to the Council, in an amount adequate 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.[145] In addition, it requires a demonstration that the applicant can obtain a bond or letter of credit 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 proposed facility site can be restored to a useful non-hazardous condition at the end of the proposed facility's useful life, or if construction of the facility were to be halted prior to completion. The Applicant estimates the proposed facility's useful life as 30 years.[146]

As described by the Applicant in ASC Exhibit W, restoring the site to a useful, nonhazardous condition upon cessation of construction or operations, or upon retirement, would involve disconnecting facility components from the transmission system and disconnecting site

[145] OAR 345-022-0050(1).
[146] BSEAPPDoc71. ASC Exhibit W, p.W-1. 2017-09-01.

equipment from aboveground and underground cables. Aboveground equipment, including the solar modules, solar module steel racking system, and electrical and electronic devices (such as the medium voltage step-up transformers, solar inverters, and the disconnect switches) would be removed and transported offsite. Concrete foundations and cables up to three feet below ground would be removed and recycled or transported to a landfill. Cables located three feet or more below ground would be rendered inert and left in place.[147] The O&M building and O&M fence would be removed and the surrounding graveled area would be removed, regraded, and reseeded. While the Applicant's estimated site restoration costs include removal of the internal service roads, access road, perimeter fencing, and the transmission line, the Applicant states that these components would be left in place and maintained if the planned next use of the land would benefit from these components remaining in place. Upon completion of the other proposed facility retirement activities, bare ground portions of the site would be seeded.[148]

The Council's rules include several mandatory site certificate conditions relating to the obligation of the certificate holder to prevent the development of conditions on the site that would preclude restoration of the site and requiring the certificate holder to obtain Council approval of a retirement plan in the event that the facility ceases construction or operation:

> **Retirement and Financial Assurance Condition 1:** 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. [Mandatory Condition OAR 345-025-0006(7)]
>
> **Retirement and Financial Assurance Condition 2:** The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site. [Mandatory Condition OAR 345-025-0006(9)]
>
> **Retirement and Financial Assurance Condition 3:** The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does

[147] *Id.*
[148] BSEAPPDoc71. ASC Exhibit W, p. W-1 and W-2, and Attachment W-1. 2017-09-01.

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 345-025-0006(8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Mandatory Condition OAR 345-025-0006(16)]

In Section IV.B., *Organizational Expertise* of this order, the Department recommends that the Council find that the Applicant has the organizational expertise to construct, operate, and retire the proposed facility in compliance with that Council standard. In addition, the Department recommends that the Council find that the Applicant meets the Council's Soil Protection, Fish and Wildlife Habitat, and Waste Minimization standards (Sections IV.D., IV.H., and IV.N. of this order, respectively). Each of those sections imposes conditions on the Applicant that are designed so that that construction and operation of the proposed facility would minimize adverse impacts on the surrounding land.

Based upon the evidence in the record, the Department recommends that the Council find that the Applicant has the ability to restore the site to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility, subject to compliance with the recommended conditions listed above.

Estimated Cost of Site Restoration

OAR 345-022-0050(2) requires the Council to find that the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount necessary to restore the proposed facility site 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 345-025-0006(8) establishes a mandatory condition, included as Retirement and Financial Assurance Condition 4, which maintains compliance with this requirement.

The Applicant used the Department's former *Cost Estimating Worksheet* to estimate that the total site restoration cost (calculated in Q4 2016 dollars) would be approximately $4.5 million. A summary of the Applicant's cost estimate from Attachment W-1 of Exhibit W is presented in Table RF-1, *Applicant's Decommissioning and Site Restoration Cost Estimate* below.

Table RF-1: Applicant's Decommissioning and Site Restoration Cost Estimate

Proposed Facility Component	Restoration Activity	Cost Estimate[1]
Module Blocks	Disconnect from electrical system, disassemble components, remove equipment and foundations (up to three feet below ground), restore site	$1,994,242
O&M Facilities	Remove O&M facility and fences/gates	$310,912
Substation	Remove substation	$32,770
Transmission Lines	Remove above-ground high-voltage transmission line and collector system junction boxes	$62,739
Internal Service Road and Access Roads	Remove, grade, and seed	$361,409
Restoration of Additional Areas Disturbed by Facility Removal	Grade and seed	$200,435
General Costs	Permits, mobilization, engineering, and overhead costs	$342,375
	Subtotal	$3,304,881
	Subtotal Adjusted to Current Dollars (Q4 2016 dollars)	$3,651,730
Performance Bond	1%	$36,517
	Gross Cost (Adjusted)	$3,688,248
Administration and Project Management	10%	$368,825
Future Development Contingency	10%	$368,825
	Total Site Restoration Cost (current dollars)	$4,425,897
	Total Site Restoration Cost (rounded to nearest $1,000)	$4,426,000
Notes: 1. Numbers may not sum to total due to rounding.		

The Department notes that at a January 13, 2017 meeting with the Applicant and in its March 14, 2017 request for additional information, the Department informed the Applicant that the Department no longer recommends that applicants use the Department's former *Cost Estimating Worksheet* (2011), which is outdated; however, should an applicant elect to use the guide in full or in part, the applicant must discuss and justify the assumptions used to develop the cost estimate. In ASC Exhibit W, the Applicant states that for the retirement and site restoration components of the proposed facility which would be similar to those of a wind energy facility (e.g., grading; seeding; and electrical transmission line removal, transport, and disposal), the Applicant relied upon ODOE's 2011 guidelines for those corresponding wind

energy facility unit costs. For those retirement and restoration activities which substantially differ between wind and solar energy facilities, the Applicant states that unit costs specific to solar energy facilities were developed based on standard industrial practice.[149] However, the Department notes that while some of the text in the model was revised, the Department has not identified a single unit cost that was added or revised by the Applicant to account for differences between decommissioning wind and solar energy facilities.

To evaluate if the Applicant's estimated site restoration cost is of an amount sufficient to restore the site to a useful, non-hazardous condition, the Department engaged a contractor (DNV GL) experienced in tracking and researching energy facility decommissioning cost trends. The contractor reviewed the preliminary ASC Exhibit W and informed ODOE that the Applicant's $0.06/watt (W) estimate (based on a total restoration cost estimate of approximately $4.43 million for a 75 MW facility) is underestimated, in the contractor's professional opinion.[150] The contractor recommended a $0.25/W decommissioning cost estimate,[151] which would equate to a bond or letter of credit in the amount of $18.75 million. The Department's contractor's decommissioning cost estimate of $0.25/W is not based on development of a decommissioning cost estimate specific to the Boardman Solar Energy Facility, but is rather based on a review of proprietary data available to the contractor in one of its roles as a lender's engineer for financial institutions reviewing financial packages for energy facilities. The dataset includes data from numerous jurisdictions with varying regulatory requirements, which makes a direct comparison of those regulatory requirements with the requirements under the Retirement and Financial Assurance standard infeasible.[152] Accordingly, the Department does not recommend that the Council simply require the Applicant to demonstrate a reasonable likelihood of obtaining bond or letter of credit in the amount of $18.75 million (based upon the contractor's $0.25/W estimate). Instead, the Department considers the contractor's analysis of specific shortcomings in the Applicant's cost estimate when evaluating whether the Applicant has demonstrated 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. The contractor explained to ODOE that the difference between the Applicant's estimate and the contractor's estimate is largely driven by differences in estimated removal and recycling/disposal costs.

The Applicant estimated removal and recycling/disposal costs at $0.032/W, whereas the Department's contractor asserts that a $0.22/W cost is more realistic (a difference of

[149] BSEAPPDoc71. ASC Exhibit W, p. W-2. 2017-09-01.
[150] BSEAPPDoc22 ODOE Consultant Review of Exhibit W Site Restoration Cost 2017-03-02.
[151] BSEAPPDoc22 ODOE Consultant Review of Exhibit W Site Restoration Cost 2017-03-02.
[152] BSEAPPDoc76 DNV GL qualifications Kallevig-Childers 2017-11-03.

approximately $0.19/W).[153] The contractor informed the Department that, in the contractor's professional opinion, the Applicant's estimated costs to recycle or dispose of solar modules are likely underestimated. In addition, the contractor informed the Department that the Applicant likely also underestimated labor rates, one of the drivers of removal and recycling/disposal costs.[154] The Department notes that one of the reasons it no longer recommends that applicants use the Department's former *Cost Estimating Worksheet* (2011) is because the labor rates and unit costs in that worksheet have not been updated since 2010. As noted in the Department's 2011 *Site Restoration Cost Estimating Guide*, while applicants may use the Gross Domestic Product Implicit Price Deflators to adjust estimates generated by the Cost Guide to account for economic changes from the 2nd Quarter of 2010 to the quarter and year for which the estimate is prepared (which the Applicant did in Attachment W-1), unit costs in the model should be revised and updated periodically. The *Site Restoration Cost Estimating Guide* states, "The unit costs included in the Cost Guide are expressed in 2nd Quarter 2010 dollars. Periodically (perhaps every five years) these unit costs should be revised and updated to reflect economic changes affecting the costs of labor and the costs of commodities."[155]

Based upon the contractor's assessment, in its March 14, 2017 request for additional information, the Department requested that the Applicant justify or revise the portions of the site restoration cost estimate related to labor and recycling/disposal costs. In response, on April 21, 2017 the Applicant provided a revised Attachment W-1 containing additional or corrected methods and assumptions related to the estimated costs of wrecking steel posts and module blocks, and loading, hauling, and disposing of debris. However, the Applicant did not update or revise labor rates and unit costs, and the Applicant's total estimated site restoration cost did not change.[156] Because unit and labor costs were not updated, and the Applicant continued to rely upon unit and labor costs from seven years ago (albeit with an adjustment for inflation using the Gross Domestic Product Implicit Price Deflator[157]), the Applicant's estimated site restoration cost is likely underestimated.

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[153] The Department's contractor advised ODOE that removal and recycling/disposal costs would be even greater than the contractor's estimate of $0.22/W if future federal regulatory changes require photovoltaic modules to be handled and recycled/disposed of as hazardous waste.

[154] BSEAPPDoc22. ODOE Consultant Review of Exhibit W Site Restoration Cost 2017-03-02, and personal communication between ODOE and DNV GL staff on March 23, 2017.

[155] BSEAPPDoc51. Site Restoration Cost Estimating Guide 2011-01.

[156] The Department compared the April 21, 2017 revised Attachment W-1 to the version submitted by the Applicant on January 31, 2017. BSEAPPDoc50 Attachment W-1 to pASC Exhibit W 2017-01-31.

[157] The Department notes that the Applicant generated the adjustment factor to account for inflation using inconsistent rounding, and therefore the Applicant's adjustment factor as applied to the Applicant's cost estimate is approximately $24,000 less than the Department's same calculations using the Gross Domestic Product Implicit Price Deflator.

In its April 21, 2017 response to the Department's request for additional information, the Applicant provided three example estimates that are less than the Applicant's estimated $0.06/W for facility retirement and site restoration. The Applicant stated that a recent Invenergy solar project was permitted with a decommissioning cost estimate of $0.033/W (20 MW Morgans Corner Solar Energy Center on private land in North Carolina). In addition, the Applicant referred to a fact sheet by NYSun that estimated the cost to decommission a 2 MW solar energy generation facility at $0.03/W.[158] The NYSun fact sheet states that these figures are "based on estimates from the Massachusetts solar market;" however, no reference to a specific dataset, report, or Massachusetts state decommissioning requirements is provided.[159] The Department is unaware of the specific decommissioning requirements of the jurisdictions in North Carolina and Massachusetts applicable to the Applicant's examples. Furthermore, the Department is unaware of whether or not these requirements would be comparable to the Retirement and Financial Assurance standard's requirement that the applicant demonstrate a reasonable likelihood of obtaining a bond or letter of credit sufficient to restore the site to a useful, non-hazardous condition. Therefore, while useful data points, these examples do not provide sufficient justification or rationale on their own for validating a retirement cost estimate for the Boardman Solar Energy Facility.

The third example provided by the Applicant is the $0.035/W decommissioning cost estimate for the 50 MW Luning Solar Energy Project on land managed by the Bureau of Land Management (BLM) in Nevada. However, the Applicant also referred to BLM bonding requirements that are based on a larger dataset than a single project example, which therefore may more accurately reflect potential decommissioning costs for utility-scale solar PV facilities. Specifically, the Applicant referred to the BLM's "Solar and Wind Energy Rule," which amended regulations in 43 CFR parts 2800 and 2880. The Solar and Wind Energy Rule incentivizes solar and wind energy development on BLM-managed lands within preferred areas called designated leasing areas (DLAs). The rule requires a standard bond of $10,000 per acre for solar energy facility development within DLAs[160]. The Applicant points out that $10,000 per acre as applied to the proposed Boardman Solar Energy Facility would amount to approximately $0.07/W,

[158] BSEAPPDoc32. pASC RAI Responses 2017-04-21.

[159] BSEAPPDoc75. Decommissioning Solar Panel Systems_NYSun 2016.

[160] The BLM developed the standard bond amounts based upon a review of bonded solar and wind energy projects on lands managed by the BLM. The BLM stated that the agency developed the bond amounts after considering potential liabilities ("such as potential impacts to cultural values, wildlife habitat, and scenic values") associated with the lands affected by granting rights-of-way to these developments. The BLM's bonding requirements account for the potential environmental risks that a development poses on public lands, and are intended to cover the direct impacts to the resources and their reclamation to a condition as near as possible to what they were before development occurred. The review identified bonds for solar energy development ranging from $10,000 per acre to $18,000 per acre, which informed BLM's development of the incentivized $10,000 per acre standard bond for solar energy facility development within DLAs. [81 Federal Register 92163 (December 19, 2016)]

which is less than the Department's contractor's estimate.[161] However, the Solar and Wind Energy Rule, in part, incentivizes development within DLAs by providing more favorable bonding requirements than those that would be applied to wind and solar development outside of DLAs, which must be determined based on reclamation cost estimates.[162] Similar to grant or lease holders for solar energy facilities on BLM-managed lands outside of DLAs, certificate holders of EFSC-jurisdictional facilities must maintain financial instruments in an amount sufficient to restore the site to a useful, non-hazardous condition, rather than in an incentivized amount. Therefore, simply applying a $10,000 per acre bond or letter of credit requirement to the Boardman Solar Energy Facility may not result in a bond or letter of credit of a sufficient amount to restore the proposed facility site to a useful, non-hazardous condition. However, as described in footnote 161, the BLM developed its bond amounts in consideration of potential environmental risks that a development poses on public lands, and these amounts are intended to cover the direct impacts to the resources and their reclamation to a condition as near as possible to what they were before development occurred. This is broadly similar to the part of the Council's Retirement and Financial Assurance standard referring to restoring the site to a "useful, non-hazardous condition," and as such, the Department considers the BLM's $10,000/acre cost estimate an appropriate starting point in determining the adequate retirement and restoration cost estimate in compliance with the Council's standard.

The Boardman Solar Energy Facility is the first solar photovoltaic power generation facility to come before the Department and Council for review. In addition, little non-proprietary data on actual or expected retirement costs for utility-scale solar photovoltaic energy facilities in the United States are available. However, in light of the Department's contractor's assessment and the known shortcomings in the cost estimating model used by the Applicant, the Department recommends that the Council find that the Applicant's estimated site restoration cost ($4.426 million, Q1 2017 dollars) is an insufficient amount to restore the proposed facility site to a useful, non-hazardous condition.

Based upon the insufficiency of the Applicant's estimate (and, therefore, the insufficiency of the lower bond estimates the Applicant provided as supporting examples) and limited availability of comparable data, the Department recommends that the Council instead consider BLM's $10,000 per acre bond requirement (for solar energy facilities proposed on BLM DLAs) as the starting point from which to determine the cost for retirement and site restoration of the

[161] BSEAPPDoc32. pASC RAI Responses. 2017-04-21.

[162] The BLM's Solar and Wind Energy Rule states that, "It is the intent that these standard bond amounts would incentivize solar and wind energy development in DLAs. Reclamation of the lands in these DLAs is anticipated to be less than other locations outside of DLAs as the resource impacts are not expected to be as great, and the land could, in turn, be used for solar or wind development again if a developer failed to complete their lease obligation in developing the land." [81 Federal Register 92191-92192]

proposed facility.[163] As applied to the proposed facility, $10,000 per disturbed acre (545.02 acres) would equate to approximately $5.45 million.

The Department recommends that the Council consider the Department's $5.45 million starting estimate inclusive of the costs to perform the actions described in ASC Exhibit W to restore the site to a useful, nonhazardous condition. In ASC Exhibit B, the Applicant states that in accordance with the 2014 Oregon Fire Code Section 605.12.2, the area under and around the solar installation will have a gravel base or other noncombustible base that is approved by the fire code official. The Applicant provided an estimated cost of $1.25 million to remove gravel from the area that would be occupied by the module blocks. ASC Exhibit W does not account for this cost,[164] and the Department adds this cost to its $5.45 million starting estimate, for a $6.7 million subtotal.

The Department increases this estimate by one percent (1%) to account for the cost of a performance bond that would be posted by the contractor as assurance that the work will be completed as agreed. In addition, the Department adds a contingency for administrative and management expenses of 10 percent to its cost estimate. As described in the *Site Restoration Cost Estimating Guide*, these are the anticipated direct costs borne by the State in the course of managing site restoration and would include the preparation and approval of a final retirement plan; obtaining legal permission to proceed with the demolition of the facility; legal expenses for protecting the State's interests; preparing specifications, bid documents, and contracts for demolition work; and managing the bidding process, the negotiation of contracts, and other tasks.

As stated in the Department's 2011 *Site Restoration Cost Estimating Guide*, a site restoration estimate is similar to preliminary engineering estimates, which may have an accuracy range of plus-or-minus 20 percent. If it becomes necessary for the State to draw upon the bond, it might be many years in the future. Other factors contribute to uncertainty; for example, different environmental standards or other legal requirements might be in place in the future, new disposal sites might need to be found for demolition debris, and the cost of labor and equipment available might increase at a rate exceeding the standard inflation adjustment. Given these factors and that the example taken from BLM's bonding process (the $10,000 per acre bond requirement) is an incentivized amount, and given the uncertainties inherent in the proposed facility being the first solar photovoltaic power generation facility before the Council,

[163] The Department recommends that Council consider the Department's recommended starting point from which to determine the cost for retirement and site restoration ($10,000 per acre) to include overhead charges, profit, and insurance costs that would likely be included in a demolition contractor's bid to restore the site. The Department's 2011 *Site Restoration Cost Estimating Guide* recommends 10 percent for overhead, 10 percent for profit, and 3 percent for insurance costs.

[164] BSEAPPDoc73. Applicant estimated cost gravel removal, 2017-10-20.

the Department recommends that the Council require a future developments contingency amount of 20 percent.

Table RF-2 provides a summary of the Department's site restoration cost estimate.

Table RF-2: The Department's Decommissioning and Site Restoration Cost Estimate

		Cost Estimate
Subtotal		$6,700,200
Performance Bond	1%	$67,002
Administration and Project Management	10%	$670,020
Future Developments Contingency	20%	$1,340,040
Total Site Restoration Cost (Q4 2017 dollars)		$8,777,262
Total Site Restoration Cost (rounded to nearest $1,000)		$8,777,000

Using these cost assumptions, the Department estimates the total site restoration cost (inclusive of the performance bond, administration and management expenses, and future developments contingency) to be $8.78 million.[165] Based upon the preceding analysis, the Department recommends the Council find that $8.78 million (Q4 2017 dollars) is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition.

Ability of the Applicant to Obtain a Bond or Letter of Credit

The Applicant provided information about its financial capability in ASC Exhibit M. The Applicant proposes to provide a financial assurance bond or letter of credit in a form approved by the Council before beginning construction of the facility. To demonstrate its ability to receive an adequate bond or letter of credit, the Applicant provided a letter from Wells Fargo Bank, N.A., dated December 21, 2016, stating that it is the bank's understanding that Invenergy Solar Development LLC (of which Boardman Solar Energy LLC is a wholly owned subsidiary) may be asked to provide a letter of credit to the Department in an amount of up to $4.5 million. The bank states that it has an ongoing relationship with Invenergy Solar Development LLC and that there is a reasonable likelihood that Wells Fargo would provide a letter of credit for the facility should one be required.[166] The letter does not constitute a commitment from Wells Fargo to issue the letter of credit.

[165] This proposed order corrects the site restoration cost rounding error from the draft proposed order, which showed $8.77 million instead of $8.78 million.

[166] BSEAPPDoc71. ASC, Exhibit M, Attachment M-2. 2017-09-01.

As previously discussed, the Department recommends that the Council find that a cost of $8.78 million (Q4 2017 dollars), rather than the Applicant's estimate of $4.43 million, is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition. Therefore, the value of the financial assurance bond or letter of credit for restoring the site of the facility would be $8.78 million (Q4 2017 dollars), adjusted annually as described in the recommended condition below. To address the Applicant's financial assurance obligations and ensure the adequacy of the bond or letter of credit, the Department recommends that the Council adopt the following condition:

Retirement and Financial Assurance Condition 4: Consistent with Mandatory Condition OAR 345-025-0006(8), before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The initial bond or letter of credit amount for the facility is $8.78 million (Q4 2017 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:

(a) The certificate holder may revise the amount of the initial bond or letter of credit based on the final design configuration of the facility. However, any revision to the restoration costs must be adjusted to the date of issuance as described in (b) and must be reviewed and approval by the Council in a site certificate amendment.

(b) The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:

1. Adjust the amount of the bond or letter of credit (expressed in Q4 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 and using the fourth quarter 2017 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust fourth quarter 2017 dollars to present value.
2. Round the result total to the nearest $1,000 to determine the financial assurance amount.

(c) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

(d) The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter

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

Subject to compliance with Retirement and Financial Assurance Conditions 1, 2, and 3, the Department recommends the Council find that the proposed facility can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility. Subject to compliance with Retirement and Financial Assurance Condition 4, the Department recommends that the 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 recommended Retirement and Financial Assurance conditions, the Department recommends that the Council find that the proposed facility would comply with the Council's Retirement and Financial Assurance standard.

IV.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 the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

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 for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted as well as the nature, extent, and duration of the impact. The rule also establishes a habitat classification system based on the function and value of the habitat it would provide to a species or group of species likely to use it. There are six habitat categories, with Category 1 being the most valuable, and Category 6 the least valuable.

The analysis area for potential fish and wildlife habitat impacts, as defined in the Project Order, is the area within and extending ½-mile from the site boundary.[167] The Applicant provides evidence of its compliance with the Fish and Wildlife Habitat standard in ASC Exhibit P. Additional information and evidence of the Applicant's ability to meet mitigation compliance requirements was included in ASC Exhibit D, *Organizational Expertise* and is discussed in Section IV.B, *Organizational Expertise* of this proposed order. ODFW provided comment letters on the ASC and the draft proposed order.[168]

Habitat Types and Categories in the Analysis Area

To identify habitat types, categories, and potential sensitive species occurring within the analysis area, the Applicant reviewed existing information sources and survey reports, consulted with ODFW and the US Fish and Wildlife Service, and conducted multiple field surveys within the analysis area in 2016 and 2017.[169] The list of information sources reviewed and queried is included in ASC Exhibit P, Section P.3.1. The Applicant used the results of desktop surveys and existing information sources to prepare for field surveys. Results of desktop and field surveys were used to determine and validate habitat types and categories, as well as to establish information related to state sensitive species.[170]

A general field investigation was conducted by the Applicant's biologists in April 2016 to evaluate biological resources, potential presence of special-status species, potentially suitable habitat for wildlife and plants, and generally characterize the habitat of the analysis area. A second field investigation was conducted by the Applicant's biologist in September 2016 to confirm the habitat occurrence and quality, and to categorize the existing habitat in accordance with the ODFW habitat category system (fully described at OAR 635-415-0025).[171] Habitat categories are assigned based on factors including habitat quality, uniqueness, irreplaceability, extent, importance to specific species including sensitive and listed species, and other factors. As described in ASC Exhibit P, Table P-4, the identified habitat and habitat subtypes within the analysis area, and associated acreage, are:

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[167] BSEAPPDoc33. Expedited Review Project Order. 2017-05-09

[168] BSEAPPDoc66 Complete ASC Reviewing Agency Comment ODFW. 2017-10-03 and BSEAPPDoc80 DPO Agency Comment ODFW Henderson 2017-12-01. ODFW commented on the record of the draft proposed order public hearing that ODFW is supportive of the Habitat Mitigation Plan, Wildlife Monitoring and Adaptive Management Plan, and the avoidance measures proposed by the Applicant, and that ODFW feels that the facility is sited appropriately.

[169] BSEAPPDoc71. ASC Exhibit P. 2017-09-01

[170] The Applicant used the same reviews and surveys to identify potential threatened and endangered species that may be present in the analysis area. Threatened and endangered species are discussed in section IV.I under the *Threatened and Endangered Species* standard.

[171] Also in September 2016, the Applicant conducted a wetland delineation of the site boundary; results of the delineation are discussed in ASC Exhibit J and Section IV.Q.2., *Removal-Fill* of this proposed order. BSEAPPDoc29. DSL Wetland Delineation Concurrence. 2017-03-22.

- Grassland:
  - Majority of site is exotic annual grassland, Category 4 habitat, 664.5 acres in site boundary
  - Isolated patches of native perennial grassland, Category 4 habitat, 7.3 acres in site boundary
- Shrub-steppe:
  - Rabbitbrush/Snakeweed, with understory dominated by cheatgrass, Category 4 habitat, 113.9 acres in site boundary
- Wetlands:
  - Herbaceous, dominated by cattail, softstem bulrush, and western goldenrod, Category 2 habitat, 11.4 acres in site boundary
  - Open water, a small excavated area along west side of Threemile Canyon Road, dominated by cattail and softstem bulrush, Category 2 habitat, 0.5 acres in site boundary

ASC Exhibit P, Section P-4 provides additional information and description related to the specific habitat types, habitat subtypes, and habitat categories within the analysis area. A number of state-sensitive species have the potential to occur in the analysis area, or have habitat used by such species within the analysis area. These species are listed in ASC Exhibit P, Table P-1.

The Applicant submitted the survey results for sensitive species and raptor nests in June 2017, and those survey reports are attachments to ASC Exhibit P. As shown in ASC Exhibit P and confirmed by ODFW, the majority of the site boundary is considered habitat category 4, and the wetlands are considered habitat category 2.[172]

Potential Construction and Operational Impacts to Habitat

Construction of the proposed facility would result in permanent and temporary loss of habitat. ASC Exhibit P explains that the proposed facility would only cause temporary and permanent impacts to habitat classified as Category 4. Based on the ASC materials and confirmation from ODFW, there is no category 1, 3, 5, or 6 habitat within the site boundary.[173] While category 2 wetland habitat is within the site boundary, the Applicant commits to avoiding all impacts, permanent and temporary, to this habitat. See also ASC Exhibit J and Section IV.Q.2, *Removal-Fill* of this order for additional information related to wetlands.

Table FW-1, *Estimated Temporary and Permanent Impacts by Habitat Category and Type*, shows the anticipated impacts by habitat type, category, and acreage. This table is recreated

[172] BSEAPPDoc43. ODFW Henderson feedback survey reports. 2017-06-29.
[173] *Id.*

from ASC Exhibit P, Table P-5. As is shown, the only expected habitat category to be impacted, either temporarily or permanently, is habitat category 4.

Table FW-1: Estimated Temporary and Permanent Impacts to Category 4 Habitat by Subtype

Habitat Subtype	Permanent Disturbance (acres)	Temporary Disturbance (acres)	Total Disturbance (acres)
Category 4			
Exotic annual grasslands	472.45	26.62	499.07
Native perennial grasslands	0.05	4.08	4.13
Rabbitbrush/ Snakeweed shrub-steppe	13.53	28.29	41.82
Total	**486.03**	**58.99**	**545.02**

As shown in Table FW-1, *Estimated Temporary and Permanent Impacts by Habitat Category and Subtype* the Applicant calculates the estimated total impacted habitat to be 545.02 acres, with 58.99 acres being temporarily disturbed during construction and restored post-construction. The proposed facility would result in approximately 486.03 acres of permanent impacts. All impacted habitat is considered Category 4. ODFW reviewed the ASC and accompanying survey reports and agreed with the habitat categorization.[174]

Because habitats can change over time, the Department recommends that the Council adopt the following condition, requiring the Applicant to conduct a pre-construction habitat assessment and submit an associated report to the Department and ODFW, for review and approval. This recommended condition requires that the pre-construction habitat assessment report include an updated version of Table FW-1, indicating the acres to be temporarily and permanently impacted by the proposed facility by habitat category and type and sub-type.

[174] *Id.*

Fish and Wildlife Habitat Condition 1: Prior to construction, the certificate holder shall:

(a) Submit to the Department and ODFW the proposed methods or protocol to be implemented for the pre-construction habitat assessment of the site boundary. Methods could include, for example, desktop survey results informed by the threatened and endangered species surveys conducted per Threatened and Endangered Species Condition 1. The method or protocol shall be approved by the Department in consultation with ODFW.

(b) Conduct a survey, based upon the methods or protocol as approved by the Department in sub(a), to confirm the habitat categories of all areas to be impacted by facility components, as well as the locations of any sensitive resources such as active state-listed or sensitive bird species nests, wetlands, and other state-listed threatened or endangered species and habitat that could be temporarily or permanently impacted by facility components.

(c) At least 45-days prior to construction, unless otherwise agreed to by the Department, submit to the Department and ODFW a pre-construction habitat assessment report. The report shall be approved by the Department, in consultation with ODFW, prior to construction. The pre-construction habitat assessment report shall, at a minimum, include the following:

- Habitat impact table, based upon final facility design, including permanent and temporary impacts by facility component and habitat category/type/subtype.
- Maps showing: habitat categories and subtypes of all areas within the site boundary, final location of temporary and permanent facility components, and locations of any sensitive resources that will be flagged as exclusion zones in accordance with Fish and Wildlife Habitat Condition 6. If necessary, sensitive resource information shall be submitted to the Department in hard copy only and provided under request for information to be treated as confidential.
- Discussion of habitat impacts including a confirmation of avoidance of temporary or permanent impacts to category 1 habitat.

As is discussed in Section IV.I, *Threatened and Endangered Species*, the Applicant proposes to conduct a pre-construction survey for listed species, including Washington ground squirrel and Lawrence's milkvetch. The Department recommends the Council adopt Threatened and Endangered Species Condition 1, requiring that this survey for state-listed threatened and endangered species be conducted and an accompanying survey report be submitted to the Department and ODFW for review and approval prior to facility construction. The survey and report associated with recommended Threatened and Endangered Species Condition 1 can be combined with the pre-construction habitat assessment report required under recommended Fish and Wildlife Habitat Condition 1, at the Applicant's (certificate holder's) discretion.

State Sensitive Wildlife

ASC Exhibit P, Table P-1 lists all state and other non-listed special status species that could occur in both the analysis area (within and extending 0.5-mile from the site boundary) and extending five miles from the site boundary, and identifies whether the analysis area contains suitable habitat for these state sensitive species. The Applicant explains that based upon the literature review, 2016 habitat assessment, and 2017 sensitive species surveys conducted, the analysis area contains suitable habitat for 19 state sensitive and 2 other non-listed special-status species. The Applicant's 2017 field surveys identified multiple state sensitive wildlife species within the analysis area, including three observations of peregrine falcons, 29 groups of long-billed curlews, and three observations of grasshopper sparrows.[175]

State sensitive species with potential to occur in the analysis area that have the potential to be impacted by the proposed facility are further discussed below. In general, the largest impacts from a solar facility to habitat (and as such, wildlife) are expected to occur during construction when habitat is removed for installation of the facility. The Applicant notes that there is little scientific evidence that solar photovoltaic facilities lead to substantial wildlife fatalities (due to collision with facility components) during operation.[176] In addition, the proposed facility site is located directly south of I-84, and north of an existing irrigated agriculture operation. These existing land uses further limit the proposed facility site's value to wildlife. The proposed facility site is not within designated big game winter or summer range.[177]

Potential Impacts to Mammals[178]

In ASC Exhibit P, based upon presence of suitable habitat within the analysis area, the Applicant explains that up to 10 special-status bat species and the white-tailed jackrabbit could be impacted by proposed facility construction or operation[179] The Applicant describes that while the analysis area contains suitable foraging habitat for bat species (i.e., water source in and around wetlands), there is no suitable roosting habitat, such as tall trees or cliffs. Because the proposed facility would not impact special-status bat species' suitable foraging habitat, and because suitable roosting habitat was not identified within the analysis area, construction and

[175] Note, the Applicant is responsible for compliance with all applicable federal rules and regulations, including any rules regarding protection of federally-listed species. Compliance with federal rules and regulations is outside of the EFSC process.
[176] BSEAPPDoc71. ASC Exhibit P, p. 7-15. 2017-09-01.
[177] BSEAPPDoc71. ASC Exhibit P, Attachment P-2 Site Characterization Study. 2017-09-01.
[178] Potential facility impacts to Washington ground squirrel are discussed elsewhere in this order, in Section IV.I, *Threatened and Endangered Species.*
[179] BSEAPPDoc71. ASC Exhibit P, Table P-1. 2017-09-01.

operation of the proposed facility would not be expected to result in significant adverse impacts on this species or its habitat.

While the white-tailed jackrabbit may be present within the analysis area, the Applicant states that the species is typically found in high-quality native grassland habitat, which has not been identified within the analysis area. Therefore, if the species is identified within the analysis area it is likely a transient visitor and unlikely to be significantly adversely impacted by the proposed facility.[180] White-tailed jackrabbits were not observed during spring 2017 sensitive species surveys.[181]

Avian Species

The Applicant states that there are a number of state-sensitive bird species with potential to occur in the analysis area, particularly because of the proposed facility's proximity to the Columbia River and Willow Creek. However, the Applicant notes that the proposed facility is expected to only impact category 4 habitat, and not impact the category 2 wetlands located within the site boundary. Additionally, as noted above, the Applicant states that there is little scientific evidence that solar photovoltaic facilities lead to substantial wildlife (including avian species) fatalities during facility operation.[182] Three state-sensitive avian species were observed during the Applicant's spring 2017 sensitive wildlife surveys: peregrine falcon, long-billed curlew, and grasshopper sparrow.[183]

The long-billed curlew and grasshopper sparrow are both ground-nesting birds. Another state sensitive species that nests in grass or thick brush, shrubs, or small trees with potential to occur in the analysis area is the loggerhead shrike, and there are some areas of the analysis area with potential habitat for sagebrush sparrow and Western burrowing owl. These species could be impacted by proposed facility construction, and post-construction, the facility would displace potential habitat for the species. It is noted in ASC Exhibit P that there is limited habitat in the site boundary for both the sagebrush sparrow and Western burrowing owl, so these species would be less likely to be impacted by the proposed facility.[184]

The Applicant states that a number of state-sensitive raptor species could occur in the analysis area, including Ferruginous hawk, Peregrine falcon, Swainson's hawk, and burrowing owl. Raptors generally nest in trees or other tall structures (including power poles), and there are limited nesting opportunities in the analysis area (the one exception is Western burrowing owl, a

[180] BSEAPPDoc71. ASC Exhibit P, p. P-16. 2017-09-01.
[181] BSEAPPDoc71. ASC Exhibit P, Attachment P-9 Sensitive Species Survey. 2017-09-01.
[182] BSEAPPDoc71. ASC Exhibit P, p. 7-15 and p. 7-16. 2017-09-01.
[183] BSEAPPDoc71. ASC Exhibit P, Attachment P-9 Sensitive Species Survey. 2017-09-01.
[184] BSEAPPDoc71. ASC Exhibit P, P.7.2.2. 2017-09-01.

raptor species that nests in burrows in the ground). The site boundary could be foraging habitat for raptor species.[185] Only one sensitive raptor species, the Peregrine falcon, was observed during sensitive species and raptor nest surveys conducted in spring 2017. Red-tailed hawk nests were discovered in the analysis area, but these are not sensitive or listed species.[186]

Facility construction could impact nesting habitat for ground-nesting species, and foraging habitat for all avian species. As noted, spring 2017 sensitive species surveys identified three avian species in the analysis area. As stated by the Applicant, considering the limited number of sensitive species and the generally low quality of habitat to be impacted by the proposed facility (category 4), significant adverse impact 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 Applicant will provide compensatory mitigation for impacted habitat according to a Habitat Mitigation Plan; this plan is further discussed in *Minimization, Mitigation, and Monitoring* section below. In addition, the Applicant proposes a number of mitigation measures to reduce impacts to wildlife habitat and sensitive species. Generally applicable measures are discussed below. The Applicant also proposes a Wildlife Monitoring and Adaptive Management Plan (WMAMP) to study the facility's potential impacts to avian species and bat species once the proposed facility is in operation. The Department recommends Council include as a condition a requirement that the Applicant implement the WMAMP, which is included in as Attachment E to this order.

> **Fish and Wildlife Habitat Condition 2:** Following construction, the certificate holder shall implement the Wildlife Monitoring and Adaptive Management Plan (WMAMP), as included in Attachment E of the Final Order on the ASC.
>
> The WMAMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMAMP agreed to by the Department.

As noted, spring 2017 raptor nest surveys did not identify any specific state sensitive species nests within the analysis area. Six unidentified nests were discovered, but all six were determined to be inactive or unoccupied. In order to further reduce potential impacts to

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[185] *Id.*
[186] BSEAPPDoc71. ASC Exhibit P, Attachment P-8 Raptor Nest Survey and Attachment P-9 Sensitive Species Survey. 2017-09-01.

raptors, the Applicant proposes seasonal construction restrictions around occupied nests.[187] Occupied raptor nests shall be determined based on the pre-construction habitat assessment conducted as part of recommended Fish and Wildlife Habitat Condition 1.

> **Fish and Wildlife Habitat Condition 3**: During construction, within the time periods listed in the table below, the certificate holder shall implement buffer zones around occupied nest sites of the species included in the table. No construction activities within the buffer zone shall occur during the seasonal restrictions. The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid construction activity within the buffer zone. Occupied nests shall be determined based on the results of pre-construction surveys and habitat assessment. The buffer areas shall be flagged as exclusion areas in accordance with Fish and Wildlife Habitat Condition 6. The buffer distances do not apply to occupied nests north of I-84.

Nesting Species	Buffer Size (Radius Around Nest Site):	Avoidance Buffers in Effect from:
Ferruginous hawk	0.25 mile	March 15 to August 15
Swainson's hawk	0.25 mile	April 1 to August 15
Western burrowing owl	0.25 mile	April 1 to August 15
Golden eagle	0.5 mile	January 1 to July 15
Bald eagle	0.5 mile	January 1 to August 31

The Applicant states in ASC Exhibit P that it is incorporating additional design features and protective measures to reduce potential impacts to avian species. The Applicant states that it is utilizing existing roads as much as possible, and would construct the proposed 115 kV transmission line in accordance with the latest Avian Power Line Interaction Committee (APLIC) design standards to reduce the risk of electrocution to raptors, in particular.[188] As such, the Department recommends the Council adopt the following condition, requiring the Applicant construct transmission lines in accordance with the latest APLIC standards.

> **Fish and Wildlife Habitat Condition 4:** The certificate holder shall construct the 115 kV transmission line in accordance with the latest Avian Power Line Interaction Committee design standards.

[187] Bald and Golden eagles are not listed as state-sensitive species or threatened or endangered species. However, the Applicant has proposed in its application to implement the construction buffer restriction around any occupied eagle nests and as such, these species are included in the recommended condition.

[188] BSEAPPDoc71. ASC Exhibit P, P.8.1. 2017-09-01.

Additional recommended conditions would provide further protective measures for avian species, including: recommended Fish and Wildlife Habitat Condition 6, which would require that the certificate holder flag sensitive habitats (including the category 2 wetland habitats within the site boundary) as exclusion areas to be avoided during construction and operation; and Fish and Wildlife Habitat Condition 5, which would require environmental awareness training of all personnel prior to working on the site.

Reptile Species[189]

One state-sensitive reptile species, the northern sagebrush lizard, has the potential to occur within the analysis area. The Applicant notes that the species has been observed during wildlife surveys for nearby wind power facilities, but that the species was not observed during spring 2017 sensitive species surveys within the analysis area and that the analysis area contains minimal suitable habitat for the species. The Applicant describes that if the species is present within the facility site or if transient individuals use the area within the site boundary, it could be impacted by proposed facility construction. Considering the limited suitable habitat and that no species were observed during surveys, proposed facility construction would not be expected to have a significant adverse impact on the species. Mitigation measures, including compensatory mitigation in accordance with a final habitat mitigation plan (recommended condition Fish and Wildlife Habitat Condition 11), would further offset any potential impacts to northern sagebrush lizard habitat.

Fish Species[190]

Two state-sensitive fish species are listed by the Applicant as potentially occurring within the analysis area including: Pacific lamprey and Middle Columbia River Steelhead ESU (summer run). Middle Columbia River Steelhead is also listed as threatened by the federal government, but not by ODFW. Habitat for both fish species is the Columbia River, which is not within the site boundary. The proposed facility is separated from the Columbia River to the north by I-84. While unlikely, it is possible that if not controlled, erosion from the proposed facility could enter the Columbia River, or enter Willow Creek or another nearby drainage and then enter the Columbia River, and cause an adverse impact to habitat for both sensitive species. The Applicant proposes, and would be required to, implement a number of erosion control measures, which would serve to reduce the potential facility impact to the Columbia River, Willow Creek, and other nearby waterways, and therefore reduce potential impacts to sensitive fish species habitat. Erosion control measures are discussed in the Soil Protection standard section of this proposed order, and also in ASC Exhibit I.

[189] BSEAPPDoc71. ASC Exhibit P, Section P.7.2.3. 2017-09-01.
[190] BSEAPPDoc71. ASC Exhibit P, Table P-1. 2017-09-01.

Minimization, Mitigation, and Monitoring

In addition to the recommended conditions described in this section, the Applicant proposes to implement a number of minimization and mitigation measures to reduce the potential impact of proposed facility construction and operation on fish and wildlife habitat and state sensitive species. The Department recommends that the Council include these proposed measures, to reduce a potential habitat or species impact, as conditions in the site certificate as follows.

Fish and Wildlife Habitat Condition 5: The certificate holder shall require all onsite construction workers to complete an environmental awareness training and shall demonstrate compliance with this condition per sub(a) and (b) of the condition as follows:

(a) Prior to construction, the certificate holder shall submit to the Department a copy of the final presentation and environmental training materials. The training materials shall, at a minimum, address the following topics: facility site boundary, including flagged exclusion areas; restricted areas including wetlands and other areas; sensitive and special status plant and wildlife species found in the analysis area; avoidance and impact minimization measures; response procedure and notification process to be followed if sensitive resources are identified during construction; additional permit requirements; buffer distances from sensitive and protected resources; work timing restrictions including seasonal restrictions; reporting procedures for any injured or dead wildlife; speed limits; trash control; and other topics as necessary.

(b) During construction, the certificate holder shall require all construction personnel to attend an environmental and permit requirements awareness training session conducted by a knowledgeable environmental professional. Records of completed training shall be maintained onsite and made available to the Department upon request.

Fish and Wildlife Habitat Condition 6: Prior to construction, the certificate holder shall:

(a) Flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to wetlands and waterways on or near the site boundary, areas with sensitive or protected plant species, buffers around raptor nests in accordance with Fish and Wildlife Habitat Condition 3, and any other buffers around sensitive or protected species habitats. The final limits of the restricted work zone flagging shall be based on the surveys and/or habitat assessment conducted for Fish and Wildlife Habitat Condition 1. All wetlands shall be flagged with a minimum 100 foot buffer distance.

(b) Prohibit any construction activity within restricted work zones.

(c) Provide maps with the locations of the restricted work zones, and instructions prohibiting construction activity within these areas, to construction personnel.

Fish and Wildlife Habitat Condition 7: During construction, the certificate holder will not leave any trenches open overnight. All trenches shall be covered or filled before the end of the working day or nightfall in a way that prevents animals from entering the trenches. If trenches cannot be fully covered or filled, a wildlife escape ramp must be installed into the trench so that animals can escape the trench.

Fish and Wildlife Habitat Condition 8: During construction, the certificate holder shall limit clearing of trees or shrub-steppe habitat to within September 1 and March 1. If the certificate holder needs to clear trees or shrub-steppe habitat outside this period, prior to the clearing, a biological survey must be performed no more than seven days prior to the clearing to determine if the area has birds or bats roosting in the area, or other sensitive wildlife species. If sensitive species are discovered, clearing must not occur until after the sensitive species have left for the season. If bat roosts or other sensitive wildlife species are discovered, the certificate holder must contact the Department and ODFW for guidance, and clearing cannot proceed without approval from the Department, in consultation with ODFW.

Fish and Wildlife Habitat Condition 9: During construction, the certificate holder shall impose a 20 mile per hour speed limit on new and improved private facility roads. Speed limit signs shall be posted throughout the facility. No off-road travel shall be allowed except in case of emergency. All on-site personnel shall be instructed on these requirements as part of the environmental awareness training for all employees (associated with Fish and Wildlife Habitat Condition 5).

Additionally, a number of recommended conditions included elsewhere in this order would also benefit fish and wildlife habitat and reduce potential impacts, including Soil Protection Condition 1 related to implementation of an ESCP during proposed facility construction, in accordance with the facility's final 1200-C NPDES permit, and Soil Protection Condition 2 related to implementation of a hazardous materials spill prevention program and spill protection during proposed facility operation.

As explained in Section IV.A *General Standard of Review* of this order, in order to reduce potential impacts to wildlife habitat, Mandatory Condition 5 would require that, following proposed facility construction, the Applicant must restore vegetation to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surrounding and proposed use. The Applicant submitted a draft Revegetation and Noxious Weed Control Plan in ASC Exhibit P. This draft plan has been included as Attachment C to this proposed order. The Applicant commits to revegetation and implementation of the revegetation plan in ASC Exhibit P, Section P.8.2. ODFW has reviewed the plan and states that it is comfortable with

what has been proposed.[191] However, the Department notes that there are specific additional items that it recommends be included in the plan, and recommends the Council include Fish and Wildlife Habitat Condition 10 to require the plan to be finalized, following review and approval by the Department, in consultation with the ODFW and Morrow and Gilliam County weed control personnel, prior to construction. Specifically, the following items are recommended to be clarified in the finalized plan: the total acres of facility impact by habitat category and type, clarification on required actions if revegetation efforts are determined to be unsuccessful, clarification on land converted by the underlying landowner, and technical criteria related to revegetation.[192] These specific items are included in the recommended condition. Additionally, both Morrow and Gilliam counties requested that the local weed control personnel be consulted during finalization of the Revegetation and Noxious Weed Control Plan.[193]

The Department recommends the Council impose Fish and Wildlife Habitat Condition 10, requiring that prior to construction, the certificate holder finalize the revegetation plan and implement the actions of the plan during construction and post-construction as appropriate.[194]

> **Fish and Wildlife Habitat Condition 10:** No less than 45 days prior to construction, unless otherwise agreed to by the Department, the certificate holder shall submit to the Department and the Morrow and Gilliam County Planning Departments and Weed Supervisors a final Revegetation and Noxious Weed Plan. The Department will review the plan in consultation with ODFW and Morrow and Gilliam County weed control personnel. The plan must be approved by the Department, in consultation with ODFW and the Morrow and Gilliam County Planning Departments and Weed Supervisors, prior

[191] BSEAPPDoc38. Melody Henderson ODFW Comment. 2017-6-2.

[192] On the record of the public hearing, Ms. Irene Gilbert, representing herself and the Friends of the Grande Ronde Valley, commented regarding recommended Fish and Wildlife Habitat Condition 10(e). Ms. Gilbert stated that if an area of temporary impact is converted by the underlying landowner to a different use before restoration has been achieved, the certificate holder should be liable for providing mitigation. BSEAPPDoc86 DPO Hearing Public Comment Gilbert 2017-12-14. The Department agrees. Recommended Condition 10(e) is included to acknowledge that following construction, the underlying landowner may decide (outside of EFSC jurisdiction), that an area that was temporarily impacted by the energy facility construction and was intended to be revegetated is instead better used for a different purpose, such as farming. However, in such circumstances, as stated in recommended Condition 10(e) the certificate holder must provide appropriate compensatory mitigation to account for the permanent loss of habitat quality and quantity consistent with the EFSC Fish and Wildlife Habitat standard.

[193] BSEAPPDoc17. Carla McLane Morrow County Comment 2017-2-22 and BSEAPPDoc20 Michelle Colby Gilliam County Comment. 2017-2-23

[194] In a comment letter on the record of the public hearing, the Morrow County Special Advisory Group requested that recommended Fish and Wildlife Habitat Condition 10 be modified to include the Morrow County Planning Department and Weed Supervisor in review and approval of the final Revegetation and Noxious Weed Plan. BSEAPPDoc81 DPO SAG Comment Morrow County 2017-12-13. The Department agrees and has updated the condition from the draft proposed order to this proposed order accordingly.

to construction. The certificate holder shall implement the provisions of the plan following completion of construction and during operation, as appropriate. The finalized plan shall be based on the draft plan, included as Attachment C of the Final Order on the ASC. The final plan must, at a minimum, include the following:

(a) Finalize Tables 1 and 2 of the draft plan, related to habitat category and type within the site boundary and anticipated temporary and permanent impacted acreage. This information shall be based on the pre-construction habitat assessments that are required by Fish and Wildlife Habitat Condition 1.
(b) A schedule for implementation of the revegetation activities, including a schedule for monitoring assessments and reporting.
(c) Topsoil management and soil decompaction, including scarification, procedures.
(d) A statement that if at any time during the monitoring program the certificate holder, or the Department in consultation with ODFW, conclude that revegetation of an area is unsuccessful and unlikely to be successful, the impacted area must be considered permanent. In this circumstance, the certificate holder must provide appropriate compensatory mitigation for the permanent loss of habitat quality and quantity, consistent with the EFSC Fish and Wildlife Habitat standard. Any mitigation required under this provision is subject to the approval of the Department, in consultation with ODFW.
(e) A statement that if it is determined that the underlying landowner has converted an area that was temporarily impacted during facility construction (and intended to be restored) to a use that is inconsistent with the success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area. However, in such circumstances, if the area has been converted by the landowner prior to the area reaching success criteria as determined by the Department, the certificate holder shall be obligated to provide compensatory mitigation consistent with the EFSC Fish and Wildlife Habitat standard to account for the permanent loss of habitat quality and quantity.
(f) The 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, following consultation with the Morrow and Gilliam County Planning Departments and Weed Supervisors. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the Department.

The Council's Fish and Wildlife Habitat standard and the ODFW Fish and Wildlife Mitigation Policy require that impacts to habitat that cannot be avoided must be mitigated in accordance with the standard and policy. As described in Exhibit P and recreated in Table FW-1, the Applicant estimates that 486.03 acres of Category 4 habitat will be permanently impacted by the facility, and 58.99 acres will be temporarily impacted. Impacts to habitat category 4 require

compensatory mitigation that achieves a no-net-loss of habitat quantity or quality, and can be mitigated using in-kind or out-of-kind habitat mitigation, and in-proximity or off-proximity habitat mitigation.

The Applicant is proposing compensatory mitigation for temporary impacts at a 0.5:1 ratio. Per Mandatory Condition 5 and recommended Fish and Wildlife Habitat Condition 10, areas of temporary impact must be restored following construction. As such, the 0.5:1 acre accounts for any temporal loss of habitat function between the time of a temporary impact and completion of restoration. The Department agrees with this approach and mitigation proposal. It is noted that if a temporary impact is not restored, either because the restoration actions are unsuccessful or other reasons, the area must be considered permanently impacted and compensatory mitigation provided according to the EFSC Fish and Wildlife Habitat standard (see recommended condition Fish and Wildlife Habitat Condition 10).

The Applicant has developed a draft habitat mitigation plan (HMP) and identified a habitat mitigation area that is expected to provide sufficient mitigation actions and acres to meet the needs of the proposed facility in compliance with the Council's standard. The draft HMP is included as Attachment C to this order. The Department recommends the Council implement Fish and Wildlife Habitat Condition 11, requiring that the certificate holder update prior to construction and implement a final HMP, as approved by the Department in consultation with ODFW.

> **Fish and Wildlife Habitat Condition 11**: No less than 45 days prior to facility construction, unless otherwise agreed to by the Department, the certificate holder shall submit a final Habitat Mitigation Plan (HMP), consistent with the draft HMP included as Attachment C to this order), for review and approval by the Department, in consultation with ODFW. The final HMP shall be based on final facility design, unless otherwise agreed upon by the Department.
>
> (a) The certificate holder shall calculate the size of the habitat mitigation area according to the final design configuration of the facility and the estimated areas of habitat affected in each habitat category, in consultation with the Department, as per the pre-construction habitat assessment results and impact assessment calculations called for in Fish and Wildlife Habitat Condition 1.
>
> (b) The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area (or areas), as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the HMP.
>
> (c) The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, and monitoring. The mitigation actions shall be implemented at the compensatory habitat mitigation site as soon as possible concurrent with the impact.

(d) The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of mitigation actions, including ecological uplift actions at the habitat mitigation area.

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

Based on the Applicant's analysis and representations, and on review of the information provided in Exhibit P of the ASC and other evidence in the record discussed above, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the design, construction, and operation of the proposed facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 345-415-0025.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that proposed facility complies with the Council's Fish and Wildlife Habitat standard.

IV.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.[195]

The analysis area for threatened or endangered plant and wildlife species was established in the project order as the area within and extending five miles from the site boundary, with the exception of the proposed 115-kV transmission line, for which the analysis area is only the area within the site boundary.[196] In the ASC, the Applicant considered an analysis area within and extending five miles from the site boundary for all proposed facility components, including the 115-kV transmission line. The Applicant's assessment of the proposed facility's compliance with the Threatened and Endangered Species standard is included in ASC Exhibit Q.

Surveys and Results

In order to identify endangered and threatened species that could occur within the analysis area, the Applicant conducted searches of the Oregon Biodiversity Information Center (ORBIC) and U.S. Fish and Wildlife Service (USFWS) database records of threatened and endangered plant and wildlife species within the analysis area. The Applicant also consulted on multiple occasions with ODFW and USFWS regarding potential occurrences of threatened and endangered species in the analysis area. Based on the database and literature review and consultation with agencies, the Applicant identified eight federal and state threatened and endangered species with the potential to occur with the analysis area.[197] Because the Council's Threatened and Endangered Species standard only applies to state-listed threatened and

[195] 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.

[196] BSEAPPDoc33 Expedited Review Project Order 2017-05-09.

[197] BSEAppDoc71. ASC, Exhibit Q, Section Q.2. 2017-09-01.

endangered species, those species that are only listed by the federal government are not further discussed in this proposed order.[198]

The Applicant identified one mammal and two fish species that are listed as threatened or endangered by the Oregon Fish and Wildlife Commission per ORS 496.172(2), and one plant species listed as threatened by the Oregon Depart of Agriculture per ORS 564.105(2), with potential to occur in the analysis area. These species are: Washington ground squirrel, Chinook salmon – Snake River (fall run), Chinook salmon – Snake River (spring/summer run), and Lawrence's milkvetch.[199] The Applicant did not identify any threatened or endangered avian species as having a potential to occur in the analysis area.[200]

The Applicant's biologists conducted field investigations to categorize habitat and identify the likelihood of occurrence and use of the site by threatened and endangered species. Field investigations occurred in spring 2016, fall 2016, and again in spring 2017. Sensitive species surveys, including surveys for Washington ground squirrel and Lawrence's milkvetch, occurred in April 2017 and again in May 2017. The Washington ground squirrel surveys were conducted according to ODFW methodology. These specific sensitive species surveys included the site boundary and 1,000-foot buffer around the site boundary. Survey reports were included as part of the ASC, as attachments P-8 and P-9 to Exhibit P. As explained in ASC Exhibit Q and the associated field reports attached to Exhibit P, field surveys found no evidence of use or occurrence by Washington ground squirrels, and found no evidence of occurrence of the Lawrence's milkvetch. ASC Exhibit Q states that potential habitat for both species exists in the site boundary. However, the 2017 field surveys found no evidence of Washington ground squirrel in the site boundary.

As described by the Applicant, the Columbia River is critical habitat for the two Chinook salmon species identified as occurring in the analysis area. Additionally, Willow Creek, which is west of the proposed facility, connects to the Columbia River, as do other drainages in the area. The proposed facility would be separated from the Columbia River by I-84, and would not directly impact either the Columbia River, Willow Creek, or other drainages in the area. Additionally, as described by the Applicant, the use of erosion and sediment control measures would eliminate potential adverse impacts to the Columbia River, Willow Creek, or other drainages in the area.[201] The Department agrees with this conclusion, and notes that recommended Soil Protection Condition 1 would require that the Applicant implement erosion and sediment

[198] As shown in Exhibit Q, Table Q-1, the species with potentially to occur in the analysis area and listed as threatened or endangered only by the federal government include the gray wolf, bull trout, and steelhead - Middle Columbia River ESU (winter run).
[199] Exhibit Q, Table Q-1 also identifies the Steelhead – Middle Columbia River ESU (summer run) as potentially occurring in the analysis area; however, this species is listed as sensitive by ODFW - not threatened or endangered - and is therefore discussed in the Fish and Wildlife Habitat section of this proposed order.
[200] BSEAPPDoc71. ASC, Exhibit Q, Table Q-1. 2017-09-01.
[201] BSEAppDoc71. ASC Exhibit Q, Section Q.3.4. 2017-09-01.

control measures during proposed facility construction in accordance an NDPES and ESCP approved by DEQ. ODFW did not comment on potential impacts to listed fish species.

As described in ASC Exhibit P and the Fish and Wildlife Habitat standard section of this proposed order, most of the habitat within the site boundary is classified as Category 4 (important habitat but not essential habitat and not limited), and as is shown on Table FW-1, all anticipated facility impacts are to Category 4 habitat.

Impact Assessment

Wildlife Species

The only state-listed endangered wildlife species with potential to occur in the analysis area is the Washington ground squirrel. However, as stated above, field surveys found no evidence of Washington ground squirrel use or occupancy in the site boundary or within 1,000 feet of the site boundary.[202]

The Applicant represents that based on recent survey results and proposed facility design, no proposed facility components would be located in Category 1 habitat and the proposed facility is not expected to impact Washington ground squirrel active colonies or burrows. ODFW has reviewed the survey results and proposed facility construction plan, and agreed with this conclusion.[203]

In ASC Exhibit Q, the Applicant proposes to conduct a pre-construction field survey for listed species, including the Washington ground squirrel (and Lawrence's milkvetch, which is further discussed below).[204] The Department agrees with this proposal; a pre-construction survey of the area within the site boundary would determine if any listed species have moved within the site boundary between the time of the surveys conducted in support of the ASC and prior to construction, in order to maintain compliance with the Threatened and Endangered Species standard. The Department recommends the Council adopt recommended Threatened and Endangered Species Condition 1:

> **Threatened and Endangered Species Condition 1**: Prior to construction, the certificate holder shall conduct a field survey within the site boundary for state-listed threatened and endangered species. The surveys shall be conducted by qualified professionals with experience in detection of the Washington ground squirrel and its habitat, and Lawrence's milkvetch. Surveys shall be conducted according to a survey protocol

[202] BSEAPPDoc71. ASC, Exhibit P, Sensitive Species Survey. 2017-09-01.
[203] BSEAPPDoc43 Melody Henderson ODFW Comment 2017-6-29, BSEAPPDoc66 Melody Henderson ODFW Comment 2017-10-5.
[204] BSEAPPDoc71. ASC, Exhibit Q, Section Q.4. 2017-09-01.

approved by ODOE in consultation with ODFW. Washington ground squirrel surveys shall be conducted in the active squirrel season, which is typically March 1 to May 31 but can vary depending on weather, and must be verified by ODOE and ODFW as part of the survey protocol approval. Lawrence's milkvetch surveys shall be conducted in spring when the ground surface is visible. Surveys for Washington ground squirrel are valid for no more than two years after the year in which the surveys are conducted.

The certificate holder shall provide written reports of the surveys to ODOE and to ODFW and shall identify the boundaries of any listed species identified, including but not limited to Category 1 Washington ground squirrel habitat and Lawrence's milkvetch, if present. The certificate holder shall not begin construction until the survey report has been approved by ODOE in consultation with ODFW.

In compliance with the Council's Fish and Wildlife Habitat standard, no impacts to Category 1 habitat are allowed. If any Category 1 habitat is identified in the site boundary during the pre-construction survey, the certificate holder shall flag or fence off all Category 1 habitat and avoid all impacts.

If any plant species listed as threatened or endangered by Oregon Department of Agriculture per ORS 564.105(2) are found in the site boundary during the pre-construction survey, the facility shall be designed to avoid any impacts to these plants.

If any listed plant species are identified in the site boundary, no herbicides or other weed control chemical shall be used within an appropriate buffer distance from that species. The buffer distance shall be established by ODOE and shall be based on specific risks based on the plant species and the proposed herbicide or weed control chemical proposed to be used.

The environmental awareness training (required per Fish and Wildlife Habitat Condition 5) shall include information specifically regarding protection of listed species and areas of Category 1 habitat where no impact is allowed.

As described in this proposed order and by the Applicant in the ASC, the field surveys and historical data have shown a lack of Washington ground squirrel occupied habitat in the site boundary, and the existing habitat is of relatively low quality (Category 4). Subject to the recommended condition, the Department recommends the Council find that the proposed facility is unlikely to adversely affect the Washington ground squirrel or its habitat, and 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 the species.

Plant Species

Lawrence's milkvetch is a state-listed threatened species. The species is known to occur in the Columbia Plateau ecoregion, though the Applicant states that the ORBIC database did not include any occurrences of the species within five miles of the proposed facility. The Applicant states that potential habitat for Lawrence's milkvetch is present within the site boundary; though field surveys conducted in support of the ASC did not discover any occurrences of the species in the site boundary or within 1,000 feet of the site boundary.[205] The Oregon Department of Agriculture is responsible for protecting the state's threatened and endangered plant species; however, the Oregon Department of Agriculture did not comment on the ASC.

If present, potential adverse impacts to the species from proposed facility construction and operation could include direct mortality of plants and loss of potential future suitable habitat. In ASC Exhibit Q, the Applicant commits to avoiding Lawrence's milkvetch and any other threatened or endangered plant species that may be found within the site boundary.[206] As described above, the Department recommends Council adopt Threatened and Endangered Species Condition 1, which would require a pre-construction field survey to validate that no Lawrence's milkvetch or other state-listed plant species are present within the site boundary, and if any such species are found, that the proposed facility be designed to avoid impacts to such species. The recommended condition also includes restrictions of use of herbicides or other weed control chemicals near any listed plant species.

As described in this proposed order and the ASC, the field surveys and historical data demonstrate a lack of listed plant species within the site boundary. While the existing habitat is of relatively low quality (Category 4), the Applicant states that the site boundary contains potential habitat for Lawrence's milkvetch. Subject to compliance with the recommended condition, based on the analysis presented here and the information in the record, the Department recommends the Council find that the proposed facility is unlikely to adversely affect Lawrence's milkvetch or any other threatened or endangered plant species, and 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 threatened or endangered plant species.

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 that the Council find

[205] BSEAPPDoc71. ASC, Exhibit P, Sensitive Species Report and ASC, Exhibit Q, Q.3.6. 2017-09-01.
[206] BSEAppDoc71. ASC, Exhibit Q, Section Q.4. 2017-09-01.

that the proposed facility complies with the Council's Threatened and Endangered Species standard.

IV.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 in the analysis area. In applying the standard set forth in OAR 345-022-0080(1), the Council assesses the visual impacts of facility structures on significant or important scenic resources described in "local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order." For purposes of this rule, "local land use plans" includes applicable state land use and management plans.

The Applicant provides evidence regarding potential impacts to scenic resources in Exhibit R of the ASC. The analysis area for the Scenic Resources standard is the area within and extending 10-miles from the site boundary. The analysis area includes parts of two Oregon counties (Morrow and Gilliam), two Washington counties (Klickitat and Benton), one Oregon municipality (Arlington), land administered by ODFW, ODOT, and Washington State Department of Transportation, and land administered by the Bureau of Land Management and National Park Service.[207] The land use and management plans reviewed by the Applicant are shown in ASC Exhibit R, Table R-1.

[207] The Applicant states in Exhibit R, footnotes (a) and (b) to Table R-1, that it believes that applicable Oregon law does not require the analysis of scenic resources outside of Oregon. The Applicant also states that it believes that the EFSC Scenic Resources standard does not require an analysis of state land use and management plans with respect to scenic resources. The Department disagrees with both points. The EFSC Scenic Resources standard states that the standard considers "scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal management plans for *any* lands located within the analysis area" [emphasis added]. For the Boardman Solar Energy Facility, the analysis area includes land in Washington State, and significant or important scenic resources appropriately identified should be considered in Exhibit R and are covered by the EFSC Scenic Resources standard. Additionally, the Department and Council have consistently

Table SR-1, Important Scenic Resources Inventory (recreated from ASC Exhibit R, Table R-2) presents the Applicant's results, showing that there are six significant or important scenic resources within the analysis area. The table also shows the land management plans evaluated by the Applicant to determine the presence of scenic resources within the analysis area, and a conclusion on facility visibility from each scenic resource. Based on the Applicant's analysis, the proposed facility would be visible from only two of the six scenic resources.

Table SR-1: Important Scenic Resources Inventory

Scenic Resource	County	Plan Where Resource Identified	Approximate Distance and Direction from Facility Proposed Site Boundary	Is Proposed Facility Potentially Visible?
Oregon				
Rock Outcroppings near Fourmile Canyon	Gilliam	Gilliam County Comprehensive Plan (2011)	8.0 miles, SW	No
Oregon Trail Fourmile Canyon High-Potential Site		Oregon Trail Comprehensive Management and Use Plan, National Park Service (1999) Oregon Trail Management Plan, National Park Service (1993) Two Rivers Resource Management Plan Record of Decisions Rangeland Program Summary, US Fish and Wildlife Service (1986)	9.9, SW	No

interpreted "local land use plans" to include any state, county, or municipal land use and management plans applicable to the locality (i.e., the lands within the analysis area described in the project order).

Regardless, the Applicant has included in Exhibit R an analysis of scenic resources in the analysis area identified in state plans, and also resources outside of Oregon. As discussed in this section of the proposed order, the Department recommends Council conclude that the proposed facility is not likely to result in significant adverse impacts to scenic resources in the analysis area, including to resources identified in state plans and outside of Oregon.

Table SR-1: Important Scenic Resources Inventory

Scenic Resource	County	Plan Where Resource Identified	Approximate Distance and Direction from Facility Proposed Site Boundary	Is Proposed Facility Potentially Visible?
City of Arlington East Slopes		City of Arlington Comprehensive Plan (1978)	9.5, SW	No
Blue Mountain Scenic Byway		1999 Oregon Highway Plan: Including Amendments November 1999 through May 2015 (ODOT)	1.2, West	Yes, intermittently from one approx. 1 mile section of SR-74
Washington				
Crow Butte State Park	Benton (WA)	Benton County Comprehensive Plan (2006)	5.5 miles, NE	No
Lewis and Clark Trail Scenic Byway	Klickitat (WA)	Klickitat County Energy Overlay: Final EIS (2004) Washington State Scenic and Recreational Highways Strategic Plan, Washington DOT (2010-2030)	1.3, North	Yes, intermittently from sections of SR-14

Visual Features of the Proposed Facility

As noted in ASC Exhibit B, the maximum height of the solar modules and inverters is approximately 10 feet, and there would be an approximately seven foot tall security fence around the site boundary. The O&M building would be approximately 20 feet in height. The tallest facility component would be the gen-tie transmission line. As described by the Applicant, the transmission towers would be between 70 and 135 feet in height.[208] Facility construction

[208] BSEAPPDoc71. ASC Exhibit R, p. R-12. 2017-09-01.

would remove some trees from the site, but these trees are generally invasive, non-native Russian olive trees, and their removal is beneficial to the environment.[209]

Visual Impact Assessment

As described by the application in ASC Exhibit R, of the six identified scenic resources in the analysis area, only two resources would have visibility of the facility: the Blue Mountain Scenic Byway (State Route 74) and the Lewis and Clark Scenic Byway (in Washington, State Route 14). The Applicant provided photographs of the view towards the site boundary from the identified scenic resources. No comments have been received from reviewing agencies noting concern with the facility's potential impact to scenic resources.

As the Applicant notes, the area surrounding the proposed facility contains undulating hills, vegetation, cliffs and bluffs along the Columbia River, and previously-developed features including roads and the interstate, wind turbines, and transmission lines.[210] The tallest feature of the proposed facility, the gen-tie transmission line, is proposed to be sited next to an existing transmission line and would be similar in design. This would reduce the visual effect of the facility because the proposed facility would be co-located with existing infrastructure.

As described in the application, while the facility would be visible from SR-14 in Washington, this road is across the Columbia River, and views of the facility would be interrupted by hills and the existing Burlington Northern Santa Fe railroad line. The facility would also be located south of SR-14, and the road is oriented generally east-west in this location. From this distance (approximately 1.3 miles at the nearest point), the solar modules and perimeter fence may appear as a line on the horizon, and while the gen-tie transmission line could be more visible, as noted, it is proposed to be located next to an existing transmission line. The Applicant concludes and the Department agrees that while the proposed facility could be visible from the Lewis and Clark Scenic Byway, SR-14, there will not be a significant adverse impact to the scenic resource and value of the byway.[211]

Similarly, the proposed facility would be visible from certain locations along SR-74 (the Blue Mountain Scenic Byway). The views would be interrupted by topography, vegetation, and existing structures at various locations. As with the discussion of SR-14, if the facility is visible to passing motorists on SR-74, the solar modules and perimeter fence would appear as a line on the horizon, and the gen-tie transmission line, when visible, would be located next to an existing transmission line and would be similar in design, thus reducing visual impacts of the proposed facility by co-locating infrastructure. In the area where views from SR-74 could include the facility, the road has a general north-south orientation and the facility would be to

[209] BSEAPPDoc71. ASC Exhibit R, p. R-13. 2017-09-01.
[210] BSEAPPDoc71. ASC Exhibit R, p. R-14. 2017-09-01.
[211] BSEAPPDoc71. ASC Exhibit R, p. R-17. 2017-09-01.

the east of the road. As such, when traveling at highway speeds along SR-74, and considering the distance of the proposed facility from the highway, it is unlikely that travelers would have more than a brief view of the facility. The Applicant concludes and the Department agrees that while the proposed facility could be visible from the Blue Mountain Scenic Byway, SR-74, there will not be a significant adverse impact to the scenic resource and value of the byway.[212]

In ASC Exhibit R, the Applicant includes a discussion of the potential impacts from the facility's solar modules. As concluded in ASC Exhibit R, and supported by comments from ODOT, the potential for glare impacts of the facility are low and not anticipated to adversely affect travelers along local highways, including SR-74 and SR-14.[213] Further discussion of glare is included in Section IV.M., *Public Services* of this proposed order. Additionally, the Applicant has represented that it will use solar modules with glare reducing technology. Facility glare is unlikely to cause a significant adverse impact to viewers from identified scenic resources.

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 proposed facility are not likely to result in significant adverse impacts to any identified scenic resources and values.

Conclusion of Law

Based on the foregoing findings of fact and conclusions of law, the Department recommends that the Council find that the proposed facility complies with the Council's Scenic Resources standard.

IV.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).

[212] BSEAPPDoc71. ASC Exhibit R, p. R-16. 2017-09-01.
[213] BSEAPPDoc71. ASC Exhibit R, p. R-17, 2017-09-01, and BSEAPPDoc24 pASC Comment ODOT Hamilton 2017-03-16.

(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 the proposed facility 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 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.[214]

The applicant provided information regarding historic, cultural and archaeological resources in ASC Exhibit S.[215] As stated therein, the analysis area includes the area within the site boundary.

On September 17, 2016 a professional archaeologist from CH2M Hill Engineers, Inc. (CH2M) conducted a desktop survey of archaeological records maintained by the Oregon State Historic Preservation Office (SHPO) to identify previously recorded cultural resources and pervious cultural resource investigations conducted within the site boundary and a 1.0 mile buffer outside the site boundary. Between September 20 and 22, 2016 a team of CH2M archaeologists performed pedestrian surveys in accordance with the *Guidelines for Conducting Field Archaeology in Oregon* (issued by SHPO in 2015) for the area within the site boundary, with the exception of 8.8 acres of wetlands that would be avoided during construction.[216] In addition, on September 23, 2016 the team of archaeologists conducted subsurface testing along the eastern edge of Threemile Canyon using shovel test probes.[217]

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[214] Furthermore, in accordance with ORS 469.501(4), the Council may not impose the Historic, Cultural, and Archaeological Resources standard to approve or deny an application for an energy facility producing power from solar energy. However, to the extent it determines appropriate, the Council may apply the standard to impose conditions on a site certificate.

[215] Pursuant to OAR 345-021-0010(1)(s), information concerning the location of archaeological sites or objects may be exempt from public disclosure under ORS 192.502(4) or 192.501(11). Therefore, the Applicant submitted a confidential cultural resource report as Attachment S-1 to ASC Exhibit S.

[216] ASC Exhibit S, p. S-2.

[217] BSEAPPDoc71. ASC Exhibit S, p. S-3. 2017-09.01.

The site boundary does not encompass public lands; therefore, OAR 345-022-0090(1)(c) is not applicable.[218] As explained in ASC Exhibit S, the desktop survey revealed 16 cultural resources previously recorded within one mile of the site boundary; however, the desktop survey did not identify any previously recorded NRHP-eligible resources, archaeological sites, or objects [as defined by ORS 358.905(1)(a) and (c)] within the site boundary.[219] The pedestrian field survey identified a single archaeological site (Site 35GM402) within the site boundary. Site 35GM402 is a low-lying rock wall – a stacked rock feature – approximately 98 feet in length, and meets the definition of an archaeological site as defined by ORS 358.905(1)(c).[220] CH2M formally evaluated Site 35GM402 and recommended that it be eligible for listing on the NRHP.[221]

In addition to the desktop survey, pedestrian survey, and subsurface testing, CH2M archaeologists consulted with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to determine whether there were any unrecorded resources in the analysis area. In an April 13, 2017 comment letter, the CTUIR stated that the vicinity of the site boundary includes historic properties of religious and cultural significance to the CTUIR that the CTUIR believes are potentially eligible to the NRHP and should be treated as such. One of these historic properties of religious and cultural significance is *Xúxł*, a traditional fishing site at the confluence of the Columbia River and Willow Creek (and within 1.0 mile of the site boundary) that has been determined eligible for inclusion in the NHRP.[222]

The Applicant commits to ensuring proposed facility components are sited in such a way as to avoid direct impacts to recorded archaeological sites (regardless of NRHP eligibility status) during construction, operations, and retirement activities. The Applicant additionally proposes to avoid direct impacts to Site 35GM402 by identifying Site 35GM402 prior to construction on facility construction maps as a no-entry area, and by flagging a 100-foot (30-meter) buffer surrounding the site as an area to be avoided during construction activities.[223]

In light of the Applicant's representations, the Department recommends that the Council adopt the following conditions to reduce potential adverse direct impacts on historic, cultural, and archaeological resources:

> **Historic, Cultural, and Archeological Resources Condition 1**: Prior to construction, the certificate holder shall provide to the Department a map showing the final design

[218] BSEAPPDoc71. ASC Exhibit S, p. S-4. 2017-09.01.
[219] BSEAPPDoc71. ASC Exhibit S, p. S-2. 2017-09.01.
[220] BSEAPPDoc71. ASC Exhibit S, p. S-3. 2017-09.01.
[221] BSEAPPDoc71. The NRHP evaluation is included as Appendix D to the confidential cultural resources survey report (ASC Exhibit S, Attachment S-1). 2017-09.01.
[222] The CTUIR provided the Department the NHRP Registration Form for *Xúxł* (as a confidential material), which contains a 2008 letter from SHPO stating the agency received a National Register Nomination form for Xúxł, and that SHPO concurred with the determination that the property is eligible for the NHRP.
[223] BSEAPPDoc71. ASC Exhibit S, p. S-6.2017-09.01.

locations of all components of the facility, the areas that will be temporarily disturbed during construction and the areas that were surveyed in 2016 for historic, cultural, and archaeological resources.

Historic, Cultural, and Archeological Resources Condition 2: Prior to construction, the certificate holder shall identify Site 35GM402 on construction maps as a no-entry area, and flag a 100-foot (30-meter) buffer surrounding the site as an area to be avoided during construction activities. The certificate holder shall ensure that no physical disturbance occurs within the buffer zone. A copy of current maps and drawings must be maintained onsite during construction and made available to the Department upon request. Flagging or marking shall be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.

Historic, Cultural, and Archeological Resources Condition 3: Prior to facility retirement and site restoration activities, the certificate holder shall identify Site 35GM402 on retirement maps as a no-entry area, and flag a 100-foot (30-meter) buffer surrounding the site as an area to be avoided during retirement and site restoration activities. The certificate holder shall ensure that no physical disturbance occurs within the buffer zone. A copy of current maps and drawings must be maintained onsite during facility retirement and site restoration and made available to the Department upon request. Flagging or marking shall be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.

While the Applicant proposes measures to avoid direct impacts to Site 35GM402, indirect visual impacts to the setting of Site 35GM402 and *Xúxł* (the NHRP-eligible resource identified by the CTUIR) would occur, as discussed in Exhibit S. As part of consultation with the CTUIR, CH2M on behalf of the applicant, performed a viewshed assessment to analyze indirect visual impacts to NHRP-eligible resources within the viewshed of the proposed facility, using methods similar to those described in ASC Exhibit R (Scenic Resources) to determine from which areas the facility would be visible.[224] Based upon the viewshed assessment, CH2M determined that the proposed transmission line would be visible from Site 35GM402 and may be visible from *Xúxł*. The Applicant states that though the transmission line may have a visual impact on the setting of both of these resources, the transmission line would be routed directly adjacent to an existing 230-kV line, which would reduce the cumulative visual impact of adding new infrastructure to the landscape. The Applicant further states that the proposed transmission line would not

[224] In accordance with the CTUIR's request to keep the viewshed assessment confidential (and between the CTUIR and the Applicant) because it pertains to the location of archaeological sites and/or objects, the Applicant provided the viewshed assessment report directly to the CTUIR.

obstruct views from these resources towards Willow Creek and the Columbia River, the dominant landscape features. The viewshed assessment indicated that the solar array may also be visible from *Xúxł*, but, if visible, its appearance would be similar to a dark line on the horizon. The Applicant concluded that that while cumulative visual impacts to the setting of Site 35GM402 and *Xúxł* would occur, these impacts would not be significant.[225]

However, in consideration of the potential indirect impact to the visual setting experienced in views toward the facility from the cultural resource locations, the Applicant stated in ASC Exhibit S that it would mitigate these indirect impacts through off-site mitigation actions with the CTUIR.[226] On October 24, 2017 the CTUIR provided the Department with a letter stating that the CTUIR and the Applicant have come to a mutual agreement on the effects the proposed facility may have on historic properties of religious and cultural significance to the CTUIR.[227] The CTUIR stated that the CTUIR's concerns have been addressed and that they have no further concerns with the proposed facility unless the proposed facility changes.[228]

In addition to the agreement between the Applicant and CTUIR, the Applicant explains in Exhibit S that it would reduce visual impacts by minimizing lighting during facility construction, operations, and retirement, as further described in ASC Exhibit S, Section S.7.2. In light of the Applicant's representations, the Department recommends the Council adopt the following condition:

Historic, Cultural, and Archeological Resources Condition 4:

(a) During facility construction, the certificate holder shall direct personnel to extinguish nighttime exterior lights at the operations and maintenance building; substation; and any temporary construction work site, equipment, and laydown yard (if any) when not in use.

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[225] BSEAPPDoc71. ASC Exhibit S, p. S-6 and ASC Exhibit S, Attachment S-1. 2017-09-01.

[226] BSEAPPDoc71. ASC Exhibit S, p. S-7. 2017-09-01.

[227] Irene Gilbert, representing herself and Friends of the Grande Ronde Valley, stated on the record of the public hearing that the agreement between the CTUIR and the Applicant should be incorporated into the site certificate requirements to ensure that the agreement remains in place in the event of a site certificate transfer. BSEAPPDoc86 DPO Hearing Public Comment Gilbert 2017-12-14. However, this agreement occurred outside of the site certificate process, and is directly between the CTUIR and the Applicant. It does not involve the Department or EFSC. As such, neither the Department nor EFSC will have any ongoing involvement in the implementation of the agreement, as it is outside the site certificate process. It is described here simply for informational purposes. The Department notes that, in the event of a request to transfer the site certificate, the CTUIR would be provided an opportunity to comment on the requested transfer, and the Department would assess the transfer request against all applicable Council standards.

[228] BSEAPPDoc72. CTUIR letter to ODOE 2017-10-24.

(b) During facility operation, the certificate holder shall install motion detectors or timers and hoods on exterior lights on the operations and maintenance building, control house and substation to minimize skyward light.

It is possible that construction activities could uncover previously unrecorded historic, cultural or archaeological resources. The Applicant commits to implementing the following protective measures:[229]

- Archaeological monitor: An archaeological monitor would be present during the construction phase during ground-disturbing activities and would follow the Monitoring Plan for Cultural Resources (ASC Exhibit S, Attachment S-2).
- Training: Construction personnel would receive cultural resources sensitivity training from an archaeological monitor or cultural resources specialist during preconstruction meetings.
- Inadvertent discovery: In the event of an inadvertent discovery of possible cultural materials, including human remains, during facility construction, operations, or retirement, the Inadvertent Discovery Plan for Cultural Resources (ASC Exhibit S Attachment S-4) would be followed.

The Inadvertent Discovery Plan for Cultural Resources specifies the proper procedures to follow in the event of discovery of any previously unidentified cultural resource, including ceasing construction, operations, or retirement activities within the immediate vicinity of the newly identified cultural resource pending evaluation by a qualified archeologist, and notifying the appropriate tribal and state authorities.[230] Based upon the Applicant's representations, the Department recommends the Council adopt the following conditions to ensure that previously undiscovered sites are protected during construction, operation, and retirement of the proposed facility:

Historic, Cultural, and Archeological Resources Condition 5: During construction, the certificate holder shall implement the *Monitoring Plan for Cultural Resources, Boardman Solar Energy Facility, Morrow and Gilliam Counties, Oregon* included as Attachment F to the Final Order on the ASC. An archaeological monitor shall be present during ground-disturbing activities.

Historic, Cultural, and Archeological Resources Condition 6: Prior to construction, the certificate holder shall ensure that a monitor or cultural resources specialist trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to

[229] ASC Exhibit S, pp. 6 and 7 provide more detail on the Applicant's proposed measures.
[230] BSEAPPDoc71. ASC Exhibit S, Attachment S-4. 2017-09-01.

identified resource sites. Records of such training must be maintained onsite during construction, and made available to the Department upon request. The Cultural Resource Awareness Training Information packet (ASC Exhibit S, Attachment S-3) shall be distributed to training attendees and shall be available for reference when ground-disturbing work is performed during facility construction, operation, and retirement.

Historic, Cultural, and Archeological Resources Condition 7: During construction, operations, and retirement, the certificate holder shall:

(a) Implement and adhere to the requirements of the *Inadvertent Discovery Plan for Cultural Resources*, included as Attachment F to the Final Order on the ASC.

(b) In the event of an inadvertent discovery of possible cultural materials, including human remains, the certificate holder shall:
   1. Immediately cease all ground-disturbing activities in the vicinity of the find.
   2. Place a 100-foot (30-meter) buffer around the discovery and the area shall be secured and protected from further disturbance. Construction, operations, and retirement activities shall proceed outside of this buffered area unless additional cultural materials are encountered.

(c) The certificate holder shall follow the protocol for coordination and notification described in the *Inadvertent Discovery Plan for Cultural Resources*.

(d) If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the NHRP, the certificate holder shall, in consultation with the Department, SHPO, interested Tribes and other appropriate parties, propose and implement mitigation measures, including avoidance, field documentation, and data recovery. The certificate holder shall not restart work in the affected area until a professional archaeologist is able to assess the discovery and the Department, in consultation with SHPO, determines that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.

Conclusions of Law

Based on the foregoing analysis, and in accordance with OAR 345-022-0090(2), the Department recommends that the Council impose Historic, Cultural, and Archeological Resources Conditions 1 through 7 on the site certificate to address the protection of historic, cultural, and archaeological resources at the proposed facility site.

IV.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.
****[231]*

Findings of Fact

The Recreation standard requires the Council to find that the design, construction and operation of a facility are not likely to result in significant adverse impacts to "important" recreational opportunities. Therefore, the Council's Recreation standard applies to only those recreation areas that the Council finds "important" using the factors listed in the sub-paragraphs of section (1) of the standard.

To analyze the proposed facility against this standard, the Department must first evaluate whether the identified recreational opportunity is important. The Department must then evaluate whether the design, construction or operation of the proposed facility could adversely impact the identified important recreational opportunity. If the proposed facility could adversely impact the resource, then the Department must consider the significance of the possible impact.

The Applicant provides information about recreational opportunities in ASC Exhibit T. The analysis area for the Recreation standard is the area within and extending five miles from the site boundary.[232] In Exhibit T, the Applicant identifies six recreational opportunities within the analysis area and concluded, based on its evaluation of the criteria outlined in OAR 345-022-0100, that five recreational opportunities should be considered "important."[233,234] The Applicant concludes that the remaining recreational opportunity within the analysis area would not meet the "important" criteria, based on the assessment described below.

[231] The proposed facility is not a special criteria facility under OAR 345-0015-0310; therefore, OAR 345-022-0100(2) is not applicable.
[232] BSEAPPDoc71. ASC Exhibit T, p. T-1. 2017-09-01.
[233] BSEAPPDoc19. ODFW submitted comments recommending a change in the preliminary ASC findings regarding the importance of Quesnel Park from "not important" to "important" per OAR 345-022-0100. 2017-02-23.
[234] The Lewis and Clark Trail Scenic Byway is located partially or entirely in the State of Washington. Although the recreational opportunity is located in Washington State, its location remains within the analysis area [5 miles, as per OAR 345-001 -001(59)(d)] and was analyzed in the ASC and considered "important."

- Horn Butte Wildlife Area: The Horn Butte Wildlife Area is a federally-managed (Bureau of Land Management) wildlife area. Recreational opportunities are limited, but include off road vehicle use, rock collecting, and bird-watching. The main focus of the Horn Butte Wildlife Area is the Horn Butte Area of Critical Environmental Concern (ACEC), designed particularly for protecting habitat of the long-billed curlew. The public use of this area is assumed to be low, owing to the fairly remote nature of the area and the lack of trails.

The Horn Butte Wildlife Area does not meet the Council's criteria for "important," in that it does not contain a rare or unusual quality, nor is the recreational experience presumed to be irreplaceable or irretrievable as the long-billed curlew occurs elsewhere in the Columbia Basin area as well as southern Oregon. Additionally, the degree of demand appears to be low. Finally, designation of the ACEC is focused on wildlife protection, not recreation. As such, the Department concurs with the Applicant that the Horn Butte Wildlife Area does not meet the criteria to be considered an important recreational opportunity.

The Applicant's analysis concludes that the following recreation areas should be considered "important" based on the Council's criteria:

Lewis and Clark Trail Scenic Byway

The nearest portion of the Lewis and Clark Trail Scenic Byway is located 1.3 miles north of the proposed facility.[235] Portions of the scenic byway are located within the 5 mile analysis area and are located on the Washington side of the Columbia River, along a stretch of SR 14, Washington's state-designated scenic byway.[236] The Applicant explains that the recreational opportunities provided by the scenic byway include sightseeing and road touring. Identified as the nearest point of interest along the byway, Crow Butte State Park is located outside of the analysis areas, 5.1 miles to the northeast of the proposed facility.[237] Due to its designation as a state scenic byway, the access it provides to other recreational opportunities, as well as its irreplaceable qualities and moderate rate of demand, the Department recommends that the Council find that the portion of the Lewis and Clark Trail Scenic Byway within the analysis area, be considered an important recreational resource as defined by OAR 345-022-0100(1).

Lewis and Clark National Historic Trail

[235] According to Table T-1 of ASC Exhibit T, the Lewis and Clark Scenic Byway is 1.3 mile away from the facility site boundary (at its nearest point), while the expanded description on page T-8 states that the scenic byway is located 1.4 miles north of the proposed facility.
[236] BSEAPPDoc71. ASC Exhibit T, p. T-8. 2017-09-01.
[237] Further details of the points of interests along the byway were provided by the Applicant on p. T-8 of ASC Exhibit T.

Under the National Trails Systems Act, the Lewis and Clark National Historic Trail (LCNHT) was federally designated as a "historic trail" in 1978. The Applicant explains that a portion of the LCNHT is located within the analysis area for the Recreation standard and approximately 0.3 mile from the proposed facility. The identified recreational opportunities provided by the LCNHT include boating the approximate route of the Lewis and Clark expedition in the Columbia River, driving the approximate route along the Washington SR 14 or I-84 (aforementioned in the Lewis and Clark Trail Scenic Byway description), visiting parks along the Columbia River, wildlife viewing, and historic interpretation of the Lewis and Clark expedition.[238] The Applicant explains that the purpose of the historic trail designation is to promote the historic route and associated artifacts, and that the recreational uses and opportunities of the LCNHT satisfy the criteria of OAR 345-022-0100, thus classifying it as important.[239] The Applicant concluded that although the LCNHT offers recreational opportunities that support public use and historic interpretation, the designation made by the National Trails Systems Act focuses on the historic preservation of the LCNHT rather than the management of recreational opportunities. The Applicant states in Exhibit T that the route segment within the analysis area is irreplaceable. The Department recommends that the Council find the portion of the Lewis and Clark National Historic Trail within the analysis area is an important recreational resource as defined by OAR 345-022-0100(1) due to its uncommon availability and irreplaceable qualities.

Blue Mountain Scenic Byway

The Applicant explains in Exhibit T that a segment of the Blue Mountain Scenic Byway is located approximately 1.2 miles west of the site boundary.[240] The Oregon SR 74 route segment was identified and classified by the Applicant as an important recreational opportunity due to its irreplaceable qualities and moderate (seasonal) rate of demand. Route segment Oregon SR 74 provides recreational uses including sightseeing and road touring. Numerous points of interest occur along the entire 145 mile byway, but only one is located within the analysis area. The nearest point of interest to the site boundary is the Willow Creek Wildlife Area, located 1.2 miles from the proposed facility. The Department recommends that the Council find the Oregon SR 74 segment of the Blue Mountain Scenic Byway within the analysis area designated as an Oregon State Scenic Byway is an important recreational resource as defined by OAR 345-022-0100(1) due to its special designation as well as its irreplaceable qualities and moderate (seasonal) rate of demand.

Willow Creek Wildlife Area

[238] The Lewis and Clark expedition moved from east to west in 1804, with a return trip from the Pacific Ocean along the north shore of the Columbia River in 1806. Recreational opportunities associated with the return trip route are included in the Lewis and Clark Scenic Byway description in ASC Exhibit T, p. T-8.
[239] BSEAPPDoc71. ASC Exhibit T, p. T-9. 2017-09-01.
[240] The Blue Mountain Scenic Byway is a designated Oregon State Scenic Byway (ASC Exhibit T, p. T-7).

The Willow Creek Wildlife Area is one of four ODFW-managed Columbia Basin Wildlife Areas in the vicinity of the proposed facility. The Applicant explains that the public uses of the wildlife area include hunting, trapping, angling, wildlife viewing, and educational/interpretive uses, and while there are other similarly accessible natural landscapes (where surface water bodies and streams meet the Columbia River), they do not provide public access to hunting. [241] Hence, this resource is somewhat irreplaceable and identified by the Applicant as an important recreational opportunity with a moderate degree of demand. The Department concurs and recommends that the Council find the Willow Creek Wildlife Area is an important recreational resource as defined by OAR 345-022-0100(1) due to its somewhat irreplaceable qualities and moderate rate of demand.

Quesnel Park

Quesnel Park, a recreational site identified by the Applicant within the analysis area and 0.2 miles from the facility site boundary, offers recreational opportunities that include hunting, fishing, windsurfing, camping, and wildlife viewing.[242] A public boat ramp and launch site at the park provide year-round public access to the Columbia River. Recreation access at Quesnel Park is cooperatively managed by both the US Army Corps of Engineers and the ODFW, and is part of the Columbia River Regulated Hunt Area.[243] The US Army Corps of Engineers Ranger Station in The Dalles informed the Applicant that other than the summertime seasonal demand, use of the park is generally low, with almost no use during the fall, winter, and early spring months. Due to its high summer seasonal demand, attractive natural setting, and the presence of some protective offshore islands or breakwaters, the Applicant identified Quesnel Park as an important recreational resource. Based on its natural, recreational, and scenic qualities, as well as its high seasonal demand and year-round access to the Columbia Basin, the Department recommends that the Council find that Quesnel Park is an important recreational resource as defined by OAR 345-022-0100(1).

Impacts to Important Recreational Opportunities

OAR 345-021-0010(t) requires the applicant to evaluate potential impacts to important recreational opportunities based on both direct and indirect loss, and on noise, traffic and visual impacts resulting from construction and operation of the proposed facility. OAR 345-022-0100(1) requires that the Council find that the construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area.

Direct Loss

[241] BSEAPPDoc19 pASC Comment ODFW Henderson and Reif 2017-02-23, Comment 10.
[242] BSEAPPDoc71. ASC Exhibit T, p. T-6, and BSEAPPDoc19 pASC Comment ODFW Henderson and Reif 2017-02-23, Comment 9.
[243] BSEAPPDoc19 pASC Comment ODFW Henderson and Reif 2017-02-23, Comment 9.

A direct loss occurs when construction or operation of a proposed facility would impact a recreational opportunity by directly altering the resource so that it no longer exists in its current state. The proposed 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 finds that the proposed facility would not result in direct loss of any of the recreational opportunities identified as important.

Indirect Loss

Similar to the assessment of direct loss, indirect loss would result if construction or operation of a proposed facility would impact a recreational opportunity by indirectly altering the resource or some component of it. For the Boardman Solar Energy Facility, indirect loss is considered in the context of the "traffic" section below with particular review of how the facility could indirectly impact access to the Willow Creek Wildlife Area.

Noise

As explained in Exhibit T of the ASC, and as discussed in Section IV.Q.1. of this Order (Noise Control Regulation), noise levels associated with the construction of the proposed facility would be temporary in nature, and result in short-term increases in noise levels at the two closest recreational opportunities. Quesnel Park and the Willow Creek Wildlife Area are both 0.2 miles from the site boundary, and would not be significantly impacted by both the construction noise and the operational noise.[244] The Applicant states that temporary construction noise levels will not exceed approximately 60 dBA at Willow Creek Wildlife Area or Quesnel Park, and that any operational noise would be extremely low (if audible) at those locations.[245] The Applicant states that construction noise – while temporary – may potentially be audible from both the Willow Creek Wildlife Area and Quesnel Park but will not result in any interference with the recreational opportunities.[246]

The two closest recreational opportunities are either located adjacent to, or are bisected by, the I-84 highway and a high-volume railroad track, which are existing sources of traffic noise. Due to Quesnel Park's proximity to the highway and railroad, recreational users of the public park already anticipate ambient noise.[247] While the recreational opportunities of the Willow Creek Wildlife Area are more sound sensitive (fishing, hunting, and wildlife viewing) than those

[244] BSEAPPDoc71. ASC Exhibit T, p. T-9. 2017-09-01.
[245]The Applicant submitted an analysis of predicted noise associated with the proposed facility in ASC Exhibit X. Claiming to be conservative, the calculated noise levels were based on attenuation from geometric spreading, and did not account for other factors that will further reduce the construction noise estimates. (ASC Exhibit X, p. X-6, and ASC Exhibit T, p. T-10)
[246] BSEAPPDoc71. ASC Exhibit T, p. T-10. 2017-09-01.
[247] BSEAPPDoc71. ASC Exhibit T, p. T-9. 2017-09-01.

of Quesnel Park (e.g., windsurfing), additional noise sources (such as recreational fire arms discharge from hunting and the water pumping facility) exist at Willow Creek Wildlife Area. As such, the noise levels associated with the construction of the facility would not be likely to result in a significant impact to the recreational opportunities at the Willow Creek Wildlife Area, as the area is already subject to noise sources generated while recreating and the ambient noise of the highway and railroad track. Additionally, at both recreational opportunities, facility construction noise will be temporary, and any long-term operational noise is expected to be so low as to be undetectable.[248]

Temporary construction noise levels were evaluated at the remaining important recreational opportunities (Blue Mountain Scenic Byway, Lewis and Clark Trail Scenic Byway, and LCNHT). The Applicant's evaluation of temporary construction noise levels at the other "important" recreational opportunities determined that the construction of the proposed facility would not significantly affect these recreational opportunities. While the Applicant did not provide a noise impact analysis on the Lewis and Clark Trail Scenic Byway, the Department notes that the recreational opportunities of the Lewis and Clark Trail Scenic Byway are not likely to be significantly impacted by the temporary construction noise levels. Table X-5 of the Applicant's Exhibit X shows the total composite noise at a reference distance of 50 feet as well as additional distances. At 1 mile, the predicted noise levels during construction are not expected to be greater than 50 dBA. Located 1.3 miles away from the facility, and considering the existing ambient noises of activities on the Columbia River, I-84, and the high-volume railroad track, the Department recommends that Council find that the noise generated by the construction proposed facility is not likely to result in significant adverse impacts to the Lewis and Clark Trail Scenic Byway. As with the Willow Creek Wildlife Area and Quesnel Park, noise during operation is anticipated to be undetectable. The remaining two important recreational opportunities analyzed by the Applicant for significant noise impacts were the Lewis and Clark National Historic Trail and the Blue Mountain Scenic Byway. Auto touring, a recreational activity provided at both of the aforementioned recreational opportunities, generates noise and should not be considered a noise-sensitive activity. The Applicant explains that the noise generated temporally during construction would be faint at these recreational opportunities, if audible at all, and that any long-term noise associated with the operation of the facility will be so low that it may be undetectable. [249]

Based on the analysis presented here, the Department recommends that the Council find that the noise generated by the construction and operation of the proposed facility is not likely to

[248] BSEAPPDoc71. ASC Exhibit T, p. T-10. 2017-09-01.
[249] BSEAPPDoc71. ASC Exhibit T, p. T-10. 2017-09-01.

result in significant adverse impacts to any of the recreational opportunities identified as "important."

Traffic

The Applicant estimates that a worst-case increase in traffic due to facility operation would include 10 daily trips to and from the proposed facility, and states that because I-84 and Threemile Canyon Road have sufficient capacity for these additional vehicle trips, traffic impacts to important recreational opportunities during facility operation are not anticipated.[250] The rest of the following discussion focuses on potential traffic impacts on important recreational opportunities from facility construction.

The Applicant states that I-84 will act as the primary transportation route to the proposed facility, but impacts related to temporary construction traffic would be nominal because construction vehicles would constitute a small percentage of the daily traffic typical on I-84.[251]

Construction activities at the facility have the potential to temporarily impact access to both Quesnel Park and the Willow Creek Wildlife Area. Access to both of these recreational opportunities occurs via Exit 151 on I-84. Exit 151 will also be utilized to access the proposed facility. Because Quesnel Park is located north of I-84 on Threemile Canyon Road, a private road that runs north to south, whereas construction traffic would access the facility by traveling south on Threemile Canyon Road, any increase in traffic affecting access to the park will be limited to the I-84 on- and off-ramps.[252] Therefore, traffic impacts associated with the construction of the proposed facility are not expected to result in any significant adverse impacts to Quesnel Park.

In contrast, because both visitors to Willow Creek Wildlife Area and facility construction traffic would use the same 0.5-mile segment of Threemile Canyon Road south of I-84, recreationists may experience backups and delays of a temporary nature, particularly during the peak construction season. The Applicant explains that large delivery trucks are likely to arrive primarily during the work week, which would limit the amount and number of delays experienced by weekend visitors to Willow Creek Wildlife Area. The Applicant commits to measures in ASC Exhibit U, Section U.4.7 that would reduce the impact of delays due to construction traffic on visitors to Willow Creek Wildlife Area. Recommended Public Services Conditions 5 would require the Applicant to implement these measures.

A private access road turnoff, located off of Threemile Canyon Road and approximately 0.5 miles south of Exit 151, provides access to the Willow Creek Wildlife Area. In order to accommodate facility construction and operation, the Applicant proposes to upgrade 600 feet

[250] BSEAPPDoc71. ASC Exhibit U, p. U-14 and ASC Exhibit T, p. T-10 and T-11. 2017-09-01.
[251] BSEAPPDoc71. ASC Exhibit T, p. T-10. 2017-09-01.
[252] BSEAPPDoc71. ASC Exhibit T, p. T-11. 2017-09-01.

of this access road where it turns west from Threemile Canyon Road. To minimize impacts to accessing Willow Creek Wildlife Area, the Applicant has committed to providing a temporary (during construction) alternate public access route to Willow Creek Wildlife Area in coordination with the landowner. ASC Exhibit L, Figure L-2 shows the alternate access route, which follows Threemile Canyon Road 1.1 miles south of the existing Willow Creek Wildlife Area turnoff and then turns west onto an existing privately owned dirt road, which continues west to Willow Creek Wildlife Area.[253] While the alternate access route is 0.6-miles longer than the existing Willow Creek Wildlife Area access route, most of the additional driving distance would be on paved Threemile Canyon Road (in contrast to the unimproved portion of access to Willow Creek Wildlife Area that the Applicant proposes to upgrade); therefore, travel time on the alternate access route should be comparable to the existing access route. In addition, the Applicant commits to working with ODFW and the landowner to provide safe and clear wayfinding to Willow Creek Wildlife Area on the alternate access route during facility construction.

In light of the Applicant's representations, the Department recommends that the Council adopt the following conditions:

> **Recreation Standard Condition 1:** During construction, the certificate holder shall, in coordination with the landowner, maintain an alternate public access route to Willow Creek Wildlife Area. The alternate public access route shall be the route shown in ASC Exhibit L, Figure L-2, or shall be another comparable route.
>
> **Recreation Standard Condition 2:** During construction, the certificate holder shall coordinate with ODFW and the landowner to provide safe and clear wayfinding to Willow Creek Wildlife Area on the alternate access route, including at a minimum directional roadway signage.

With implementation of the recommended Recreation Standard Conditions 1 and 2 and the recommended Public Services Condition 4, the Department recommends that the Council find that construction traffic from the proposed facility would not result in significant adverse impacts to Willow Creek Wildlife Area.

As explained in Exhibit T of the ASC, the Applicant states that motorists accessing the Blue Mountain Scenic Byway via I-84 may experience limited traffic increases during facility construction. This impact will be temporary in nature, occurring over the main access route (I-84) to the byway's starting point, as opposed to the byway itself. Due to the low traffic demands of the portion of I-84 immediately adjacent to the byway, potential impacts are expected to be both low and temporary.[254]

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[253] BSEAPPDoc71. ASC Exhibit T, p. T-11. 2017-09-01.
[254] BSEAPPDoc71. ASC Exhibit T, p. T-11. 2017-09-01.

Finally, because Washington SR-14 is not a primary transportation route for the proposed facility, no traffic-related impacts to motorists on the Lewis and Clark Trail Scenic Byway or on the motor route segment of the LCNHT are anticipated.

Based on the analysis presented here, the Department recommends that the Council find that the traffic generated by the construction and operation of the proposed facility is not likely to result in significant adverse impacts to any of the recreational opportunities identified as "important."

Visual Impacts

The location of the proposed facility is situated atop a river terrace of the Columbia River, approximately 100 feet higher in elevation than Quesnel Park. The Applicant states that views of the proposed facility from Quesnel Park would be limited due to this topography and because the Applicant proposes to construct the tallest structures of the facility (the transmission line poles) over a mile and a half away from the park.[255] The Applicant therefore concludes that the facility would not result in any significant visual impacts to recreational users at Quesnel Park and in the adjacent portion of the Columbia River (i.e., persons windsurfing and fishing).[256] Quesnel Park is also separated from the proposed facility by I-84.

Views of the proposed facility from Willow Creek Wildlife Area would similarly be limited due to topography, because the wildlife area is located in a canyon at a lower elevation than the proposed facility. In addition, vegetative screening (consisting of evergreen and deciduous vegetation) would block views of the proposed facility from Willow Creek Wildlife Area.[257] The Applicant therefore concludes that the facility would not result in any significant visual impacts to recreational users at Willow Creek Wildlife Area.[258]

The Blue Mountain Scenic Byway, Lewis and Clark Trail Scenic Byway, and upland portion of the LCNHT are all located more than one mile away from the Facility site boundary, and with some exceptions views of the proposed facility from these recreational opportunities would be blocked by topography, vegetation, and other structures. Where these recreational opportunities would have views of the solar energy generation components (e.g., solar modules, inverters, O&M building, perimeter fence), these components would appear as a line on the horizon given their distance from the recreational opportunities. The tallest and most visible features of the proposed facility – the transmission line poles –would be between 70 and

[255] BSEAPPDoc71. ASC Exhibit T, p. T-11. BSEAPPDoc71.
[256] BSEAPPDoc71. ASC Exhibit T, p. T-11. BSEAPPDoc71.
[257] BSEAPPDoc71. ASC Exhibit L, Section L.3.2.1. BSEAPPDoc71.
[258] BSEAPPDoc71. ASC Exhibit T, pp. T-11 and T-12. BSEAPPDoc71.

135 feet in height.[259] The Applicant states that the visual impact of the transmission line poles on these recreational areas would be minimized because the proposed transmission line would be routed directly adjacent to an existing transmission line with poles similar in scale and appearance. The Applicant further notes that other structures, such as wind power generation infrastructure, are an existing part of the visual landscape, and concludes that the facility would not result in significant adverse impacts to the views from the Blue Mountain Scenic Byway, Lewis and Clark Trail Scenic Byway, and upland portion of the LCNHT. Potential visual impacts were also analyzed for the water route segment of the LCNHT, located adjacent to the Oregon shoreline of the Columbia River, which is approximately 110 to 170 feet lower in elevation below the area within the facility site boundary. The Applicant concludes that the proposed facility would not result in significant adverse impacts on views from the water route segment of the LCNHT because the taller components of the facility such as the transmission line, substation, and the operations and maintenance building would be located on the south end of the site boundary, farthest away from the river.[260]

Based on the analysis above, the Department recommends that the Council find that construction and operation of the proposed facility are not likely to result in significant visual impacts to important recreational opportunities.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council's Recreation standard.

IV.M. Public Services: OAR 345-022-0110

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*

[259] ASC Exhibit R provides additional information about the visual impact assessment related to these recreational opportunities.
[260] BSEAPPDoc71. ASC Exhibit T, p. T-12. 2017-09-01.

* * *

The Council's Public Services standard requires the Council to find that the proposed facility 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 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.

Findings of Fact

The analysis area for public services is the area within and extending 10-miles from the site boundary. The Applicant addresses the impacts to public services in ASC Exhibit U.

The Applicant's analysis in ASC Exhibit U is based, in part, on assumptions related to the length of the construction phase and the number of local and non-local construction and operations workers that would be employed at the proposed facility. The Applicant proposes to begin construction of the proposed facility by October 1, 2018, and complete construction by December 31, 2019. Operations at the proposed facility are anticipated to begin at the beginning of 2020.[261] The Applicant estimates that during construction, the proposed facility would employ an average of approximately 100 people, and that approximately 250 people may be employed during peak construction months.[262] The Applicant intends to hire locally to the extent that workers are available to minimize traffic impacts and support the local economies. The Applicant estimates that two full time personnel would be required to operate the proposed facility. To the extent feasible, construction and operation and maintenance employees would be hired locally, although contractors with specialized skills or personnel with prior experience operating a solar facility may be hired from outside the analysis area.[263]

Sewers and Sewage Treatment

The Applicant does not propose to connect the proposed facility to any public sewer or waste water treatment facility during construction or operation. During construction, the Applicant proposes to use portable toilets. Disposal of the associated sewage would be provided by licensed haulers and disposal facilities.[264]

[261] BSEAPPDoc71. ASC Exhibit U, pp. U-1 and U-2. 2017-09-01.
[262] BSEAPPDoc71. ASC, Exhibit U, p. U-4. 2017-09-01.
[263] BSEAPPDoc71. ASC Exhibit U, p. U-2. 2017-09-01.
[264] BSEAPPDoc71. ASC, Exhibit U, p. U-4. 2017-09-01.

During operations, the O&M building would be the only facility component that would generate and discharge sewage waste. The Applicant proposes to install an on-site septic system for effluent discharge in accordance with OAR Chapter 340, Division 71 (see recommended Soil Protection Condition 3). The proposed O&M facility would have a bathroom, kitchen, and utility sink which would drain into the septic system. The Applicant estimates that approximately 90 gallons of sanitary wastewater would be generated and disposed of each day using the proposed onsite septic system and drain field.[265] The Applicant's proposal to construct and operate an onsite septic system and drain field for treatment and disposal of sewage waste during operations would eliminate the need for use of public or private providers of sewer and sewage treatment. Therefore, the potential impacts of proposed facility construction and operation to public and private providers of sewer and sewage treatment services would not be likely to result in a significant adverse impact.

Water Supply

The Applicant states that it would purchase water needed for construction from permitted local water sources. As provided in Section IV.Q.3, *Water Rights,* the Applicant verified that the City of Boardman has sufficient water sources to meet the proposed facility demand during construction, and for potential module washing associated with operation.[266] The Applicant estimates that approximately 9.7 million gallons of water would be required for the proposed facility during construction under worst-case conditions, including 9 million gallons for dust suppression, and, 700,000 gallons for concrete production if the Applicant elects to use concrete foundations for the solar module steel posts.[267] Additionally, the Applicant states that less than 50,000 gallons per day (gpd) of water would be used for drinking water and for sanitation facilities used by construction workers.[268]

As discussed in Section IV.Q.3, *Water Rights,* the Applicant may wash the solar modules during proposed facility operation using water (an estimated 0.5 million gallons per year) provided by the City of Boardman.

During operation, the Applicant estimates that two full-time employees, some contractors, and occasional visitors would use water totaling approximately 165 gpd for toilets and sinks in the O&M building and some equipment washing.[269] To supply water used during operation, the Applicant proposes to construct a new well to be located near the O&M building. The well would be an exempt use pursuant to OAR 537.545(1)(f) because it would not provide more

[265] BSEAPPDoc71. ASC Exhibit V, p. V-2. 2017-09-01.
[266] BSEAPPDoc71. ASC Exhibit O, Attachment O-2. 2017-09-01.
[267] BSEAPPDoc71. ASC Exhibit U, p. U-4. 2017-09-01.
[268] BSEAPPDoc71. ASC Exhibit O, p. O-1. 2017-09-01.
[269] BSEAPPDoc71. ASC, Exhibit O, p. O-2. 2017-09-01.

than 5,000 gpd, and the well location would be logged pursuant to Oregon Revised Statute (ORS) 537.765. In accordance with these requirements and the Applicant commitments, the Department recommends that the Council adopt the following condition:

> **Public Services Condition 1:** During facility operation, the certificate holder shall maintain a written log for the on-site water well, in accordance with ORS 537.765, demonstrating that water use does not exceed 5,000 gallons of water per day.

In addition, the Oregon Water Resources Department requires owners of exempt wells to meet certain requirements to protect groundwater quantity and quality. The site certificate holder would be subject to those OWRD requirements independent of the site certificate.

Stormwater Drainage

Within the analysis area, there are no entities that provide stormwater drainage services to the site. The Applicant states that the proposed facility would not alter existing drainage patterns of the surrounding areas directly adjacent to the site where the proposed facility would be located.

To minimize erosion and sedimentation issues associated with the construction of the proposed facility, the Applicant would implement BMPs required under the ESCP.[270] The Applicant states that through proper site design and the erosion control procedures described in the ESCP and ASC Exhibit U, there would be no adverse impacts to public or private providers of stormwater drainage. [271] Recommended Soil Protection Condition 1 described in Section IV.D*., Soil Protection* of this proposed order addresses the requirements related to erosion control procedures and stormwater management.

Solid Waste Management

Currently, no community in the analysis area provides solid waste management services to the area within the site boundary. However, the proposed facility is located between two public landfills: the Arlington Landfill, located approximately 27 miles from the proposed facility, and Finley Buttes Landfill located approximately 30 miles from the proposed facility.[272] The Applicant has verified that these landfills have sufficient capacity to handle the waste disposal needs of the proposed facility and has provided this information in ASC Exhibit U.

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[270] BSEAPPDoc71. ASC, Exhibit U, p. U-4. 2017-09-01.
[271] BSEAPPDoc71. ASC Exhibit U, p. U-11. 2017-09-01.
[272] BSEAPPDoc71. ASC, Exhibit U, p. U-6. 2017-09-01.

Solid waste generated during construction would include scrap steel, waste concrete, packaging materials, electrical equipment and excavated soil. The Applicant estimates that the volume of construction waste would be approximately 40-cubic-yards per week during construction.[273] Waste concrete and hardened concrete from concrete washout areas would be incorporated into the foundation excavations where possible. Excavated soil would be used onsite as fill or transported offsite for disposal.[274]

Recyclable materials consisting of scrap steel, cardboard, general packaging materials, and wood would be segregated from solid waste and transported to a recycling facility. Additionally, the Applicant states that they would implement recycling programs during operation to reduce the amount of materials that will need to be hauled to a disposal facility. In ASC Exhibit V, the Applicant estimates that two yards of solid waste would be generated per month during operation of the proposed facility.[275]

The Department recommends in Section IV.N., *Waste Minimization* of this proposed order that the Council adopt Waste Minimization Condition 1, which would require the certificate holder to develop and implement a solid waste management plan during construction. This same recommended condition would reduce the likelihood of impacts on the solid waste services provided by surrounding communities.

Morrow County commented on the pASC and requested that the Applicant address solid waste management consistent with the Morrow County Solid Waste Ordinance.[276] To ensure the proper disposal of solid wastes and consistency with Morrow County's Solid Waste Ordinance, the Department recommends that the Council adopt the following conditions:

> **Public Services Condition 2:** During construction, operation, and retirement, the certificate holder shall:
> (a) On an annual basis, consult with Morrow County to identify appropriate recycling opportunities for solid waste.
> (b) Collect non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste.
> (c) Conduct waste hauling within Morrow County in compliance with the Morrow County Solid Waste Management Ordinance, which requires that all loads be covered and secured.

[273] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.
[274] BSEAPPDoc71. ASC, Exhibit V, p. V-7. 2017-09-01.
[275] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.
[276] BSEAPPDoc17 pASC Comment Morrow County Court McLane 2017-02-22.

Public Services Condition 3: During construction, operation, and retirement, the certificate holder shall coordinate with its solid waste handler to provide the information solicited through the Oregon Department of Environmental Quality's Recycling Collector Survey to the Morrow County waste shed representative on an annual basis.

As discussed in ASC Exhibits U and V, the proposed facility would generate minimal waste and use private contractors to haul waste to landfills that have adequate capacities for disposal. Therefore, waste disposal services already being provided in the surrounding communities would not be disrupted by the construction or operation of the proposed facility.

Housing

The 10-mile analysis area includes portions of both Oregon and Washington. The Applicant expects that population in the analysis area would change very little as a result of proposed facility construction. The Applicant assumes that approximately 10 to 15 percent of the construction workers would be local residents (from surrounding counties), and that therefore an average of about 87 and a maximum of about 225 new workers would be temporary residents (in-migrants) during construction of the proposed facility. The Applicant assumes that the average household size would be 2.0 persons, resulting in a maximum of about 450 temporary new residents that may be associated with proposed facility construction during the four to six month peak construction period.[277]

The Applicant estimates that the commutable travel distance to the proposed facility is 1 hour, or 70 miles. In-migrants associated with construction would likely choose temporary housing options such as hotels, campgrounds, RV parks, or rental houses located within a commutable distance. The Applicant assumes that the lodging vacancy rates during construction of the proposed facility would be similar to the hotel/motel vacancy rate for Eastern Oregon overall (53 percent in the first half of 2013), and states that this rate indicates that an adequate supply of housing would be available for temporary workers.[278] The Department notes that the same article on hotel/motel vacancy rates referenced by the Applicant provides a lower vacancy rate for the City of Hermiston – 33 percent in the 3rd quarter of 2013 – that may be more indicative of the characteristic vacancy rates within commuting distance of the proposed facility than the regional vacancy rate cited by the Applicant. However, the Applicant identifies other temporary housing options within a commutable distance, including Oregon state parks and private RV campgrounds.[279]

[277] BSEAPPDoc71. ASC Exhibit U, pp. U-2 and U-13. 2017-09-01.
[278] BSEAPPDoc71. ASC Exhibit U, p. U-7. 2017-09-01.
[279] BSEAPPDoc71. ASC Exhibit U, p. U-7. 2017-09-01.

Compared to construction, the Applicant emphasizes that fewer new residents are expected to result from proposed facility operations. It is assumed that two permanent, fulltime employees would be hired as part of the operations and maintenance staff. The Applicant states that, assuming 50 percent (one) of these employees are an in-migrant with an average household size of 3.0, as many as three new permanent residents could be added to the local population. The Applicant assumes that these workers would live locally, with the exception of specialized personnel who may commute from outside the area.[280]

In ASC Exhibit U, the Applicant states that housing vacancy rates in analysis area cities and communities range from 7.5 percent to 23.7 percent. The four-county average vacancy rate of approximately 16.0 percent is higher than the state of Oregon's average of 9.7 percent and Washington's average of 9.4 percent.[281] The Applicant uses this information to assert that adequate opportunities would be available for the permanent workers to purchase housing or to construct new housing in the analysis area, or within a commutable distance of the proposed facility.[282] Based on the estimated amount of permanent workers and the availability of long-term housing opportunities, the Department recommends that Council find that proposed facility operations would not result in significant adverse impacts on the ability of communities to provide housing are anticipated from proposed facility operations.[283]

Traffic Safety

The transportation service providers in Morrow County are the Morrow County Public Works Department and the Oregon Department of Transportation (ODOT) Region 5. Transportation providers in Gilliam County include the Gilliam County Road Department and ODOT Region 4.[284]

Transportation Routes

In ASC Exhibit U, Interstate Highway 84 (I-84) is identified as the primary facility access route for both eastbound and westbound construction and operational traffic. From I-84, construction vehicles would exit southbound at Exit 151 on Threemile Canyon Road east of the proposed facility, and would continue south on Threemile Canyon Road for approximately 0.5 mile to the turnoff for the Willow Creek Wildlife Area located on the west side of Threemile Canyon Road. The Applicant proposes to upgrade approximately 600 feet of existing dirt road from Threemile Canyon Road to accommodate construction and operation of the proposed facility. Where this

[280] BSEAPPDoc71. ASC Exhibit U, pp. U-2 and U-3. 2017-09-01.
[281] BSEAPPDoc71. ASC, Exhibit U, p. U-7. 2017-09-01.
[282] *Id.*
[283] BSEAPPDoc71. ASC, Exhibit U, p. U-12. 2017-09-01.
[284] BSEAPPDoc71. ASC Exhibit U, p. U-8. 2017-09-01.

existing road ends, the Applicant proposes to construct a new portion of road that would continue north another 900 feet to the main facility access gate.[285] Construction and operational traffic would access the proposed facility's point of interconnection (POI) and the southern end of the proposed facility's 115 kV transmission line via three miles of existing private road owned by Threemile Canyon Farms, LLC, which extends west from Threemile Canyon Road. Vehicles needing to access the POI and southern end of the proposed 115 kV transmission line during construction and operation would take I-84, Exit 151, Threemile Canyon Road, and then the existing private road.[286]

Traffic Impacts and Mitigation

During the approximately 15-month construction period, the proposed facility would employ an average of around 100 people, with an estimated maximum of 250 people employed during peak construction. Most of the construction workforce (an average of about 87 and a maximum of about 225 workers during peak construction) would either commute from outside the analysis area (e.g., from Kennewick, Washington or The Dalles, Oregon) or would temporarily relocate to communities in closer proximity to the proposed facility. Workers commuting from outside the 10-mile analysis area may temporarily increase traffic on roads within the analysis area.[287] In addition to workers commuting in personal vehicles, other construction-related vehicles, including equipment component delivery vehicles, heavy-duty trucks transporting materials such as gravel and concrete materials, and water trucks would increase traffic on roads within the analysis area.[288]

In ASC Exhibit U, the Applicant estimates that peak construction traffic would include up to 90 truck trips per day (round trip). The Applicant estimates that combining truck trips and workforce trips, and assuming the 250 workforce personnel carpool in two- and three-person carpools, up to 145 construction vehicles (or 290 round trips) per day would be added to the background traffic patterns along the primary transportation route. Based on average daily traffic volume data published by ODOT and presented in Table U-3 of the ASC Exhibit U, average daily traffic volumes on I-84 just west of the proposed facility are approximately 11,900 vehicles per day. If construction vehicles originate west of the proposed facility, average temporary, short-term daily traffic could increase by 290 trips per day (or approximately 2.4 percent). If construction vehicle trips originate east of the proposed facility, average daily traffic volume on I-84 would increase by approximately 2.0 percent. The Applicant concludes that these numbers represent minimal traffic increases on I-84.[289] The Department notes that, without carpooling, approximately 590 construction vehicle trips per day could be added to the

[285] BSEAPPDoc71. ASC Exhibit U, p. U-3. 2017-09-01.
[286] *Id.*
[287] BSEAPPDoc71. ASC Exhibit U, pp. U-2 and U-4. 2017-09-01.
[288] BSEAPPDoc71. ASC Exhibit U, p. U-3. 2017-09-01.
[289] BSEAPPDoc71. ASC Exhibit U, p. U-13 and U-14. 2017-09-01.

background traffic patterns during the peak construction period, and therefore short-term, temporary average daily traffic on I-84 could increase by approximately 5 percent if construction vehicles originate west of the proposed facility and approximately 4 percent if construction vehicles originate east of the proposed facility.

The Applicant represents that it would consult with ODOT prior to construction to determine if construction traffic would be restricted from any roadway segments or bridges along I-84, and to obtain any heavy haul permits required for legally oversized/overweight loads.[290] These permits would not be included in or governed by the site certificate.

During operations, the proposed facility could impact vehicular transport safety and visibility issues due to glare from the photovoltaic panels. ASC Exhibit R addresses potential glare impacts and describes that glare would be minimized due to the antireflective coating of the solar modules. Additionally, ODOT stated in reference to an operational solar installation adjacent to a highway, "… we [ODOT] have not received a single complaint about glare or even driver distraction." ODOT concluded in the correspondence that they do not have concerns about impacts on traffic due to glare from the proposed facility.[291]

The Applicant states that, because traffic volumes on Threemile Canyon Road are lower than I-84, this private road would experience a higher relative increase in daily traffic volumes that could be impactful at times, but would be temporary in duration. In addition, backups and delays of a temporary nature may occur during the delivery of large components. The Applicant maintains that delays due to the delivery of large facility components would primarily occur during peak construction, and the arrival of large delivery trucks would be spaced throughout the day in order to minimize the traffic impacts.[292] Traffic increases on Threemile Canyon Road have the potential to impact vehicles accessing Willow Creek Wildlife Area and vehicles accessing Threemile Canyon Farms.[293]

The Applicant states that while there may be short delays experienced during construction (as a result of slow-moving delivery trucks or trucks entering and exiting the proposed facility), the delays are likely to be temporary and limited to Threemile Canyon Road. The Applicant proposes various measures to reduce and mitigate potential traffic related impacts during construction. The Department recommends that these measures be adopted and imposed by Council as a condition as follows:

> **Public Services Condition 4:** Prior to construction, the certificate holder shall prepare and submit to the Department a Construction Traffic Management Plan for review and

[290] BSEAPPDoc71. ASC Exhibit U, p. U-15. 2017-09-01.
[291] BSEAPPDoc24 pASC Comment ODOT Hamilton 2017-03-16.
[292] BSEAPPDoc71. ASC Exhibit U, p. U-13. 2017-09-01.
[293] BSEAPPDoc71. ASC Exhibit U, p. U-13. 2017-09-01.

approval. The certificate holder shall demonstrate that the Construction Traffic Management Plan includes traffic management measures or other recommendations, as applicable, based upon consultation with the Morrow County Public Works Department. The Construction Traffic Management Plan applies to construction vehicle transport and activity on Threemile Canyon Road and shall, at a minimum, include the following measures:

(a) Temporary road signage and warnings such as "Equipment on Road," "Truck Access," or "Road Crossings" at locations where trucks are expected to slow down or enter/exit a public roadway shall be installed and maintained, in accordance with Chapter 3, Page 93 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c)).
(b) Advance signage shall be implemented, where possible, in accordance with Chapter 3, Page 62 and Chapter 3, Page 84 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c).
(c) Pilot cars will be used for slow or oversize loads per OAR 734-082-0035.
(d) Construction workforce will be encouraged to carpool during safety meetings and worker training activities; high-occupancy vans or buses will be provided by the certificate holder or contractor to transport workers to the site.
(e) Flag personnel will be used to minimize the potential for accidents during large deliveries, in accordance with Chapter 3, Page 102-107 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c).
(f) At least one travel lane will be made available at all times during construction at entrance and exit points onto public roads.
(g) The certificate holder, in coordination with the owner of Threemile Canyon Farms, will provide a temporary alternate access to Willow Creek Wildlife Area.
(h) Adequate parking for construction vehicles in the main temporary staging area will be provided, including one space per worker, consistent with Morrow County Zoning Ordinance Article 4 Supplementary Provisions Section 4.040 Off-Street Vehicle Parking Requirements.

Public Services Condition 5: During construction, the certificate holder shall:

(a) Implement the final Construction Traffic Management Plan (Threemile Canyon Road), as approved by the Department.
(b) Include the requirements of the Construction Traffic Management Plan in contract specifications for construction contractors, as applicable.
(c) Maintain a monthly log, to be submitted monthly to the Department for review and confirmation of compliance with the components of the Construction Traffic Management Plan.
(d) The Department, in consultation with the Morrow County Public Works Department, may require implementation of additional traffic management measures including a Traffic Impact Assessment per MCZO Section 3.010(1) if any requirement of the Construction Traffic Management Plan is determined not adequately implemented, or if additional measures are deemed necessary based on actual passenger car equivalent trips per day during facility construction. Within 30-days of submittal of

the monthly compliance report required under sub(c), the certificate holder shall obtain written confirmation from the Department on any additional construction traffic management measures required to be implemented.

The Applicant committed to maintaining adequate sight distance (in compliance with the Morrow County Zoning Ordinance Article 4 Supplementary Provisions Section 4.020) at the intersection of Threemile Canyon road and the road leading to the Willow Creek Wildlife Area, and at the intersection of the proposed new access road to the proposed facility and the road to Willow Creek Wildlife Area.[294] Accordingly, and to minimize risks to drivers approaching either of these intersections, the Department recommends the Council adopt the following condition:

Public Services Condition 6: Prior to construction, the certificate holder shall submit engineering drawings to the Department and Morrow County Public Works Department demonstrating that road improvements at the intersection of Threemile Canyon Road and the improved road to the Willow Creek Wildlife Area, and at the intersection of the access road to the facility and the road to the Willow Creek Wildlife Area meet the minimum intersectional sight distance pursuant to MCZO Section 4.020. Specifically, the minimum intersectional sight distance shall be equal to ten times the vehicular speed of the road and shall be based on eye height of 3.5 feet and an object height of 4.25 feet above the road; and shall be assumed to be 10 feet from the near edge of pavement or the extended curb line or near the edge of the graveled surface of a gravel road to the front of a stopped vehicle.

Furthermore, to require that new access roads and private road improvements are designed and constructed to county standards, the Department recommends that Council adopt the following condition:

Public Services Condition 7: The certificate holder shall design and construct the new access roads and private road improvements to standards approved by the applicable county jurisdiction (Gilliam County or Morrow County).

The Applicant estimates that during facility operation a worst-case daily increase in traffic may include an additional ten trips (including round trip travel for two operations workers and travel associated with specialized personnel and delivery trucks). The Applicant asserts that the minimal volumes of traffic on I-84 and Threemile Canyon Road that would be attributable to facility operation are not expected to affect traffic patterns because these roads have sufficient capacity to accommodate these additional vehicles.[295]

[294] BSEAPPDoc71. ASC Exhibit U, p. U-15. 2017-09-01.
[295] BSEAPPDoc71. ASC Exhibit U, p. U-15. 2017-09-01.

Air Traffic

Two public airports provide access for general aviation purposes within the analysis area: the Boardman Airport operated by the Port of Morrow in Morrow County and Arlington Municipal Airport operated by the City of Arlington in Gilliam County. The Applicant stated in Exhibit U that the airport operated by the Port of Morrow hosts a landing strip and advertises support for local industry and available hanger space.[296] However, the Applicant states in Exhibit U that it does not anticipate using either Boardman or Arlington airports for facility construction or operation. The proposed facility is not anticipated to affect either airport.

The site boundary is within the vicinity of the northwest low-level initial ingress point for Naval Weapons Station Training Facility (NWSTF) Boardman. Attachment E-2 in ASC Exhibit E provides the Applicant's correspondence with the U.S. Navy regarding potential impacts to air traffic at NWSTF Boardman. The Applicant performed a glare/glint analysis using the Sandia Solar Glare Hazard Analysis Tool and provided the results to the Navy. The analysis results suggested that there would be "…moderate potential for late-afternoon glare as aircraft pass over the southwest portion of the solar array field…"[297] In consideration of this information, the Navy entered comments into the Federal Aviation Administration's (FAA) Obstruction Evaluation/Airport Airspace Analysis system requesting that FAA (and/or the developer) notify the Navy when construction of the facility begins so that a Department of Defense flight information publication can be updated to notify pilots of the potential for late afternoon glare from the facility.[298] The FAA conducted an aeronautical study and, in a letter dated September 13, 2017, issued a determination of no hazard to air navigation.[299] The determination contains a condition requiring that the Applicant file FAA Form 7460-2 (Notice of Actual Construction or Alteration) any time the "project is abandoned" or "within five days after construction of the facility reaches its greatest height."

Police Protection

The Applicant states that law enforcement services in the analysis area are provided by Morrow County Sherriff's Office and Gilliam County Sheriff's Office, with backup law enforcement service available from the Oregon State Police Eastern Region as well as the City of Boardman Police Department.[300] The Applicant states that the relatively small number of new temporary and permanent residents associated with the construction and operation of the proposed

[296] BSEAPPDoc71. ASC, Exhibit U, p. U-22. 2017-09-01.
[297] BSEAPPDoc71. ASC, Exhibit E, Attachment E-2. 2017-09-01.
[298] BSEAPPDoc71. ASC, Exhibit E, Attachment E-2. 2017-09-01.
[299] BSEAPPDoc71. ASC, Exhibit E, Attachment E-1. 2017-09-01.
[300] BSEAPPDoc71. ASC Exhibit U, p. U-9. 2017-09-01.

facility are not anticipated to place significant demands on the providers of police protection in the analysis area.[301] However, to establish on-site security, establish and maintain effective communication with local law enforcement, and mitigate the potential adverse impacts to the police services provided by the surrounding law enforcement agencies, the Department recommends the Council adopt the following conditions:

> **Public Services Condition 8:** During construction, the certificate holder shall provide for 24-hour security, and shall establish effective communications between on-site security personnel and both the Morrow County Sheriff's Office and Gilliam County Sheriff's Office.
>
> **Public Services Condition 9:** During operation, the certificate holder shall ensure that appropriate law enforcement agencies have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency at the facility site.

Fire Protection

Boardman Rural Fire Protection District and the North Gilliam County Rural Fire Protection District provide fire protection services in the analysis area.[302]

The Applicant acknowledges that accidental grass fires at the site could occur during facility construction, and proposes to reduce this risk by requiring construction vehicles to only use established roads in order to keep vehicles away from dry grassland areas, using diesel vehicles whenever possible (to prevent potential ignition by catalytic converters), avoiding idling vehicles in grassy areas, and keeping cutting torches and similar equipment away from grass. A potential fire hazard associated with the operation of the proposed facility includes the possibility of an electrical fire from facility components.[303]

As shown in ASC Exhibit U Attachment U-2, the Applicant contacted the Boardman Rural Fire Protection District with information about the proposed facility. The District stated that while the facility is not anticipated to cause any substantial increase in impacts upon the District, it is located in an area that is subject to high indices of large and rapid-spreading fires. The District reviewed the fire prevention information provided by the Applicant in ASC Exhibit B, Section

[301] BSEAPPDoc71. ASC Exhibit U, p. U-15. 2017-09-01.
[302] BSEAPPDoc71. ASC Exhibit U, p. U-9. 2017-09-01.
[303] BSEAPPDoc71. ASC Exhibit U, p. U-16. 2017-09-01.

B.1.5, and concluded that this information addressed the District's concerns.[304] Specifically, the Applicant states in ASC Exhibit B that equipment will meet National Electrical Code and Institute of Electric and Electronics Engineers standards, and facility roads and the area under and around the energy generation components will be designed in accordance with Oregon Fire Code requirements. The Applicant states that the control house and O&M building will have smoke detectors, fire extinguishers, and eyewash stations.[305] The Applicant also commits to constructing a perimeter road around the facility that would provide a 50-foot wide noncombustible defensible space, which in the event of a major fire would reduce the likelihood of the fire spreading beyond the facility boundary.[306]

The Applicant states that they will notify both fire protection districts of the final construction plans and construction phasing. The plans will identify the location of and access to the proposed facility structures, and outline the Applicant's mutual assistance in the case of fire within or around the proposed facility site boundary. Finally, the site will be equipped with fire protection equipment in accordance with the Oregon Fire Code.[307]

The Department recommends that the Council adopt the following condition requiring the Applicant to develop a Fire Prevention and Response Plan that formalizes the measures described above and in Exhibit U:

> **Public Services Condition 10:** Prior to construction, the certificate holder shall prepare a Fire Prevention and Response Plan. The certificate holder shall submit the plan no less than 30 days prior to beginning construction to the Department for review and approval in consultation with the Boardman Rural Fire Protection District and the North Gilliam County Rural Fire Protection District. The plan shall include information on the final construction plans and construction phasing, identify the location of and access to the facility structures, and discuss how the certificate holder will provide mutual assistance in the case of fire within or around the facility site boundary. The plan shall be maintained onsite and implemented throughout construction and operation of the facility. All onsite workers shall be trained on the fire prevention and safety procedures contained in the plan prior to working on the facility.
>
> Additional information that shall be included in the plan:
> (a) Current contact information of at least two facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. The contact information must include name, telephone number(s), physical location, and email address for the listed contact(s). An updated list must be provided to the fire protection

[304] BSEAPPDoc71. ASC Exhibit U, Attachment U-2. 2017-09-01.
[305] BSEAPPDoc71. ASC Exhibit B, p. B-2. 2017-09-01.
[306] BSEAPPDoc71. ASC Exhibit B, p. B-3. 2017-09-01.
[307] BSEAPPDoc71. ASC Exhibit U, p. U-9. 2017-09-01.

agencies immediately upon any change of contact information. A copy of the contact list, and any updates as they occur, must also be provided to the Department.

(b) Identification of agencies that are designated as first response agencies for the site boundary and vicinity.

(c) A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility that could respond to an emergency.

(d) Contact information for each agency listed above.

(e) Communication protocols for both routine and emergency events.

(f) The designated employee meeting location in case of evacuation.

(g) Staff training requirements.

To reduce the fire risk, and so that response personnel can respond to fire hazards in the shortest possible time frame, the Department recommends the Council adopt the following conditions:

Public Services Condition 11: During construction, the certificate holder must maintain an area clear of vegetation for fire prevention around construction sites, including solar modules and any areas where work includes welding, cutting, grinding, or other flame- or spark-producing operations.

Public Services Condition 12: Prior to working on the facility, all construction personnel must receive fire prevention and response training that includes instruction on facility fire hazards, fire safety, emergency notification procedures, use of fire safety equipment, and fire safety rules and regulations. Annual fire prevention and response training shall also be provided during facility operations. The certificate holder shall notify the Department, the Boardman Rural Fire Protection District, and the North Gilliam County Rural Fire Protection District at least 30 days prior to the annual training to provide an opportunity to participate in the training. Equivalent training shall be provided to new employees or subcontractors working on site that are hired during the fire season. The certificate holder must retain records of the training and provide them to the Department upon request.

Public Services Condition 13: Before beginning operation of the facility, the certificate holder must provide a final site plan to the Boardman Rural Fire Protection District and the North Gilliam County Rural Fire Protection District. The certificate holder must indicate on the site plan the actual location of all facility structures and the identification number assigned to each solar module block.

Health Care

There are no hospitals within the analysis area; however, the Arlington Medical Center in Arlington and the Good Shepherd Health Care System in Hermiston are 15 miles and 30 miles

away, respectively.[308] Health clinics are located in Boardman and Irrigon.[309] The Arlington Medical Center is serviced by the North Gilliam Medic ambulance service. There are additional medical service providers further away (in Heppner and The Dalles) and all offer basic, intermediate, and advanced life support emergency medical care and transportation.[310]

The Applicant does not anticipate that the number of construction workers temporarily locating within the analysis area and the number of permanent employees and their families moving into the analysis area would adversely affect the ability of these providers to deliver health services. To reduce the potential for impacts to local health care providers, the Applicant will require that onsite construction contractors prepare site health and safety plans before they begin construction activities. The Applicant states that each plan will be updated and maintained during construction and operations and will inform employees and others what to do in case of emergencies. These plans will further include locations of fire extinguishers, important telephone numbers, first aid techniques, nearby hospital names, addresses, and contact information. The Applicant lists additional preventive measures, such as briefings with local hospitals and emergency service providers, identification of an emergency helicopter or aircraft landing area, and coordination with local fire officials.[311] The Department recommends that the Council consider the Applicant's representations regarding the proposed site health and safety plans as binding commitments and recommends the Council adopt the following condition:

> **Public Services Condition 14:** Before beginning construction, the certificate holder shall develop and implement a site health and safety plan that informs workers and others onsite about first aid techniques and what to do in case of an emergency. The health and safety plan shall include preventative measures, important telephone numbers, the locations of onsite fire extinguishers, and the names, locations and contact information of nearby hospitals. All onsite workers shall be trained in safety and emergency response, as per the site health and safety plan. The site health and safety plan must be updated on an annual basis, maintained throughout the construction and operations and maintenance phases of the project, and available upon request by the Department.

The Department concurs that the population increase in the analysis area during operation of the facility would be minimal, but the Applicant has indicated that an average of about 87 and a

[308] BSEAPPDoc71. ASC, Exhibit U, p. U-9. 2017-09-01.
[309] Morrow County commented on the record of the public hearing that, "It should also be noted that in the Draft Proposed Order at page 172 under the discussion concerning Health Care that there are health clinics in both Boardman and Irrigon that should be included." BSEAPPDoc81 DPO SAG Comment Morrow County 2017-12-13.
[310] BSEAPPDoc71. ASC, Exhibit U, p. U-9. 2017-09-01.
[311] BSEAPPDoc71. ASC, Exhibit U, p. U-17. 2017-09-01.

peak of about 225 temporary residents (in-migrants) could be in a single location for a period from a few weeks to as long as 15 months, which has potential to cause a temporary strain on health and emergency care services.[312] To reduce the potential for impacts to health providers, the Department recommends the Council adopt the following conditions:

> **Public Services Condition 15:** Before beginning construction, the certificate holder shall require that at least one on-site person is available at the worksite during construction activities that is certified in first aid, cardio pulmonary resuscitation (CPR), and the use of an automated external defibrillator (AED). The certificate holder must retain records of the certifications and provide them to the Department upon request. The certificate holder shall also ensure that an AED is available onsite at all times.

Schools

Communities in and near the analysis area are served by the Morrow County School District and the Arlington Community Charter Schools.[313] The Applicant explains that it anticipates that no new students would be enrolled in analysis area schools due to facility construction because construction work would be short-term and peak construction would occur during the summer months. Therefore, the Applicant does not anticipate that facility construction would result in any new demands on local schools.[314]

The Applicant estimates that during facility operations up to four new schoolchildren (assuming two operations workers with up to two children per household) could move to the area. Given the small number of potential new school-age children that could move to the area as a result of the facility, significant impacts to educational facilities in the analysis area are not anticipated.[315]

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0110(2), the Department recommends that the Council include the above referenced conditions in the site certificate to address the Council's Public Services Standard.

IV.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:*

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[312] BSEAPPDoc71. ASC Exhibit U, pp. U-4 and U-7. 2017-09-01.
[313] BSEAPPDoc71. ASC Exhibit U, p. U-10. 2017-09-01.
[314] BSEAPPDoc71. ASC Exhibit U, p. U-16. 2017-09-01.
[315] BSEAPPDoc71. ASC Exhibit U, p. U-16. 2017-09-01.

(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.

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Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a solar facility without making findings regarding the Waste Minimization standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

Findings of Fact

The Waste Minimization Standard requires the Council to find that the Applicant will minimize the generation of solid waste and wastewater, and that the waste generated will be managed to result in minimal adverse impacts on surrounding and adjacent areas. The Applicant provided information about waste minimization in Exhibits G and V of the ASC. ASC Exhibit V includes the Applicant's plans for solid waste and wastewater management during construction and operation of the proposed facility. ASC Exhibit G includes additional information about management of potentially hazardous materials.

Solid Waste

As presented in ASC Exhibit G, nonhazardous construction waste will be generated. Primary sources of nonhazardous construction waste include construction debris such as scrap steel, waste concrete, excavated soil, packaging from the solar photovoltaic modules and associated electrical equipment, and erosion control materials. The Applicant estimates the volume of construction waste will be one 40-cubic-yard per week during active construction, which is

estimated to span 4 to 6 months.[316] The nonhazardous waste produced during construction will be removed by a local solid waste hauler.[317]

During operations, the primary waste generated will be office waste composed of paper, packaging, and food scraps. An estimated 2 yards of solid waste will be generated per month.[318]

In Table V-1 of the ASC, the Applicant provides an inventory of the major types of waste materials and disposal methods associated with retirement of the proposed facility. When the proposed facility is retired, aboveground equipment will be removed and sold for scrap, reused, or disposed of at a local landfill. Aboveground and underground electrical cables will be rendered inert and underground electrical cables will be left in place.

In its February 22, 2017 comment letter on the pASC, Morrow County requested that the Council adopt a condition to ensure that the Applicant supports Morrow County waste shed reporting and goals as defined in the Morrow County Solid Waste Ordinance.[319] In Section IV.M., *Public Services*, of this proposed order the Department recommends that the Council adopt Public Services Conditions 2 and 3, which would require the Applicant to meet the waste hauling and reporting requirements of the Morrow County Solid Waste Ordinance. In ASC Exhibit V, the Applicant addresses the components of the Ordinance and describes how they would minimize and reuse materials generated during the construction, operation, and retirement of the proposed facility. In light of the Applicant's commitments, the Department recommends that the Council adopt the following conditions:

> **Waste Minimization Condition 1:** Prior to construction, the certificate holder shall develop a Construction Waste Management Plan, which at a minimum, shall include the following:
> (a) A requirement to implement a detailed material usage estimating and procurement system to minimize the amount of excess materials ordered.
> (b) A policy requiring that waste collection containers be covered and secured within construction staging areas.
> (c) Description of waste segregation methods for recycling or disposal.
> (d) Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.
>
> The certificate holder shall maintain a copy of the construction waste management plan onsite and shall provide to the Department a report on plan implementation in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).

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[316] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.
[317] BSEAPPDoc71. ASC, Exhibit V, p. V-1. 2017-09-01.
[318] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.
[319] BSEAPPDoc17 pASC Comment Morrow County Court McLane 2017-02-22.

Waste Minimization Condition 2: During facility construction, operation, and retirement, solar panels that are nonfunctional or are retired shall be recycled through the Solar Energy Industries Association National PV Recycling Program (or similar program).

Hazardous and industrial materials used during construction are expected to consist of paint, spent lubrication oils, and solvents. These materials, with the estimated quantities and disposal methods, are listed in Tables G-1 and G-2 in Exhibit G of the ASC. The Applicant states that oils, lubricants, paints, and solvents will be stored within covered containers such as work trailers and conex boxes to prevent incidental spills and will be stored in the staging areas. Excess of these materials will be disposed of during the Morrow County annual household hazardous waste event, or will be transported to Arlington Landfill, a landfill permitted to receive hazardous materials.

Fueling will primarily occur off-site, and on-site fueling will occur in the staging areas. On-site fuels will be stored in mobile, double-walled tanks.[320] The GSU transformer and the 30 transformers that would be co-located with the inverters are the only facility components that would contain oil. The Applicant states that the GSU transformer will have a concrete catchment system, and the Applicant would implement an SPCC plan for the transformers. In addition, the Applicant states that it would develop a hazardous material spill prevention program and implement it during the construction and operation of the proposed facility. The Department recommends in Section IV.D., *Soil Protection* of this proposed order that the Council adopt Soil Protection Condition 2, which would require the Applicant to develop and implement the SPCC plan for the transformers and a hazardous material spill prevention program during proposed facility operation. These same recommended conditions would reduce the likelihood of adverse impacts on surrounding and adjacent areas from waste generated by the proposed facility.

Wastewater

Wastewater generated during construction will result from portable toilets. An average of 15 portable toilets will be onsite during construction, including 40 portable toilets during peak construction. Wastewater associated with the portable toilets will be disposed of by a local contractor in accordance with state law.[321]

[320] BSEAPPDoc71. ASC, Exhibit G, p. G-1. 2017-09-01.
[321] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.

Other than the washwater periodically generated from washing solar panels, which would be covered under an Oregon General Water Pollution Control Facilities 1700-B Permit if the Applicant determines that module washing is necessary, and washwater generated during maintenance equipment washdown, which would also be covered under a WPCF 1700-B Permit, industrial wastewater will not be generated through proposed facility operation.[322] The solar panel washwater would contain no added cleaning solvents and would be discharged by evaporation and seepage into the ground.[323] The Applicant estimates that during operations approximately 90 gallons per day of sanitary wastewater will be generated and disposed of using an on-site septic system.[324]

The Department recommends in Section IV.D., *Soil Protection* and Section IV.M., *Public Services* of this proposed order that the Council adopt recommended Soil Protection Condition 3, requiring the Applicant to discharge sanitary wastewater generated during operations to a licensed on-site septic system; and, that Council adopt recommended Public Services Condition 2, requiring that waste hauling be conducted in accordance with the Morrow County Solid Waste Management Ordinance. These same recommended conditions would reduce the likelihood of adverse impacts on surrounding and adjacent areas from waste generated by the proposed facility.

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.

IV.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 proposed facility is not a nongenerating facility as defined in statute, and therefore Division 23 is inapplicable to the requested amendment.

IV.P. Division 24 Standards

The Council's Division 24 standards include specific standards for siting facilities including wind, underground gas storage reservoirs, transmission lines, and facilities that emit carbon dioxide. The only applicable Division 24 specific standard to the proposed Boardman Solar facility is OAR 345-024-0090, Siting Standards for Transmission Lines.

[322] BSEAPPDoc71. ASC, Exhibit E, p. E-2 and Section IV.B., *Organizational Expertise* of this order.
[323] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.
[324] BSEAPPDoc71. ASC, Exhibit V, p. V-2. 2017-09-01.

IV.P.1. Siting Standards for Transmission Lines: OAR 345-024-0090

To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:

(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;

(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.

Findings of Fact

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 the certificate holder design, construct and operate the line in a manner that reduces the risk posed by induced current. The Applicant provided information related to the Siting Standards for Transmission Lines in Exhibit AA of the ASC.

Electric Fields

The 34.5-kV cables would be located underground and inside the perimeter fence. Because these lines would not be accessible to the public, the 34.5-kV underground cables would not be subject to the requirements of OAR 345-024-0090(1). The ASC Exhibit AA assessment includes the Applicant's evaluation of the proposed 115-kV overhead transmission line against the requirements of OAR 345-024-0090(1).

As explained in Exhibit AA, 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. The strength of the electric field is inversely proportional to the distance from the conductors; the electric field strength declines as the distance from the conductor increases.[325]

[325] BSEAPPDoc71. ASC, Exhibit AA, p. AA-2. 2017-09-01.

The Applicant used a model developed by the Electric Power Research Institute (which utilizes a methodology developed by the Bonneville Power Administration) to calculate the electric fields, measured in units of kilovolts per meter (kV/m), which would be produced by the proposed 115-kV overhead transmission line.[326] The Applicant modeled both the electric fields that would be produced by the proposed 115-kV transmission line alone and those that would be produced by the proposed line together with the existing, adjacent Portland General Electric 230-kV transmission line, whose centerline is 112.5 feet from the centerline of the proposed transmission line.[327] As shown in Table AA-1 and Figure AA-1 of ASC Exhibit AA, the maximum electric field modeled is 3.11 kV per meter, which is below the 9-kV per meter threshold set forth in OAR 345-024-0090(1).

Based upon review of the Applicant's calculations in ASC Exhibit AA, the Department recommends that the Council find that the proposed 115-kilovolt transmission line would not exceed 9-kV per meter at one meter above ground level.

Induced Voltage and Current

The Siting Standards for Transmission Lines requires the Council to find that the applicant "can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable."

As explained in ASC Exhibit AA, induced currents can flow from overhead transmission line conductors to nearby objects that are insulated from the ground (ungrounded). For example, an ungrounded wire fence that parallels an overhead transmission line can cause humans that touch the fence to experience a momentary shock as the person becomes the conducting path for the current to flow to ground.[328] Site Specific Condition 1 [based on the mandatory condition contained in OAR 345-025-0010(4)] requires, in part, the certificate holder to 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. The Applicant states that induced currents from 115-kV transmission lines are not a hazard to people, and states that any metal fences that parallel and are close to the transmission line will be grounded to prevent electrical loops and circulating current from occurring.[329] Based on the Applicant's commitment to reduce induced current, the Department recommends that the Council adopt the following condition:

[326] BSEAPPDoc71. ASC Exhibit AA, p. AA-3. 2017-09-01.
[327] BSEAPPDoc71. ASC Exhibit AA, p. AA-4. 2017-09-01.
[328] BSEAPPDoc71. ASC Exhibit AA, p. AA-7. 2017-09-01.
[329] BSEAPPDoc71. ASC Exhibit AA, p. AA-8. 2017-09-01.

Siting Standards for Transmission Lines Condition 1: Prior to facility operation, the certificate holder shall identify and ground metal fences within the transmission line right-of-way.

In addition, to further reduce the risk of induced current and nuisance shocks, the Department recommends the Council adopt the following condition:

Siting Standards for Transmission Lines Condition 2: Prior to facility operation, the certificate holder shall provide the landowner a map of the 115-kV transmission line on their property and advise the landowner of possible health and safety risks from induced currents caused by electric and magnetic fields. The map shall identify any metal fences grounded as per Siting Standards for Transmission Lines Condition 1.

In a comment letter, the Oregon Public Utility Commission recommended conditions to ensure compliance with applicable safety requirements.[330] In accordance with the Public Utility Commission request, and in order to maintain compliance with OAR 345-024-0090, the Department recommends the Council adopt the following conditions:

Siting Standards for Transmission Lines Condition 3: Prior to construction, the certificate holder shall schedule a time to brief the Public Utility Commission Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.

Siting Standards for Transmission Lines Condition 4: During operation, the certificate holder shall:

(a) Annually update the Public Utility Commission Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 considering future operations, maintenance, emergency response, and alterations until project retirement.

(b) File the following required information with the Commission:

i. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:

a. The name and contact information of the person that is responsible for the operation and maintenance of the electric

[330] BSEAPPDoc71. BSEAPPDoc14 pASC Comment OPUC Birkeland 2017-02-07.

power line, and for ensuring that the electric power line is safe, on an ongoing basis; and

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

c. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.

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

(c) Provide Public Utility Commission Safety Staff with:

i. Maps and drawings of routes and installation of electrical supply lines showing:
- Transmission lines and structures (over 50,000 Volts)
- Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)
- Substations, roads and highways

ii. Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).

Based upon review of the Applicant's evaluation presented in Exhibit AA, the Department recommends that the Council find that the Applicant can design, construct and operate the proposed transmission line so that induced currents would be as low as reasonably achievable.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended Siting Standards for Transmission Line Conditions 1 through 4, the Department recommends that the Council find that the proposed facility complies with the Council's Siting Standards for Transmission Lines.

IV.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative

rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for appropriating ground water.

IV.Q.1. Noise Control Regulations: OAR 340-035-0035

(1) Standards and Regulations:

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(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.

Findings of Fact

OAR 340-035-0035 provides the DEQ noise regulations for industry and commerce. 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 previously unused site.[331] The proposed facility will be located within an approximately 798-acre site boundary. Historically, the land has been used for cattle grazing. The proposed facility site location is also adjacent to Interstate 84, a highly traveled highway. This location would be considered a "previously unused industrial or commercial site," because under OAR 340-035-0015(47) agricultural activities that generate infrequent noise emissions are not considered a commercial operation.

[331] A "previously unused industrial or commercial site" is defined in OAR 340-035-0015(47) 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.

Therefore, OAR 340-035-0035(1)(b)(B) noise control regulations for new industrial or commercial noise sources located on a previously unused site apply to the proposed facility.

Under the regulations, the proposed facility must comply with the "ambient degradation standard." The ambient degradation standard provides a basis for measuring noise levels from specific sources at specific locations and the noise thresholds that shall not be exceeded. Specifically, the noise levels generated shall not "increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour…as measured at an appropriate measurement point…"[332] The noise limits apply to appropriate measurement points and these provide distances from noise-sensitive properties.[333] Figure X-1 in Exhibit X of the ASC illustrates the locations of the noise-sensitive properties in the vicinity of the proposed facility. The Applicant states that the closest residential receptor (a noise-sensitive property) to the solar array or substation is more than two miles away, and the closest residential receptor to the transmission line is more than one mile away.[334]

In addition, the noise rules limit the noise from new industrial or commercial noise sources to the statistical noise limits contained in "Table 8" referenced in OAR 340-035-0035(1)(b)(B)(i). Table NC-1 below provides the information contained in "Table 8."

Table NC-1: 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

The Applicant provides information in ASC Exhibit X on the potential noise impacts from construction and operation of the proposed facility.

[332] OAR 340-035-0035(1)(b)(B)(i).
[333] 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."
[334] BSEAPPDoc71. ASC, Exhibit X, p. X-5. 2017-09-01.

OAR 340-035-0035(5) outlines exemptions to the DEQ noise rules including exemptions for emergency equipment, warning devices not operating continuously for more than 5 minutes, and sounds created in construction or maintenance of capital equipment. OAR 340-035-0035(5)(g) specifically exempts noise that originates on construction sites. Even though noise associated with the construction of a proposed facility is exempt by rule, the Applicant provided an analysis of the potential impacts to the closest noise sensitive properties during each phase of construction in Exhibit X of the ASC. The Applicant provided the composite noise levels at varying distances that are emitted from construction activities such as clearing, excavating, and the erection of structures. These findings are presented in Table X-5 of Exhibit X of the ASC.[335] Because of the construction exemption, the Table 8 limits do not apply during construction, though it is noted that the noise impacts at the 1 mile and 2 miles distances are lower than the daytime noise limits referenced in noise rules Table 8. The Applicant also states that the actual noise levels experienced at those distances may be lower due to quieter design features in modern equipment (compared to the equipment specifications used in the model) and the attenuation of sound due to vegetative screening and terrain.[336]

The primary facility components that would emit noise emissions during operation of the proposed facility are inverters, transformers, and the 115-kV transmission line. Inverters are employed to convert direct current generated from the solar modules to alternating current power, so the power may be sent to the grid. Transformers increase, or step up, the voltage to ensure the power is efficiently transmitted to the grid, and this process creates noise emissions.

The methodology used by the Applicant to complete the noise analysis for the operation of the proposed facility used the sound power levels from the inverters and transformers as a basis to calculate the sound pressure level that would occur at noise sensitive properties. The sound power levels are calculated using the manufactures' information and technical literature for the inverter and transformer components. The analysis of the sound pressure level that would occur at each receptor from each source takes into consideration losses from distance, air absorption, and other factors, with the sum of all the individual levels equaling the total plant level at a particular modeling point. Assuming that all equipment is operating simultaneously, the predicted sound levels from the proposed facility at the closest residence to the solar array (approximately two miles away) would be less than 20 dBA. This is well under the Table 8 allowance of 50 dBA at night. Applying the ambient degradation standard, in order for a sound level of 20 dBA to exceed the 10 dBA incremental threshold, the existing or ambient noise levels would have to less than 10 dBA. The Applicant states that the proposed facility location is not an acoustically pristine area and it is adjacent to an interstate highway; therefore, it is reasonable to conclude that the ambient noise level exceeds 10 dBA and that operation of the proposed facility would comply with OAR 340-035-0035.[337]

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[335] BSEAPPDoc71. ASC, Exhibit X, p. X-6. 2017-09-01.
[336] BSEAPPDoc71. ASC, Exhibit X, p. X-6. 2017-09-01.
[337] BSEAPPDoc71. ASC Exhibit X, p. X-7. 2017-09-01.

The proposed 115 kV transmission line would parallel an existing 230 kV transmission line and both lines are more than 1 mile from the closest noise-sensitive receptors. The audible noise associated with transmission lines is referred to as corona noise. The amount of corona produced by an overhead transmission line is a function of the voltage of the line, the diameter of the conductors, the locations of the conductors in relation to each other, the elevation of the line above sea level, the condition of the conductors and hardware, and specific weather conditions.[338] The Applicant modeled the audible corona noise for the proposed 115 kV transmission line by itself, the 230-kV line by itself, and the noise from the 115 kV and 230 kV lines combined. The results from this modeling are summarized by the Applicant in Table X-7 of Exhibit X of the ASC. Based on these results, the Applicant provides that there would be no exceedances (of either the limits in "Table 8" or the ambient degradation standard) at the right-of-way (50 feet from the transmission line centerline); therefore, it can be concluded that there would also not be any exceedances of either the Table 8 requirements or the ambient degradation standard at the nearest noise sensitive receptor over one mile away and the transmission line would comply with OAR 340-035-0035.[339]

Conclusions of Law

Based on the foregoing findings, the Department recommends that the Council find that the proposed facility would comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

IV.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."[340] 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 Applicant states that a removal-fill permit is not required because no temporary or permanent disturbances to waters of the state will occur as part of the construction or

[338] BSEAPPDoc71. ASC, Exhibit X, p. X-7. 2017-09-01.
[339] BSEAPPDoc71. ASC Exhibit X, p. X-8. 2017-09-01.
[340] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.

operation of the proposed facility. The Applicant has provided information regarding wetlands and other waters of the state in Exhibit J of the ASC, including a wetland delineation report included as Attachment J-1 and a letter of concurrence issued by DSL as Attachment J-2. DSL reviewed the wetland delineation report and provided the concurrence letter in March 2017, in which DSL concurred with the wetland delineation and classifications.[341]

The wetland delineation report and fieldwork were completed by the Applicant's consultant, Western Ecosystems Technology, Inc. Fieldwork was conducted on September 20 and 21, 2016 and a follow-up visit was conducted on October 12, 2016.[342] The analysis area is referred to in ASC Exhibit J as the study area, consistent with the wetland delineation report. For the purposes of both the exhibit and the wetland delineation survey, the analysis area encompassed a 758-acre portion of the proposed facility site boundary and a 300-foot-wide buffer around the proposed transmission line encompassing approximately 158 acres, for a total of 916 acres.[343]

The results of the wetland delineation studies are presented in ASC Exhibit J, and summarized in Table J-1. Of the 30 wetland polygons delineated in the study area, 28 were classified as Palustrine Emergent wetlands, one was classified as a Palustrine Scrub-Shrub wetland, and one was classified as a Palustrine Forested wetland.[344] All 30 wetlands are presumed to be waters of the state. One ephemeral drainage was present along the transmission line survey corridor and was determined to be a vegetative swale, and therefore was not considered waters of the state. The Applicant states that DSL concurred with the delineation that this is not considered waters of the state and therefore not subject to the removal-fill requirement.[345]

Delineated wetlands and other waters of the state were digitally overlaid with the proposed facility components and the potential areas of impact were evaluated. The Applicant proposes to site facility components to avoid impacts to all wetlands and other waters; therefore, no adverse impacts to any waters of the state are expected. The Applicant explains that proposed facility components will be sited with the intent to avoid impacts to wetlands and other waters. The Applicant explains in Exhibit J of the ASC that these avoided areas are the ephemeral drainage present along the transmission line survey corridor, the area on the west side of Threemile Canyon Road where the Applicant proposes to widen the road, and along the proposed southern fenceline. The Applicant further states that all remaining proposed facility components will be sited at least 100 feet from wetlands to avoid any temporary or permanent impacts to these waters.[346] Recommended Fish and Wildlife Habitat Condition 6 would require

[341] ASC Exhibit J, Attachment J-2. DSL "Letter of Concurrence" dated 03-22-2017.
[342] BSEAPPDoc71. ASC, Exhibit J, p. J-2. 2017-09-01.
[343] BSEAPPDoc71. ASC, Exhibit J, p. J-1. 2017-09-01.
[344] BSEAPPDoc71. ASC, Exhibit J, p. J-3. 2017-09-01.
[345] BSEAPPDoc71. ASC, Exhibit J, p. J-6. 2017-09-01.
[346] BSEAPPDoc71. ASC, Exhibit J, p. J-7. 2017-09-01.

the Applicant to flag, fence, or otherwise demarcate a 100 foot boundary around any delineated wetlands, and would require the Applicant to instruct all construction personnel that no impacts to delineated wetlands are allowed. If any changes to facility design require an impact to delineated wetlands, the Applicant must request a site certificate amendment to secure a removal-fill permit to authorize wetland impacts.

As the Applicant demonstrates in ASC Exhibit J and the associated wetland delineation report, the proposed facility would not impact waters of the state; therefore, a removal-fill permit is not required.

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 proposed facility.

IV.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 the statutes and administrative rules identified in the project order. The project order identifies OAR 690, Divisions 310 and 380 (Water Resources Department permitting requirements) as the administrative rules governing use of water resources and water rights as applicable to the proposed facility. The project order also states that OAR 345-021-0010(1)(o) applies to the facility (except for provision (D), which is applicable only to thermal power plants). 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

OAR 690 establishes the procedures and standards which shall be applied by the OWRD in the evaluation of applications for a permit to appropriate surface water, ground water, to construct a reservoir and store water, to use reserved water, or to use water stored in a reservoir. The Applicant is not requesting a groundwater permit, a surface water permit, or a water rights transfer during the construction and operation of the proposed facility.

As explained in Exhibit O of the ASC, during construction of the proposed facility water would be used for dust suppression, drinking and sanitary purposes, and concrete mixing. The Applicant estimates that facility construction would consume approximately 5.4 million gallons over a 9-month construction period under annual average conditions and 9.7 million gallons under worst-case conditions. Most of this water (approximately 9 million gallons) would be used for dust suppression. If the Applicant elects to use concrete foundations for the solar module steel posts, approximately 700,000 gallons of water may be required for concrete

production. The Applicant states that less than 50,000 gallons per day (gpd) of water would be used for drinking and sanitation for facilities used by construction workers.[347] The City of Boardman has verified to the Applicant that it has sufficient domestic water capacity to supply the proposed facility and has agreed to manage the water sales through its hydrant meter program.[348]

The Applicant estimates that water use during facility operation will be approximately 600,000 gallons per year under annual average conditions and 1.1 million gallons per year under worst-case conditions. Water demands during the proposed facility operations include office uses, such as water for toilets and sinks in the O&M building and some equipment washing. The Applicant also states that, depending on the effects of solar module dust and dirt on energy production, or "soiling," the solar modules may require washing. If the modules require washing, the Applicant estimates this may occur twice a year using a total of 0.5 million gallons per year.[349] If water for module washing is needed, the City of Boardman has indicated it has water supplies to meet this demand and the Applicant states that this water would be purchased from the City and trucked in to the site. [350]

Water used for sinks, toilets, and washing equipment in the O&M building during the operation of the proposed facility will be supplied by the construction of a new well. The Applicant proposes to construct a new well adjacent to the proposed O&M building. The well will be an exempt use pursuant to OAR 537.545(1)(f) because it will provide approximately 165 gpd, but in no case more than 5,000 gpd, and the well location will be logged pursuant to ORS 537.765.[351] Recommended condition Public Services Condition 1 would make this a requirement of the site certificate. When the proposed facility is retired and restored, this well could continue to be used by the property owner as an exempt well.

Based on the Applicant's analysis and calculations, the Department concurs that the Applicant has established that it can provide adequate water for construction and operation of the proposed facility and does not need a groundwater permit, surface water permit, or water right transfer. If such a permit is required by the Applicant at a later time, a site certificate amendment would be required to review and consider such a permit application.

[347] BSEAPPDoc71. ASC, Exhibit O, p. O-1. 2017-09-01.
[348] BSEAPPDoc71. ASC, Exhibit-O, Attachment O-1 and Attachment O-2. 2017-09-01.
[349] BSEAPPDoc71. ASC, Exhibit O, p. O-2. 2017-09-01.
[350]BSEAPPDoc71. ASC, Exhibit-O, Attachment O-1. 2017-09-01.
[351] BSEAPPDoc71. ASC, Exhibit O, p. O-3. 2017-09-01. Recommended Public Services Condition 1 of this order would restrict the certificate holder to using not more than 5,000 gallons of water per day from the on-site well.

Conclusions of Law

Based on the foregoing findings of fact, the Department recommends that the Council conclude that the proposed facility does not need a groundwater permit, surface water permit, or water right transfer.

V. PROPOSED CONCLUSIONS AND ORDER

The Applicant submitted an ASC requesting authorization to construct and operate a solar photovoltaic power generation facility and related and supporting facilities, within Morrow and Gilliam counties. Subject to compliance with the recommended conditions, the Department recommends that the Council find that preponderance of evidence on the record supports the following conclusions:

1. The proposed Boardman Solar Energy Facility complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The proposed Boardman Solar Energy Facility complies with the standards adopted by the Council pursuant to ORS 469.501.

3. The proposed Boardman Solar Energy Facility complies with all other Oregon statutes and administrative rules identified in the project order as applicable to the issuance of a site certificate for the proposed facility.

Based on the findings of fact, reasoning, recommended conditions and conclusions of law in this proposed order, the Department recommends that the Council conclude that the Applicant has satisfied the requirements for issuance of a site certificate for the proposed Boardman Solar Energy Facility, subject to the conditions set forth in this proposed order.

Issued this 29th day of December, 2017

The OREGON DEPARTMENT OF ENERGY

By: _____

Todd R. Cornett, Assistant Director
Oregon Department of Energy, Energy Facility Siting Division

Attachments:
Attachment A: List of Draft Site Certificate Conditions
Attachment B: Draft Proposed Order Comment Index
Attachment C: Draft Habitat Mitigation Plan
Attachment D: Draft Revegetation and Weed Control Plan
Attachment E: Wildlife Monitoring and Adaptive Management Plan
Attachment F: Monitoring Plan for Cultural Resources
Attachment G: Inadvertent Discovery Plan for Cultural Resources

Notice of the Right to Appeal

[Text to be added to Final Order]

Attachment A: List of Draft Site Certificate Conditions

List of Draft Site Certificate Conditions by Standard

As recited in the context of the applicable Council Standard to which they refer, the Department recommends that the Site Certificate be subject to the following conditions.

*Changes to conditions from the draft proposed order to the proposed order are presented in underline/strikeout font

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

General Standard Condition 1 [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.

(a) Facility construction shall commence within three years after the site certificate is executed by the Council Chair. Within 7 days of construction commencement, the certificate holder shall provide the Department written verification that it has met the construction commencement deadline. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before 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.

(b) Construction of all facility components shall be completed within three years after construction commencement. Within 7 days of construction completion, the certificate holder shall provide the Department written verification that it has met the construction completion deadline.

General Standard Condition 2: At least 90 days prior to beginning construction (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department and the Morrow County Planning Department a compliance plan documenting and demonstrating actions completed or to be completed to satisfy the requirements of all site certificate terms and conditions and applicable statutes and rules. The plan shall be provided to the Department for review and compliance determination for each requirement. The Department may request additional information or evaluation deemed necessary to demonstrate compliance.

Mandatory Condition 1 [OAR 345-025-0006~~027-0020~~(2)]: The certificate holder shall submit a legal description of the site to the Oregon Department of Energy and the Morrow County Planning Department within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.

Mandatory Condition 2 [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.

Mandatory Condition 3 [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 the transmission line associated with the energy facility 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 the certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line occurs during the certificate holder's negotiations to acquire construction rights on another part of the site.

Mandatory Condition 4 [OAR 345-025-0006~~027-0020~~(6)]: 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.

Mandatory Condition 5 [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 in accordance with the applicable site certificate provisions and the Morrow County Solid Waste Management Plan.

Mandatory Condition 6 [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 subsidence.

Mandatory Condition 7 [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 to propose and implement corrective or mitigation actions.

Mandatory Condition 8 [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.

Mandatory Condition 9 [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.

Site Specific Condition 1 [OAR 345-025-0010~~027-0023~~(4)]: Because the facility includes a transmission line as a related or supporting facility under Council jurisdiction, the following conditions apply:

(a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011 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.

Site Specific Condition 2 [OAR 345-025-0010~~027-0023~~(5)]: The certificate holder is authorized to construct the 2.1 mile 115 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor extends the 2.1 mile length of the 115 kV transmission line route and is as described in ASC Exhibit B, Section B.4.2 and as presented on Figure 1 of the Site Certificate.

Organizational Expertise (OAR 345-022-0010)

Organizational Expertise Condition 1: During design, construction, operation, and retirement, the certificate holder shall contractually require all contractors and subcontractors to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. The contractual obligation shall be required of each contractor and subcontractor prior to that firm working on the facility. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.

Organizational Expertise Condition 2: Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder.

Organizational Expertise Condition 3: In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the Department.

Organizational Expertise Condition 4:

(a) At least 30 days prior to construction, the certificate holder shall provide to the Department the following:
   1. Written confirmation that its third-party contractors have obtained all necessary local and state permits for the temporary concrete batch plant, if required during facility construction, and wastewater discharge. These permits are expected to include a Conditional Use Permit for Temporary Concrete Batch Plant from Morrow County and a General Water Pollution Control Facilities Permit for Temporary Concrete Batch Plant concrete washout water from Oregon Department of Environmental Quality.
   2. Proof of agreements between the certificate holder and the third-party regarding access to the resources or services secured by the permits or approvals identified prior to construction per sub(a) above.

(b) During operation, provide written confirmation that its third-party contractors have obtained a General Water Pollution Control Facilities Permit for washwater discharge from maintenance equipment washdown (as well as from solar module cleaning, if solar panel washing will occur) from Oregon Department of Environmental Quality and proof of an agreement between the certificate holder and the third-party for access to the service secured by the permit.

Structural Standard (OAR 345-022-0020)

Structural Standard Condition 1: At least 90-days prior to construction, unless otherwise agreed to by the Department, the certificate holder shall submit to the Department and DOGAMI a pre-construction site-specific geological and geotechnical investigation report (report), for review and concurrence that the facility site has been adequately characterized and the facility has been designed to avoid seismic, soil and geologic hazards. The report shall at a minimum include:

(a) Review of available data from previous geotechnical explorations in the vicinity of the facility site.
(b) Review of available geologic information from published sources.
(c) Discussion of geotechnical field exploration conducted within the site boundary, including soil borings, test pits, infiltration tests, and if necessary, geophysical testing.
(d) Discussion of additional soil samples collected for classification and, if necessary, laboratory testing.
(e) Calculation of the bearing capacity of the soils.
(f) Stability analyses.
(g) Engineering recommendations for construction of the structures.
(h) Determination of the final site class(es) at the locations where facility components would be constructed.

Structural Standard Condition 2: The certificate holder shall design, engineer, and construct the facility in accordance with the versions of the International Building Code, Oregon Structural Specialty Code, and local building codes in effect at the time of construction.

Structural Standard Condition 3: The certificate holder shall:

(a) Prior to construction, design the facility to avoid potential nonseismic hazards.
(b) Prior to construction, in accordance with Structural Standard Condition 1, conduct subsurface investigations to characterize the soils and use the resulting data to adequately plan and design appropriate mitigation measures.
(c) Prior to construction, create detailed geologic hazard maps to aid in laying out facilities and provide copies of maps to the Department.
(d) During design, construction and operation, provide warnings to the Department and DOGAMI in the event a potential or imminent hazard is discovered.
(e) Prior to operation, provide evidence to the Department that insurance has been obtained that provides coverage of the facility for non-seismic geologic and soil-related hazards.

Structural Standard Condition 4: In the event of a volcanic eruption that could damage or affect facility components:

(a) During construction, the certificate holder shall temporarily cease construction activities if necessary to protect equipment and human health.
(b) During operation, the certificate holder shall shut down the facility until safe operating conditions return.

Structural Standard Condition 5: During construction, if localized areas of soils with collapsing or settling potential are identified, the certificate holder shall overexcavate the soils and replace them with compacted structural fill; place impermeable material around the facility foundations to prevent wetting or saturation; or place the foundations deeper on a stable bearing layer (such as basalt rock).

Soil Protection (OAR 345-022-0022)

Soil Protection Condition 1:

(a) Prior to construction, the certificate holder shall obtain a National Pollutant Discharge Elimination System General Permit 1200-C from the Oregon Department of Environmental Quality, and shall provide the Department and Morrow County Planning Director a copy of the DEQ-approved NPDES 1200-C permit.

(b) Prior to construction, the certificate holder shall submit to the Department and Morrow 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.

(c) During construction, the certificate holder shall conduct all work in compliance with the final Erosion and Sediment Control Plan as approved by DEQ in the NPDES 1200-C permit.

Soil Protection Condition 2: Prior to facility construction, the certificate holder shall:

(a) Submit to the Department its Spill Prevention, Control and Countermeasure (SPCC) Plan for operations, developed to comply with OAR Chapter 340, Division 100-113 and 142.

(b) Provide evidence that a Hazardous Materials Spill Prevention Program will be implemented during construction and operation, which includes at a minimum training for personnel on proper handling, storing, transporting, and disposing of hazardous materials; hazardous materials storage requirements; and, cleanup procedures.

Soil Protection Condition 3: Prior to construction of the septic system at the O&M building, the certificate holder shall secure any necessary septic system permits from DEQ or the responsible local agency, for a septic system designed with a discharge capacity of less than 2,500 gallons per day. The certificate holder shall provide copies of the necessary permits to the Department.

Land Use (OAR 345-022-0030)

Land Use Condition 1: Prior to construction, the certificate holder shall submit maps and distance tables (e.g., identify the distance from north, south and east facility perimeter fenceline to nearest property) demonstrating that facility components within Morrow County satisfy the following front, side, and rear yard setback distances, and stream setback distance:

(a) The south side of the facility perimeter fenceline shall be setback a minimum of 100-feet from adjacent land uses designated as intensive agricultural use.
(b) The north side of the facility perimeter fenceline shall be setback a minimum of 25-feet from adjacent land uses designated as intensive agricultural use.
(c) The east and west sides of the facility perimeter fenceline shall be setback a minimum of 20-feet from adjacent land uses.
(d) All permanent buildings and structures, including the onsite septic system, shall be set back a minimum of 100-feet from the high-water line or mark along all streams and lakes within and adjacent to the site boundary.

Land Use Condition 2: Within 90-days after beginning commercial operation, the certificate holder shall provide to the Department, Morrow County Planning Department, and Gilliam County Planning Department the actual latitude and longitude location or Stateplane NAD83(91) coordinates of each facility component and a summary of as-built changes in the facility compared to the pre-construction final facility design.

Land Use Condition 3: Before beginning construction, the certificate holder shall provide to the Department copies of issued local permits including:
(a) All necessary zoning, building, Type I (administrative review), and Conditional Use Permit from Morrow and Gilliam counties; and,
(b) Copies of 12-month extensions, if requested by certificate holder.

Land Use Condition 4: Prior to construction, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland consistent with OAR 660-033-0130(38)(i).

Protected Areas (OAR 345-022-0040)

The Department does not recommend any conditions specific to the Protected Areas standard.

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

Retirement and Financial Assurance Condition 1: 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. [Mandatory Condition OAR 345-025-0006~~027-0020~~(7)]

Retirement and Financial Assurance Condition 2: The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site. [Mandatory Condition OAR 345-025-0006~~027-0020~~(9)]

Retirement and Financial Assurance Condition 3: The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval.

Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-025-0006~~027-0020~~(8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Mandatory Condition OAR 345-025-0006~~027-0020~~(16)]

Retirement and Financial Assurance Condition 4: Consistent with Mandatory Condition OAR 345-025-0006~~027-0020~~(8), before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The initial bond or letter of credit amount for the facility is $8.7~~7~~8 million (Q4 2017 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:

(a) The certificate holder may revise the amount of the initial bond or letter of credit based on the final design configuration of the facility. However, any revision to the restoration costs must be adjusted to the date of issuance as described in (b) and must be reviewed and approval by the Council in a site certificate amendment.
(b) The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:
    1. Adjust the amount of the bond or letter of credit (expressed in Q4 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 and using the fourth quarter 2017 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust fourth quarter 2017 dollars to present value.
    2. Round the result total to the nearest $1,000 to determine the financial assurance amount.

(c) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

(d) The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

Fish and Wildlife Habitat (OAR 345-022-0060)

Fish and Wildlife Habitat Condition 1: Prior to construction, the certificate holder shall:

(a) Submit to the Department and ODFW the proposed methods or protocol to be implemented for the pre-construction habitat assessment of the site boundary. Methods could include, for example, desktop survey results informed by the threatened and endangered species surveys conducted per Threatened and Endangered Species Condition 1. The method or protocol shall be approved by the Department in consultation with ODFW.

(b) Conduct a survey, based upon the methods or protocol as approved by the Department in sub(a), to confirm the habitat categories of all areas to be impacted by facility components, as well as the locations of any sensitive resources such as active state-listed or sensitive bird species nests, wetlands, and other state-listed threatened or endangered species and habitat that could be temporarily or permanently impacted by facility components.

(c) At least 45-days prior to construction, unless otherwise agreed to by the Department, submit to the Department and ODFW a pre-construction habitat assessment report. The report shall be approved by the Department, in consultation with ODFW, prior to construction. The pre-construction habitat assessment report shall, at a minimum, include the following:

- Habitat impact table, based upon final facility design, including permanent and temporary impacts by facility component and habitat category/type/subtype.
- Maps showing: habitat categories and subtypes of all areas within the site boundary, final location of temporary and permanent facility components, and locations of any sensitive resources that will be flagged as exclusion zones in accordance with Fish and Wildlife Habitat Condition 6. If necessary, sensitive resource information shall be submitted to the Department in hard copy only and provided under request for information to be treated as confidential.
- Discussion of habitat impacts including a confirmation of avoidance of temporary or permanent impacts to category 1 habitat.

Fish and Wildlife Habitat Condition 2: Following construction, the certificate holder shall implement the Wildlife Monitoring and Adaptive Management Plan (WMAMP), as included in Attachment E of the Final Order on the ASC.

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

Fish and Wildlife Habitat Condition 3: During construction, within the time periods listed in the table below, the certificate holder shall implement buffer zones around occupied nest sites of the species included in the table. No construction activities within the buffer zone shall occur during the seasonal restrictions. The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid construction activity within the buffer zone. Occupied nests shall be determined based on the results of pre-construction surveys and habitat assessment. The buffer areas shall be flagged as exclusion areas in accordance with Fish and Wildlife Habitat Condition 6. The buffer distances do not apply to occupied nests north of I-84.

Nesting Species	Buffer Size (Radius Around Nest Site):	Avoidance Buffers in Effect from:
Ferruginous hawk	0.25 mile	March 15 to August 15
Swainson's hawk	0.25 mile	April 1 to August 15
Western burrowing owl	0.25 mile	April 1 to August 15
Golden eagle	0.5 mile	January 1 to July 15
Bald eagle	0.5 mile	January 1 to August 31

Fish and Wildlife Habitat Condition 4: The certificate holder shall construct the 115 kV transmission line in accordance with the latest Avian Power Line Interaction Committee design standards.

Fish and Wildlife Habitat Condition 5: The certificate holder shall require all onsite construction workers to complete an environmental awareness training and shall demonstrate compliance with this condition per sub(a) and (b) of the condition as follows:

(a) Prior to construction, the certificate holder shall submit to the Department a copy of the final presentation and environmental training materials. The training materials shall, at a minimum, address the following topics: facility site boundary, including flagged exclusion areas; restricted areas including wetlands and other areas; sensitive and special status plant and wildlife species found in the analysis area; avoidance and impact minimization measures; response procedure and notification process to be followed if sensitive resources are identified during construction; additional permit requirements; buffer distances from sensitive and protected resources; work timing restrictions including seasonal restrictions; reporting procedures for any injured or dead wildlife; speed limits; trash control; and other topics as necessary.

(b) During construction, the certificate holder shall require all construction personnel to attend an environmental and permit requirements awareness training session conducted by a knowledgeable environmental professional. Records of completed training shall be maintained onsite and made available to the Department upon request.

Fish and Wildlife Habitat Condition 6: Prior to construction, the certificate holder shall:

(a) Flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to wetlands and waterways on or near the site boundary, areas with sensitive or protected plant species, buffers around raptor nests in accordance with Fish and Wildlife Habitat Condition 3, and any other buffers around sensitive or protected species habitats. The final limits of the restricted work zone flagging shall be based on the surveys and/or habitat assessment conducted for Fish and Wildlife Habitat Condition 1. All wetlands shall be flagged with a minimum 100 foot buffer distance.

(b) Prohibit any construction activity within restricted work zones.

(c) Provide maps with the locations of the restricted work zones, and instructions prohibiting construction activity within these areas, to construction personnel.

Fish and Wildlife Habitat Condition 7: During construction, the certificate holder will not leave any trenches open overnight. All trenches shall be covered or filled before the end of the working day or nightfall in a way that prevents animals from entering the trenches. If trenches cannot be fully covered or filled, a wildlife escape ramp must be installed into the trench so that animals can escape the trench.

Fish and Wildlife Habitat Condition 8: During construction, the certificate holder shall limit clearing of trees or shrub-steppe habitat to within September 1 and March 1. If the certificate holder needs to clear trees or shrub-steppe habitat outside this period, prior

to the clearing, a biological survey must be performed no more than seven days prior to the clearing to determine if the area has birds or bats roosting in the area, or other sensitive wildlife species. If sensitive species are discovered, clearing must not occur until after the sensitive species have left for the season. If bat roosts or other sensitive wildlife species are discovered, the certificate holder must contact the Department and ODFW for guidance, and clearing cannot proceed without approval from the Department, in consultation with ODFW.

Fish and Wildlife Habitat Condition 9: During construction, the certificate holder shall impose a 20 mile per hour speed limit on new and improved private facility roads. Speed limit signs shall be posted throughout the facility. No off-road travel shall be allowed except in case of emergency. All on-site personnel shall be instructed on these requirements as part of the environmental awareness training for all employees (associated with Fish and Wildlife Habitat Condition 5).

Fish and Wildlife Habitat Condition 10: No less than 45 days prior to construction, unless otherwise agreed to by the Department, the certificate holder shall submit to the Department and the Morrow and Gilliam County Planning Departments and Weed Supervisors a final Revegetation and Noxious Weed Plan. The Department will review the plan in consultation with ODFW and Morrow and Gilliam County weed control personnel. The plan must be approved by the Department, in consultation with ODFW and the Morrow and Gilliam County Planning Departments and Weed Supervisors, prior to construction. The certificate holder shall implement the provisions of the plan following completion of construction and during operation, as appropriate. The finalized plan shall be based on the draft plan, included as Attachment C of the Final Order on the ASC. The final plan must, at a minimum, include the following:

(a) Finalize Tables 1 and 2 of the draft plan, related to habitat category and type within the site boundary and anticipated temporary and permanent impacted acreage. This information shall be based on the pre-construction habitat assessments that are required by Fish and Wildlife Habitat Condition 1.
(b) A schedule for implementation of the revegetation activities, including a schedule for monitoring assessments and reporting.
(c) Topsoil management and soil decompaction, including scarification, procedures.
(d) A statement that if at any time during the monitoring program the certificate holder, or the Department in consultation with ODFW, conclude that revegetation of an area is unsuccessful and unlikely to be successful, the impacted area must be considered permanent. In this circumstance, the certificate holder must provide appropriate compensatory mitigation for the permanent loss of habitat quality and quantity, consistent with the EFSC Fish and Wildlife Habitat standard. Any mitigation required under this provision is subject to the approval of the Department, in consultation with ODFW.

(e) A statement that if it is determined that the underlying landowner has converted an area that was temporarily impacted during facility construction (and intended to be restored) to a use that is inconsistent with the success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area. However, in such circumstances, if the area has been converted by the landowner prior to the area reaching success criteria as determined by the Department, the certificate holder shall be obligated to provide compensatory mitigation consistent with the EFSC Fish and Wildlife Habitat standard to account for the permanent loss of habitat quality and quantity.

(f) The 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, following consultation with the Morrow and Gilliam County Planning Departments and Weed Supervisors. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the Department.

Fish and Wildlife Habitat Condition 11: No less than 45 days prior to facility construction, unless otherwise agreed to by the Department, the certificate holder shall submit a final Habitat Mitigation Plan (HMP), consistent with the draft HMP included as Attachment C to this order), for review and approval by the Department, in consultation with ODFW. The final HMP shall be based on final facility design, unless otherwise agreed upon by the Department.

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

(b) The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area (or areas), as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the HMP.

(c) The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, and monitoring. The mitigation actions shall be implemented at the compensatory habitat mitigation site as soon as possible concurrent with the impact.

(d) The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of mitigation actions, including ecological uplift actions at the habitat mitigation area.

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

Threatened and Endangered Species (OAR 345-022-0070)

Threatened and Endangered Species Condition 1: Prior to construction, the certificate holder shall conduct a field survey within the site boundary for state-listed threatened and endangered species. The surveys shall be conducted by qualified professionals with experience in detection of the Washington ground squirrel and its habitat, and Lawrence's milkvetch. Surveys shall be conducted according to a survey protocol approved by ODOE in consultation with ODFW. Washington ground squirrel surveys shall be conducted in the active squirrel season, which is typically March 1 to May 31 but can vary depending on weather, and must be verified by ODOE and ODFW as part of the survey protocol approval. Lawrence's milkvetch surveys shall be conducted in spring when the ground surface is visible. Surveys for Washington ground squirrel are valid for no more than two years after the year in which the surveys are conducted.

The certificate holder shall provide written reports of the surveys to ODOE and to ODFW and shall identify the boundaries of any listed species identified, including but not limited to Category 1 Washington ground squirrel habitat and Lawrence's milkvetch, if present. The certificate holder shall not begin construction until the survey report has been approved by ODOE in consultation with ODFW.

In compliance with the Council's Fish and Wildlife Habitat standard, no impacts to Category 1 habitat are allowed. If any Category 1 habitat is identified in the site boundary during the pre-construction survey, the certificate holder shall flag or fence off all Category 1 habitat and avoid all impacts.

If any plant species listed as threatened or endangered by Oregon Department of Agriculture per ORS 564.105(2) are found in the site boundary during the pre-construction survey, the facility shall be designed to avoid any impacts to these plants.

If any listed plant species are identified in the site boundary, no herbicides or other weed control chemical shall be used within an appropriate buffer distance from that species. The buffer distance shall be established by ODOE and shall be based on specific risks based on the plant species and the proposed herbicide or weed control chemical proposed to be used.

The environmental awareness training (required per Fish and Wildlife Habitat Condition 6) shall include information specifically regarding protection of listed species and areas of Category 1 habitat where no impact is allowed.

Scenic Resources (OAR 345-022-0080)

The Department does not recommend any conditions specific to the Scenic Resources standard.

Historic, Cultural and Archeological Resources (OAR 345-022-0090)

Historic, Cultural, and Archeological Resources Condition 1: Prior to construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that will be temporarily disturbed during construction and the areas that were surveyed in 2016 for historic, cultural, and archaeological resources.

Historic, Cultural, and Archeological Resources Condition 2: Prior to construction, the certificate holder shall identify Site 35GM402 on construction maps as a no-entry area, and flag a 100-foot (30-meter) buffer surrounding the site as an area to be avoided during construction activities. The certificate holder shall ensure that no physical disturbance occurs within the buffer zone. A copy of current maps and drawings must be maintained onsite during construction and made available to the Department upon request. Flagging or marking shall be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.

Historic, Cultural, and Archeological Resources Condition 3: Prior to facility retirement and site restoration activities, the certificate holder shall identify Site 35GM402 on retirement maps as a no-entry area, and flag a 100-foot (30-meter) buffer surrounding the site as an area to be avoided during retirement and site restoration activities. The certificate holder shall ensure that no physical disturbance occurs within the buffer zone. A copy of current maps and drawings must be maintained onsite during facility retirement and site restoration and made available to the Department upon request. Flagging or marking shall be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.

Historic, Cultural, and Archeological Resources Condition 4:

(a) During facility construction, the certificate holder shall direct personnel to extinguish nighttime exterior lights at the operations and maintenance building; substation; and any temporary construction work site, equipment, and laydown yard (if any) when not in use.

(b) During facility operation, the certificate holder shall install motion detectors or timers and hoods on exterior lights on the operations and maintenance building, control house and substation to minimize skyward light.

Historic, Cultural, and Archeological Resources Condition 5: During construction, the certificate holder shall implement the *Monitoring Plan for Cultural Resources, Boardman Solar Energy Facility, Morrow and Gilliam Counties, Oregon* included as Attachment F to the Final Order on the ASC. An archaeological monitor shall be present during ground-disturbing activities.

Historic, Cultural, and Archeological Resources Condition 6: Prior to construction, the certificate holder shall ensure that a monitor or cultural resources specialist trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the Department upon request. The Cultural Resource Awareness Training Information packet (ASC Exhibit S, Attachment S-3) shall be distributed to training attendees and shall be available for reference when ground-disturbing work is performed during facility construction, operation, and retirement.

Historic, Cultural, and Archeological Resources Condition 7: During construction, operations, and retirement, the certificate holder shall:

(a) Implement and adhere to the requirements of the *Inadvertent Discovery Plan for Cultural Resources*, included as Attachment F to the Final Order on the ASC.

(b) In the event of an inadvertent discovery of possible cultural materials, including human remains, the certificate holder shall:
   1. Immediately cease all ground-disturbing activities in the vicinity of the find.
   2. Place a 100-foot (30-meter) buffer around the discovery and the area shall be secured and protected from further disturbance. Construction, operations, and retirement activities shall proceed outside of this buffered area unless additional cultural materials are encountered.

(c) The certificate holder shall follow the protocol for coordination and notification described in the *Inadvertent Discovery Plan for Cultural Resources*.

(d) If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the NHRP, the certificate holder shall, in consultation with the Department, SHPO, interested Tribes and other appropriate parties, propose and implement mitigation measures, including avoidance, field documentation, and data

recovery. The certificate holder shall not restart work in the affected area until a professional archaeologist is able to assess the discovery and the Department, in consultation with SHPO, determines that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.

Recreation (OAR 345-022-0010)

Recreation Standard Condition 1: During construction, the certificate holder shall, in coordination with the landowner, maintain an alternate public access route to Willow Creek Wildlife Area. The alternate public access route shall be the route shown in ASC Exhibit L, Figure L-2, or shall be another comparable route.

Recreation Standard Condition 2: During construction, the certificate holder shall coordinate with ODFW and the landowner to provide safe and clear wayfinding to Willow Creek Wildlife Area on the alternate access route, including at a minimum directional roadway signage.

Public Services (OAR 345-022-0100)

Public Services Condition 1: During facility operation, the certificate holder shall maintain a written log for the on-site water well, in accordance with ORS 537.765, demonstrating that water use does not exceed 5,000 gallons of water per day.

Public Services Condition 2: During construction, operation, and retirement, the certificate holder shall:

(a) On an annual basis, consult with Morrow County to identify appropriate recycling opportunities for solid waste.
(b) Collect non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste.
(c) Conduct waste hauling within Morrow County in compliance with the Morrow County Solid Waste Management Ordinance, which requires that all loads be covered and secured.

Public Services Condition 3: During construction, operation, and retirement, the certificate holder shall coordinate with its solid waste handler to provide the information solicited through the Oregon Department of Environmental Quality's Recycling Collector Survey to the Morrow County waste shed representative on an annual basis.

Public Services Condition 4: Prior to construction, the certificate holder shall prepare and submit to the Department a Construction Traffic Management Plan for review and approval. The certificate holder shall demonstrate that the Construction Traffic Management Plan includes traffic management measures or other recommendations,

as applicable, based upon consultation with the Morrow County Public Works Department. The Construction Traffic Management Plan applies to construction vehicle transport and activity on Threemile Canyon Road and shall, at a minimum, include the following measures:

(a) Temporary road signage and warnings such as "Equipment on Road," "Truck Access," or "Road Crossings" at locations where trucks are expected to slow down or enter/exit a public roadway shall be installed and maintained, in accordance with Chapter 3, Page 93 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c)).
(b) Advance signage shall be implemented, where possible, in accordance with Chapter 3, Page 62 and Chapter 3, Page 84 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c).
(c) Pilot cars will be used for slow or oversize loads per OAR 734-082-0035.
(d) Construction workforce will be encouraged to carpool during safety meetings and worker training activities; high-occupancy vans or buses will be provided by the certificate holder or contractor to transport workers to the site.
(e) Flag personnel will be used to minimize the potential for accidents during large deliveries, in accordance with Chapter 3, Page 102-107 of the ODOT Traffic Control Plans Design Manual (ODOT, 2016c).
(f) At least one travel lane will be made available at all times during construction at entrance and exit points onto public roads.
(g) The certificate holder, in coordination with the owner of Threemile Canyon Farms, will provide a temporary alternate access to Willow Creek Wildlife Area.
(h) Adequate parking for construction vehicles in the main temporary staging area will be provided, including one space per worker, consistent with Morrow County Zoning Ordinance Article 4 Supplementary Provisions Section 4.040 Off-Street Vehicle Parking Requirements.

Public Services Condition 5: During construction, the certificate holder shall:

(a) Implement the final Construction Traffic Management Plan (Threemile Canyon Road), as approved by the Department.

(b) Include the requirements of the Construction Traffic Management Plan in contract specifications for construction contractors, as applicable.

(c) Maintain a monthly log, to be submitted monthly to the Department for review and confirmation of compliance with the components of the Construction Traffic Management Plan.

(d) The Department, in consultation with the Morrow County Public Works Department, may require implementation of additional traffic management measures including a Traffic Impact Assessment per MCZO Section 3.010(1) if any requirement of the Construction Traffic Management Plan is determined not adequately implemented, or if additional measures are deemed necessary based on actual passenger car equivalent trips per day during facility construction. Within 30-days of submittal of the monthly compliance report required under sub(c), the certificate holder shall obtain written confirmation from the Department on any additional construction traffic management measures required to be implemented.

Public Services Condition 6: Prior to construction, the certificate holder shall submit engineering drawings to the Department and Morrow County Public Works Department demonstrating that road improvements at the intersection of Threemile Canyon Road and the improved road to the Willow Creek Wildlife Area, and at the intersection of the access road to the facility and the road to the Willow Creek Wildlife Area meet the minimum intersectional sight distance pursuant to MCZO Section 4.020. Specifically, the minimum intersectional sight distance shall be equal to ten times the vehicular speed of the road and shall be based on eye height of 3.5 feet and an object height of 4.25 feet above the road; and shall be assumed to be 10 feet from the near edge of pavement or the extended curb line or near the edge of the graveled surface of a gravel road to the front of a stopped vehicle.

Public Services Condition 7: The certificate holder shall design and construct the new access roads and private road improvements to standards approved by the applicable county jurisdiction (Gilliam County or Morrow County).

Public Services Condition 8: During construction, the certificate holder shall provide for 24-hour security, and shall establish effective communications between on-site security personnel and both the Morrow County Sheriff's Office and Gilliam County Sheriff's Office.

Public Services Condition 9: During operation, the certificate holder shall ensure that appropriate law enforcement agencies have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency at the facility site.

Public Services Condition 10: Prior to construction, the certificate holder shall prepare a Fire Prevention and Response Plan. The certificate holder shall submit the plan no less than 30 days prior to beginning construction to the Department for review and approval in consultation with the Boardman Rural Fire Protection District and the North Gilliam County Rural Fire Protection District. The plan shall include information on the final construction plans and construction phasing, identify the location of and access to the facility structures, and discuss how the certificate holder will provide mutual assistance in the case of fire within or around the facility site boundary. The plan shall be maintained onsite and implemented throughout construction and operation of the facility. All onsite workers shall be trained on the fire prevention and safety procedures contained in the plan prior to working on the facility.

Additional information that shall be included in the plan:

(a) Current contact information of at least two facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. The contact information must include name, telephone number(s), physical location, and email address for the listed contact(s). An updated list must be provided to the fire protection agencies immediately upon any change of contact information. A copy of the contact list, and any updates as they occur, must also be provided to the Department.
(b) Identification of agencies that are designated as first response agencies for the site boundary and vicinity.
(c) A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility that could respond to an emergency.
(d) Contact information for each agency listed above.
(e) Communication protocols for both routine and emergency events.
(f) The designated employee meeting location in case of evacuation.
(g) Staff training requirements.

Public Services Condition 11: During construction, the certificate holder must maintain an area clear of vegetation for fire prevention around construction sites, including solar modules and any areas where work includes welding, cutting, grinding, or other flame- or spark-producing operations.

Public Services Condition 12: Prior to working on the facility, all construction personnel must receive fire prevention and response training that includes instruction on facility fire hazards, fire safety, emergency notification procedures, use of fire safety equipment, and fire safety rules and regulations. Annual fire prevention and response training shall also be provided during facility operations. The certificate holder shall notify the Department, the Boardman Rural Fire Protection District, and the North Gilliam County Rural Fire Protection District at least 30 days prior to the annual training to provide an opportunity to participate in the training. Equivalent training shall be provided to new employees or subcontractors working on site that are hired during the fire season. The certificate holder must retain records of the training and provide them to the Department upon request.

Public Services Condition 13: Before beginning operation of the facility, the certificate holder must provide a final site plan to the Boardman Rural Fire Protection District and the North Gilliam County Rural Fire Protection District. The certificate holder must indicate on the site plan the actual location of all facility structures and the identification number assigned to each solar module block.

Public Services Condition 14: Before beginning construction, the certificate holder shall develop and implement a site health and safety plan that informs workers and others onsite about first aid techniques and what to do in case of an emergency. The health and safety plan shall include preventative measures, important telephone numbers, the locations of onsite fire extinguishers, and the names, locations and contact information of nearby hospitals. All onsite workers shall be trained in safety and emergency response, as per the site health and safety plan. The site health and safety plan must be updated on an annual basis, maintained throughout the construction and operations and maintenance phases of the project, and available upon request by the Department.

Public Services Condition 15: Before beginning construction, the certificate holder shall require that at least one on-site person is available at the worksite during construction activities that is certified in first aid, cardio pulmonary resuscitation (CPR), and the use of an automated external defibrillator (AED). The certificate holder must retain records of the certifications and provide them to the Department upon request. The certificate holder shall also ensure that an AED is available onsite at all times.

Waste Minimization (OAR 345-022-0120)

Waste Minimization Condition 1: Prior to construction, the certificate holder shall develop a Construction Waste Management Plan, which at a minimum, shall include the following:

(a) A requirement to implement a detailed material usage estimating and procurement system to minimize the amount of excess materials ordered.
(b) A policy requiring that waste collection containers be covered and secured within construction staging areas.
(c) Description of waste segregation methods for recycling or disposal.
(d) Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.

The certificate holder shall maintain a copy of the construction waste management plan onsite and shall provide to the Department a report on plan implementation in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).

Waste Minimization Condition 2: During facility construction, operation, and retirement, solar panels that are nonfunctional or are retired shall be recycled through the Solar Energy Industries Association National PV Recycling Program (or similar program).

Siting Standards for Transmission Lines (OAR 345-024-0090)

Siting Standards for Transmission Lines Condition 1: Prior to facility operation, the certificate holder shall identify and ground metal fences within the transmission line right-of-way.

Siting Standards for Transmission Lines Condition 2: Prior to facility operation, the certificate holder shall provide the landowner a map of the 115-kV transmission line on their property and advise the landowner of possible health and safety risks from induced currents caused by electric and magnetic fields. The map shall identify any metal fences grounded as per Siting Standards for Transmission Lines Condition 1.

Siting Standards for Transmission Lines Condition 3: Prior to construction, the certificate holder shall schedule a time to brief the Public Utility Commission Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.

Siting Standards for Transmission Lines Condition 4: During operation, the certificate holder shall:

(a) Annually update the Public Utility Commission Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 considering future operations, maintenance, emergency response, and alterations until project retirement.

(b) File the following required information with the Commission:

i. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:

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

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

c. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.

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

(c) Provide Public Utility Commission Safety Staff with:

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

- Transmission lines and structures (over 50,000 Volts)
- Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)
- Substations, roads and highways

ii. Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).

Attachment B: Draft Proposed Order **Comment Index**

Attachment B: Draft Proposed Order Comment Index					
Document ID	**Date Received**	**Last Name**	**First Name**	**Organization**	**Consideration in Proposed Order**
BSEAPPDoc79	11/24/2017	Darzen	Meriel	1000 Friends of Oregon	Section IV.E. Land Use
BSEAPPDoc86	12/14/2017	Gilbert	Irene	As an individual and a representative of Friends of the Grand Ronde Valley	Section IV.H. Fish and Wildlife Habitat; Section IV.K. Historic, Cultural and Archaeological Resources
BSEAPPDoc85	12/14/2017	Harris	Greg	Threemile Canyon Farms, LLC	Section IV.E. Land Use
BSEAPPDoc80	12/1/2017	Henderson	Melody	Oregon Department of Fish and Wildlife	Section IV.H. Fish and Wildlife Habitat
BSEAPPDoc84	12/14/2017	Little	Chuck		Section IV.E. Land Use
BSEAPPDoc81; BSEAPPDoc83	12/13/2017; 12/14/2017	McLane	Carla	Morrow County Special Advisory Group	IV.A. General Standard of Review; Section IV.E. Land Use; Section IV.H. Fish and Wildlife Habitat; IV.M. Public Services Request for rulemaking is not addressed in the proposed order
BSEAPPDoc82	12/14/2017	Miner	Laura	Boardman Solar Energy LLC	Section IV.E. Land Use
BSEAPPDoc82	12/14/2017	Stauffer Curtiss	Sarah	Counsel for Boardman Solar Energy LLC	Section IV.E. Land Use

Attachment C: Draft Habitat Mitigation Plan

1.0 INTRODUCTION

Boardman Solar Energy LLC (Applicant or Certificate Holder) has prepared this document for the Boardman Solar Energy Facility (Facility or BSEF) Application for Site Certificate (ASC) submitted to the Oregon Department of Energy (ODOE). This draft Habitat Mitigation Plan (HMP) provides a preliminary strategy for effectively mitigating impacts to habitat. The habitat categorizations and concepts for mitigation have been discussed with personnel from the Oregon Department of Fish and Wildlife (ODFW).

The Facility is located in Gilliam and Morrow counties, Oregon. Western EcoSystems Technology, Inc. (WEST) completed habitat mapping and categorization of the site in the fall of 2016, and avian use surveys, special status wildlife species surveys, and raptor nest surveys in 2017. Details on habitat types, subtypes, and categories can be found in the ASC Exhibit P and in the Site Characterization Study (ASC Exhibit P Attachment P-2). Details on potential impacts to habitat and special-status species from construction and operation can be found in the ASC Exhibits P and Q, as can avoidance and minimization measures. The Applicant is committed to mitigate impacts to Category 4 grassland and shrub-steppe habitat that cannot be avoided or minimized with in-kind or out-of-kind habitat mitigation measures in-proximity or off-proximity to the Facility site boundary with input from ODFW.

2.0 DESCRIPTION OF FACILITY IMPACTS ADDRESSED BY THE PLAN

The Facility will be constructed within an approximately 798 acre-site boundary of privately owned land and will have a generating capacity of approximately 75 megawatts and a 2.1-mile-long overhead 115-kilovolt transmission line. The types of habitat present within the site boundary are identified in Table 1.

Table 1. Habitat Types within the Site Boundary

General Land Cover Type and Codes	Specific Habitat Type ("Subtype") and Mapping Codes	Description	Acres in Site Boundary
Wetland	Herbaceous	Includes various wetland classes such as palustrine emergent, forested and scrub-shrub with no open water. However, no distinction was made here between formal wetland classes (refer to **Exhibit J** for more detail regarding wetland types). Predominant species found within the wetlands included cattail (*Typha latifolia*), watercress (*Nasturtium officinale*), softstem bulrush (*Schoenoplectus tabernaemontani*), and western goldenrod (*Euthamia occidentalis*).	11.4
	Open Water	Excavated area along west side of Threemile Canyon Road. Dominated by cattail and softstem bulrush.	0.5
Grassland (G) Steppe dominated by native and/or non-native grasses (<20% shrub cover)	Exotic Annual Grassland (GA)	Dominated by two non-native grass species associated with heavy grazing and periodic burning: cheatgrass (*Bromus tectorum*) and bulbous bluegrass (*Poa bulbosa*). Scattered gray rabbitbrush and (*Ericameria nauseosa*) snakeweed (*Gutierrezia sarothrae*) were also present throughout.	664.5
	Native Perennial Grassland (GB)	Predominantly native bunchgrasses such as bluebunch wheatgrass (*Pseudoroegneria spicata*). Native forb species (e.g., northern buckwheat [*Eriogonum compositum*], arrowleaf balsomroot [*Balsamorhiza sagittata*]) are likely in these areas.	7.3
Shrub-steppe (SS) dominated by native and/or non-native grasses (<20% shrub cover)	Rabbitbrush/ Snakeweed Shrub-steppe (SSB)	Dominated by gray rabbitbrush and snakeweed, with small isolated areas of big sagebrush (*Artemisia tridentata*) also present. Understory was dominated by cheatgrass.	113.9
Total			798

Acreages of disturbance within the site boundary are the current estimate of the maximum affected area (the permanent [facility footprint] and temporary [construction] impacts) (Table 2). The actual areas of disturbance will be determined based on the final design layout of the Facility. The final design layout of the Facility will be provided to ODOE and ODFW, along with the associated permanent and temporary impact acreages prior to the beginning of construction.

Table 2. Temporary and Permanent Disturbance by Habitat Category and Subtype.

Habitat Category	Habitat Subtype	Permanently Disturbed	Temporarily Disturbed	Total Disturbed
2	Herbaceous Wetland	0	0	0
	Open Water Wetland	0	0	0
	Subtotal	0	0	0
4	Exotic Annual Grassland	472.45	26.62	499.07
	Native Perennial Grassland	0.05	4.08	4.13
	Rabbitbrush/Snakeweed Shrub-steppe	13.53	28.29	41.82
	Subtotal	486.03	58.99	545.02
Total		**486.03**	**58.99**	**545.02**

Oregon Administrative Rule (OAR) 635-415-0025, the Wildlife Habitat Mitigation Policy, defines habitats based on type, quality, availability, and usefulness/importance to wildlife, and establishes mitigation goals and implementation standards for each.

Category 1 habitat is defined by OAR 635-415-0025 as irreplaceable, essential, and limited. As further described in the ASC Exhibit P, the Facility may have suitable habitat for Washington ground squirrel (WGS) along the transmission line. If WGS colonies are present, the WGS colonies and a 785-foot buffer around those colonies would be considered Category 1 habitat. The Facility was designed and microsited to avoid all Category 1 habitat, and thus Facility components and activities are not expected to impact such habitat. WGS protocol surveys will be conducted in the spring of 2017 to confirm no WGS will be impacted.

Category 2 habitat is defined by OAR 635-415-0025 as essential and limited. Approximately 11.892 acres of wetlands were identified within the Facility site boundary. Based on the "essential and limited" criteria, discussion with ODFW during the November 21 site visit, and the value of such wetlands to wildlife generally and, in particular, to species of special state or federal status, the wetlands were determined to be Category 2 habitat. The Facility was designed and microsited to avoid all Category 2 habitat and a significant portion of the surrounding area (see ASC Exhibit P Figure P-1).

Category 4 habitat is defined by OAR 635-415-0025 as important. The remainder of the Facility's 486.03-acre footprint (area to be covered by permanent facilities) will occupy predominantly exotic annual grassland, with smaller portions of shrub-steppe and native perennial grassland (see ASC Exhibit P Figure P-1). All three habitat types have been classified as Category 4 habitat based on discussion with ODFW onsite on November 21, 2016.

In addition to the permanent impacts mentioned above, construction will entail temporary impacts to 58.99 acres of Category 4 habitat (exotic annual grassland, shrub-steppe, and native perennial grassland). There will be no disturbance to Category 1 or 2 habitats.

3.0 HABITAT MITIGATION AREA

The exact permanent and temporary disturbance areas cannot be determined until the final design layout of the Facility is known. Before beginning construction of the facility, the Certificate Holder shall provide to the Oregon Department of Energy (ODOE) and the Oregon Department of Fish and Wildlife (ODFW) a map showing the final design configuration of the Facility and an updated Table 2 showing the estimated areas of permanent impacts and temporary impacts on habitat (by category, habitat types and habitat subtypes). The Certificate Holder shall calculate the size of the habitat mitigation area (HMA), as illustrated below, based on the final design configuration of the Facility. The Certificate Holder shall implement the habitat enhancement actions described in this plan, after ODOE has approved the size of the HMA.

The HMA must be large enough and have the characteristics to meet the standards set in OAR 635-415-0025. The standards for Category 1 mitigation is "no loss of either habitat quantity or quality." The mitigation goal for Category 2, if impacts are unavoidable, is "no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality" (ODFW Wildlife Habitat Mitigation Policy). The standards for Category 4 mitigation require "no net loss of either habitat quantity or quality."

The Applicant has designed the Facility to completely avoid Habitat Categories 1 and 2. For the permanent impacts to Category 4 habitat, and to satisfy the ODFW "no net loss" goal, the HMA must include one acre for every acre of impact (a 1:1 ratio). To address the temporal loss of habitat quality during the recovery of Category 4 habitat temporarily disturbed during construction of the Facility, the HMA must include ½ acre for every Category 4 habitat affected (a 0.5:1 ratio). The total HMA is calculated as shown in Table 3, and will be updated once the final design configuration is complete.

Table 3. Habitat Mitigation Area by Habitat Category and Subtype.

Habitat Category	Habitat Subtype	1:1 Ratio	0.5:1 Ratio	Total
2	Herbaceous Wetland	0	0	0
	Open Water Wetland	0	0	0
	Subtotal	0	0	0
4	Exotic Annual Grassland	472.45	13.31	485.76
	Native Perennial Grassland	0.05	2.04	2.09
	Rabbitbrush/Snakeweed Shrub-steppe	13.53	14.15	27.68
	Subtotal	486.03	29.50	515.53
Total		**486.03**	**29.50**	**515.53**

For unavoidable permanent and temporary impacts of Category 4 habitat, the Applicant will use in-kind or out-of-kind habitat mitigation measures in-proximity or off-proximity to the Facility to effectively offset impacts in consultation with ODFW and consistent with ODFW Habitat Mitigation Policy (OAR 635-415-0005) which are defined as follows:

> *"In-kind Habitat Mitigation" means habitat mitigation measures which recreate similar habitat structure and function to that existing prior to the development action.*
>
> *"Out-of-kind Habitat Mitigation" means habitat mitigation measures which result in different habitat structure and function that may benefit fish and wildlife species other than those existing at the site prior to the development action.*
>
> *"In-proximity Habitat Mitigation" means 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.*
>
> *"Off-proximity Habitat Mitigation" means habitat mitigation measures undertaken outside the area that would constitute "in-proximity mitigation" but within the same physiographic province as the development action.*

The Certificate Holder shall therefore select a 515.53 acre HMA either in the same home range or physiographic province of the Facility and either lease or purchase the area to benefit similar or different habitat than those at the Facility.

The Applicant has identified a 515.53 acre parcel that would benefit similar habitat within the same home range of the Facility (BSEF Olex HMA). It is located in the Olex Conservation Opportunity Area (Olex COA) in Gilliam County managed by the onsite owners (see Figure 1). The Olex COA is a 2,100 acre area where the Willow Creek Wind Project conservation easement is located along with other long-term habitat protection measures and conservation areas in place (see Figure 2). Collectively, the long-term conservation easements provide value for wildlife habitat functionality within and adjacent to the proposed BSEF HMA. The BSEF Olex HMA habitat includes a mosaic of exotic annual grassland, rabbitbrush/buckwheat shrub-steppe, sagebrush shrub-steppe, perennial grassland, and native perennial grassland; these are displayed as general land cover types in Figure 2. There are 833 acres available, and the 515.53 BSEF HMA will be located at the south end within 645 acres illustrated on Figure 2 that is near other protected habitat. The habitat is of varying quality but could all be classified as Categories 2, 3 and 4. The Olex COA also has Category 1 (Washington ground squirrel) habitat. The BSEF Olex HMA will be protected through a conservation easement.

In the future, the Certificate Holder may, in consultation with ODFW and ODOE, select a HMA parcel other than the BSEF Olex HMA as long as it still meets the concepts outlined in this HMP, subject to ODOE approval.

4.0 HABITAT MITIGATION ACTIONS & SUCCESS CRITERIA

The Certificate Holder shall restrict uses of the HMA during the life of the Facility that are inconsistent with the goal of no net loss to Category 4 habitat. Specific habitat quality maintenance actions that will preserve the HMA habitat at minimum Category 4 quality and quantity will include the following:

- Restricting development of buildings or other structures;
- Restricting livestock grazing practices to those that benefit wildlife;
- Inspecting for and then removing or chemically treating noxious weeds in the spring prior to the growing season to benefit vegetative structure and complexity for wildlife;

- Revegetating with native vegetation (by seeding) in bare ground areas created by weed control; and
- Preparing a wildfire response plan that takes into account the arid nature of the region and addresses risks on a seasonal basis.

The conservation of the HMA will be completed as compensation for the 545 acres of unavoidable temporary and permanent disturbance of Category 4 grassland and shrub-steppe habitat. This plan does not include additional avoidance and minimization measures discussed in ASC Exhibits P and Q and the BSEF Wildlife Monitoring and Adaptive Management Plan.

Mitigation of the permanent and temporal habitat impacts of the Facility may be considered successful if the Certificate Holder protects sufficient habitat within the HMA to meet the ODFW goal of no net loss of habitat in Category 4. The Certificate Holder must protect the quantity and quality of habitat within the HMA for the life of the Facility. The mitigation goals are successfully achieved when the HMA contains a sufficient quantity of habitat y to meet the mitigation area requirements calculated under Section 3. The Certificate Holder may count habitat of higher value toward meeting the acreage requirements for Category 4 habitat. The Certificate Holder shall determine the actual mitigation area requirements, subject to ODOE approval, before beginning construction of the Facility. The Certificate Holder may demonstrate success based on evidence that the habitat quality at the HMA is maintained as Category 4 or higher.

If the revegetation success criteria are not met in the affected areas of temporarily disturbed Category 4 habitat in the Site Boundary, as determined under the Revegetation and Noxious Weed Control Plan (Exhibit P, Appendix P-6), then ODOE may require the Certificate Holder to provide additional mitigation.

If the quality of the HMA habitat has degraded to worse than Category 4 , and as determined during the regularly scheduled monitoring program or at any time the Certificate Holder becomes aware of degradation, the Certificate Holder shall describe if/why the maintenance actions were not effective and then propose and implement remedial action. Details and monitoring for success will be prepared at that time, with input from the ODOE and ODFW. In additional to improving maintenance actions, if possible, some enhancement actions could include the following:

- planting native grasses and shrubs;
- removing old barbed wire fencing;
- installing artificial burrowing owl nest burrows; and/or
- installing wildlife watering guzzlers.

5.0 MONITORING

The Certificate Holder will hire a qualified investigator (a botanist, wildlife biologist or vegetation specialist) to conduct an annual site visit of the HMA to ensure that the quality of the habitat is maintained at a Category 4 or higher. Monitoring for habitat maintenance actions will include describing if any development has occurred, recording signs and extent of livestock grazing, assessing for noxious weeds, describing if any wildfires occurred and any response measures, recording incidental wildlife observations, including special status plants and animals, and documenting habitat quality category/categories. Monitoring methods for enhancement actions, including success criteria, will be established if/when they are employed. All methods and results of monitoring will be reported to ODOE and ODFW.

In addition, as part of the wildfire response plan, onsite owners will notify the Certificate Holder of any wildfire when it occurs.

6.0 PLAN AMENDMENT

This Habitat Mitigation Plan may be amended by written agreement of the holder of the Site Certificate and the Oregon Energy Facility Siting Council. Amendments to this Plan will not require an amendment of the Site Certificate.

Figure 1. Olex Conservation Opportunity Area (OCOA) relative to the Boardman Solar Energy Facility (BSEF)

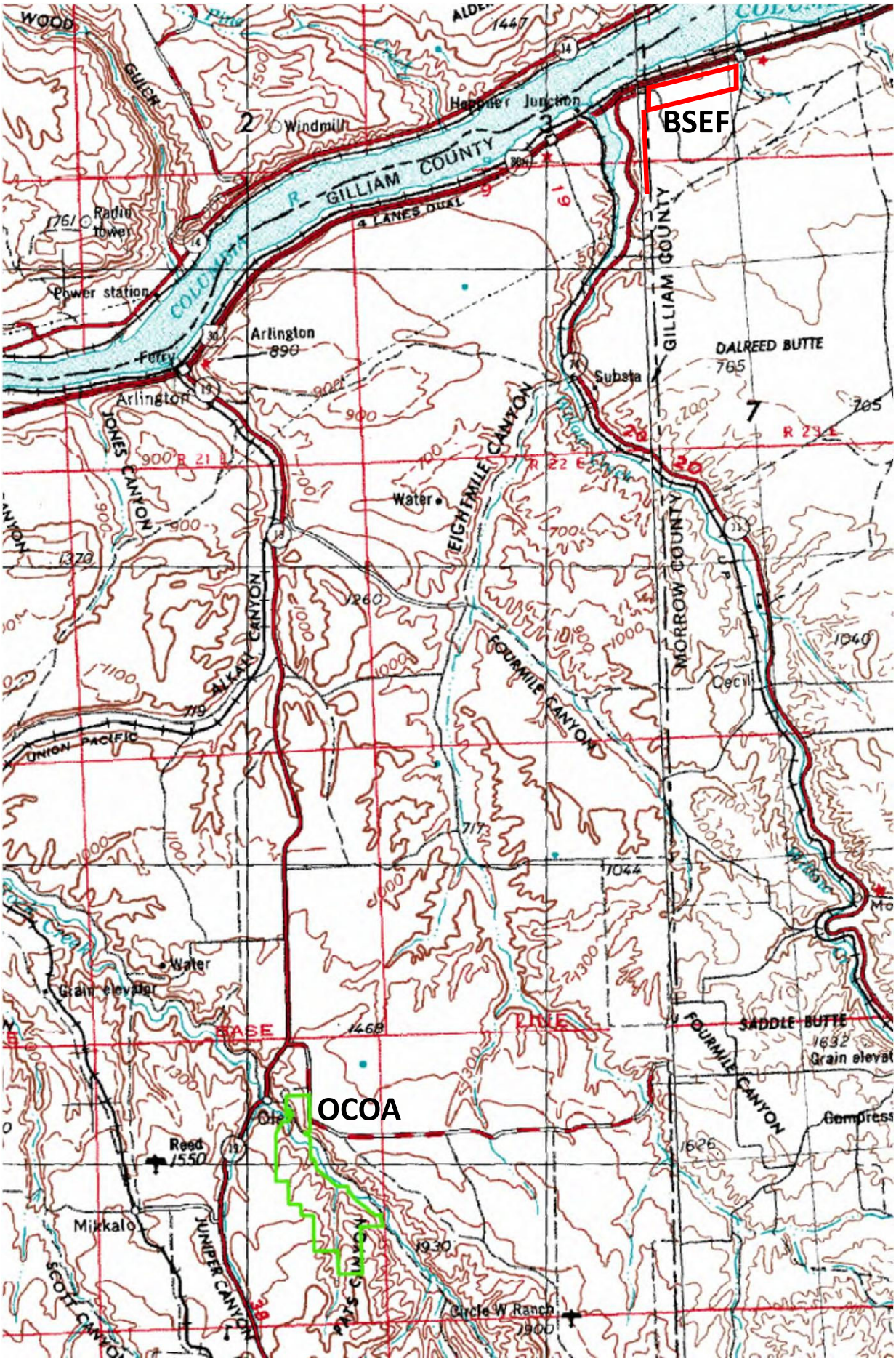
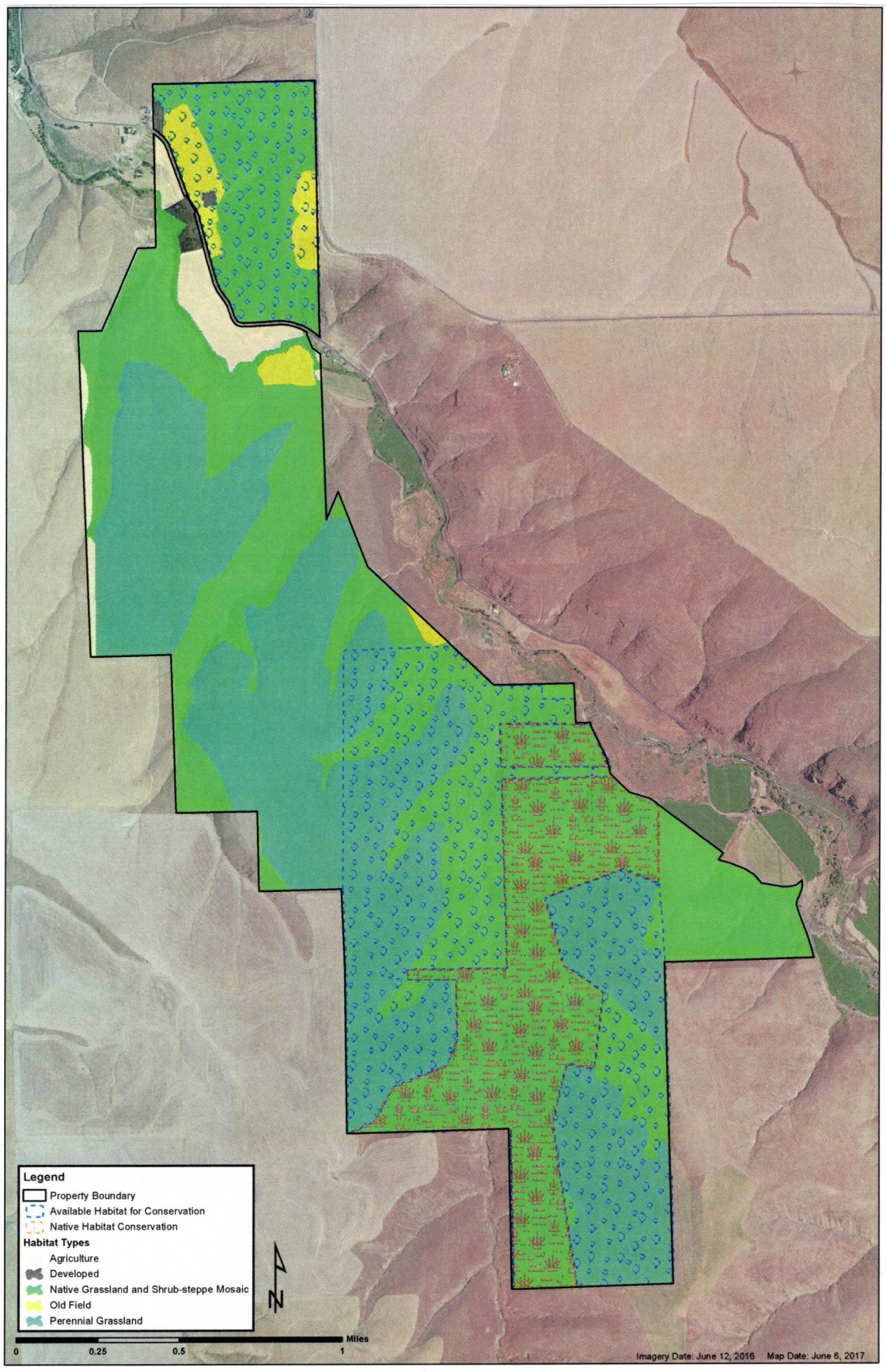


Figure 2. Olex Conservation Opportunity Area habitat types available for conservation.
179 acres available at north end, 515+ acres (645 ac. shown) available at south end around habitat in long term conservation.



Attachment D: Draft Revegetation and Weed Control Plan

1.0 INTRODUCTION

Boardman Solar Energy LLC (Applicant or Certificate holder) has prepared this document for the Boardman Solar Energy Facility (Facility or BSEF) Application for Site Certificate (ASC) submitted to the Oregon Department of Energy (ODOE). This draft Revegetation and Noxious Weed Control Plan (RNWCP) provides primary concepts for effective revegetation and noxious weed control. These concepts have been discussed with personnel from the Oregon Department of Fish and Wildlife (ODFW) and with Morrow County Weedmaster Dave Pranger. The Applicant will continue to consult with ODFW, Morrow County Weedmaster, and also with Gilliam County Weedmaster Don Farrar. This RNWCP also provides concepts for effective vegetation management to limit potential for wildfire to spread in to or from the Facility area.

The Facility is located in Gilliam and Morrow counties, Oregon. Western EcoSystems Technology, Inc. (WEST) completed habitat mapping and categorization of the site in the fall of 2016, and avian use surveys, special status wildlife species surveys, and raptor nest surveys in 2017. Details on habitat types, subtypes, and categories can be found in the ASC Exhibit P and in the Site Characterization Study (WEST, 2016). Details on potential impacts to habitat and special status species from construction and operations can be found in the ASC Exhibits P and Q, as can avoidance and minimization measures. The Applicant is committed to minimizing impacts to Category 4 grassland and shrub-steppe habitat that cannot be avoided.

2.0 DESCRIPTION OF FACILITY IMPACTS ADDRESSED BY THE PLAN

The Facility will be constructed within an approximately 798-acre site boundary of privately owned land and will have a generating capacity of approximately 75 megawatts and a 2.1-mile overhead 115-kilovolt transmission line. The types of habitat present within the site boundary are identified in Table 1.

Table 1. Habitat Types within the Site Boundary

General Land Cover Type and Codes	Specific Habitat Type ("Subtype") and Mapping Codes	Description	Acres in Site Boundary
Wetland	Herbaceous	Includes various wetland classes such as palustrine emergent, forested and scrub-shrub with no open water. However, no distinction was made here between formal wetland classes (refer to **Exhibit J** for more detail regarding wetland types). Predominant species found within the wetlands included cattail (*Typha latifolia*), watercress (*Nasturtium officinale*), softstem bulrush (*Schoenoplectus tabernaemontani*), and western goldenrod (*Euthamia occidentalis*).	11.4
	Open Water	Excavated area along west side of Threemile Canyon Road. Dominated by cattail and softstem bulrush.	0.5
Grassland (G) Steppe dominated by native and/or non-native grasses (<20% shrub cover)	Exotic Annual Grassland (GA)	Dominated by two non-native grass species associated with heavy grazing and periodic burning: cheatgrass (*Bromus tectorum*) and bulbous bluegrass (*Poa bulbosa*). Scattered gray rabbitbrush and (*Ericameria nauseosa*) snakeweed (*Gutierrezia sarothrae*) were also present throughout.	664.5
	Native Perennial Grassland (GB)	Predominantly native bunchgrasses such as bluebunch wheatgrass (*Pseudoroegneria spicata*). Native forb species (e.g., northern buckwheat [*Eriogonum compositum*], arrowleaf balsomroot [*Balsamorhiza sagittata*]) are likely in these areas.	7.3
Shrub-steppe (SS) dominated by native and/or non-native grasses (<20% shrub cover)	Rabbitbrush/ Snakeweed Shrub-steppe (SSB)	Dominated by gray rabbitbrush and snakeweed, with small isolated areas of big sagebrush (*Artemisia tridentata*) also present. Understory was dominated by cheatgrass.	113.9
Total			798

Acreages of impact are the current estimate of the maximum affected area (the permanent [facility footprint] and temporary [construction] impacts) (Table 2). The actual areas of disturbance will be determined based on the final design layout of the Facility. The final design layout of the Facility will be provided to ODOE and ODFW, along with the associated permanent and temporary impact acreages prior to the beginning of construction.

Table 2. Temporary and Permanent Disturbance by Habitat Category and Subtype

Habitat Category	Habitat Subtype	Permanently Disturbed	Temporarily Disturbed	Total Disturbed
2	Herbaceous Wetland	0	0	0
	Open Water Wetland	0	0	0
	Subtotal	0	0	0
4	Exotic Annual Grassland	472.45	26.62	499.07
	Native Perennial Grassland	0.05	4.08	4.13
	Rabbitbrush/Snakeweed Shrub-steppe	13.53	28.29	41.82
	Subtotal	486.03	58.99	545.02
Total		**486.03**	**58.99**	**545.02**

3.0 WEED MANAGEMENT PLAN

As described in Section 2.0, Facility impacts will primarily be in exotic annual grassland and some in native perennial grassland and shrub-steppe. In addition to the invasive species cheatgrass (*Bromus tectorum L.*), per Morrow County Weedmaster Dave Pranger, there are known occurrences of diffuse knapweed (*Centaurea diffusa*; Morrow County weed of economic importance) and potential occurrences of rush skeletonweed (*Chondrilla juncea L.*; Morrow County noxious weed) and yellow star-thistle (*Centaurea solstitialis L.*; Morrow County noxious weed). Weed lists are maintained by Morrow County in Section 9 Weed Control of the County Code Enforcement Ordinance. This RNWCP also serves as the Weed Management Plan required by the Morrow County Code Enforcement Ordinance Section 9.300(B).

Prior to construction, a weed survey will occur in all areas to be impacted by Facility construction to get a baseline of conditions. The location of all noxious species and weeds of economic importance will be maps and flagged for treatment. They will be treated because, even though much of the Facility area will be cleared of vegetation, treatment will help prevent reemergence after construction as well as limit introduction of noxious weeds to other locations.

All flagged noxious species and weeds of economic importance will be promptly (i.e. within 30 days or prior to viable seed production, whichever comes first) treated and/or removed. Occurrences will be treated via mechanical or chemical means in order to reduce the spread of noxious weed seed or plant parts. Plant material and topsoil at treatment areas will be removed and disposed of in a landfill. Vehicles or equipment used to remove noxious weeds or contaminated topsoil will be cleaned before proceeding with other work. After construction and revegetation, weeds will continue to be treated and/or removed in the same manner. In addition, heavy construction vehicles will be cleaned before entering the site so as to limit introduction of noxious weeds from other locations.

4.0 REVEGETATION METHODS

Revegetation will begin as soon as feasible after completion of construction for temporary impacts, and demolition for permanent impacts as part of final restoration, and seeding and planting will be done in a timely manner and in the appropriate season. Soil preparation will involve standard, commonly-used methods, and will take into account all relevant site-specific factors, including slope, size of area, and erosion potential. Topsoil will be restored to the preconstruction condition or better. Mulching and other erosion control measures will be used throughout construction and during revegetation efforts. Preconstruction land use, soil, and vegetation type will help determine the seed mix used for each area to be restored. All disturbed grassland and shrub-steppe habitat will be reseeded with a mix of native or native-like grasses, forbs, and shrubs. Seed mix and application rates will be determined in consultation with the landowner and ODFW, and will take into consideration soil types, erosion potential, and growing conditions. ODFW has suggested between 0 and 10 percent forbs and shrubs for grassland habitat restoration. Seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law.

Methods and timing of planting will be appropriate to the seed mix, weather conditions, and site conditions (including area size, slope, soil depth and composition, and erosion potential). Preparation of disturbed ground may include replacing lost topsoil and/or chemical or mechanical weed control. Two common application methods are described below.

a) Broadcasting

In this method, which may be used successfully in areas with shallow and rocky soils, the seed mix will be broadcast at specified application rates. Broadcasting should not be utilized when winds exceed five miles per hour. If feasible, half of the seed mix will be broadcast in one direction, with the other half broadcast perpendicular to the first half. A tracking dye may be added to facilitate uniform application. Certified weed-free straw will be applied at a rate of two tons per acre immediately after seeding; straw may either be crimped into the ground or applied with a tackifier.

b) Drilling

In this method, which is more successful in areas with deeper soils, seed will be planted using an agricultural or range seed drill according to application rates recommended by the seed supplier.

In order to encourage revegetation success, grazing and other activities will be restricted until revegetation is determined successful in accordance with Section 6. This will be done after completion of construction for temporary impacts, and demolition for permanent impacts as part of the land agreement.

5.0 VEGETATION MANAGEMENT

During construction, most of the vegetation will be removed from the 545 acre area with grubbing and grading equipment. Any vegetation that grows back in the 486 acre area of permanent disturbance will be managed in order to limit potential for wildlife to spread to or from the Facility area. Management will be via mechanical and/or chemical means. Mechanical methods will include use of gravel or other noncombustible base (in accordance with the fire prevention plan as described in ASC Exhibit B Section

B.1.5) and/or physical removal. Chemical methods could include an annual emergent and/or spot spraying. The intent will be to eliminate fuel for wildfire to spread in to or out of the Facility.

6.0 MONITORING

Monitoring of the revegetation and weed management effort will be conducted by an independent botanist or revegetation specialist; this monitoring will be done during the first growing season after planting and continuing until there is sufficient evidence of progress for ODOE to conclude that additional revegetation or weed management efforts in the area are not necessary. Thereafter, the monitor shall perform qualitative assessments of the restored areas at five-year intervals for the life of the Facility. The monitor will also train Operations and Maintenance (O&M) personnel on how to identify and treat weeds in the interim to improve likelihood of on-going revegetation success.

Nearby reference sites (approximating preconstruction conditions) will be selected as targets toward which revegetation will aim. Reference sites will be chosen with consideration to land use patterns, soil types, terrain, and presence of noxious weeds. At present, these reference sites occur to the west of the Facility across the County line and to the east of the Facility across Threemile Canyon Road. New reference sites may be chosen if land use changes, wildfire, or other disturbance makes a chosen reference site no longer representative of target conditions.

The specialist will assess extent of bare soil, weed growth and success of revegetation and weed control measures. Assessments will address whether each revegetation area is trending toward meeting the success criteria described below. During each assessment, revegetated areas will be compared to ensure they meet or exceed reference site conditions with regard to the following:

- Extent of bare soil
- Presence and density of weeds
- Degree of erosion
- Vegetative density
- Proportion of desirable vegetation
- Species diversity and structural stage of desirable vegetation

Records will also be kept by the holder of the Site Certificate of revegetation efforts that will include the following:

- Date construction was completed
- Description of the affected area
- Date revegetation was initiated
- Description of the revegetation effort

Revegetation efforts and monitoring reports will be reported to ODOE and ODFW each year in which monitoring is conducted until there is sufficient evidence of progress for ODOE to conclude that additional revegetation or weed management efforts in the area are not necessary, and thereafter, at five-year intervals for the life of the Facility. Each report will involve an assessment of the progress toward revegetation objectives. The overarching metric for success is when the habitat quality (erosion, desirable

vegetation density, and diversity) is equal to or better than the quality at the relevant reference site according to the conditions described above and is restored to pre-construction (or better) ODFW habitat category.

Remedial action options will be identified in cases where success criteria are not met, whether due to wildfire subsequent to construction or because of lower than expected rates of germination or survival. Remedial actions may include reseeding or other measures. The specialist will make recommendations for remedial actions after each monitoring visit, and the holder of the Site Certificate will take appropriate measures to meet the restoration objectives. The holder of the Site Certificate will include in its annual report the specialist's recommendations for remedial actions and the measures taken. For the qualitative assessments performed at five-year intervals (after ODOE concludes that additional revegetation or weed management efforts in the area are not necessary), the investigator shall assess the general condition of the revegetated areas, check for erosion or weed control problems, and report on any damage to revegetated areas that may be attributed to off-road vehicle use. The investigator will include in the report any remedial actions recommended. The Certificate Holder shall submit the qualitative assessment reports to ODOE as part of the facility annual report for the years in which assessments are done.

Based on the assessment and report at the end of the fifth year or at the time that success criteria has been substantially achieved, whichever is earlier, the holder of the Site Certificate will consult with ODOE and ODFW to design an action plan for subsequent years during operations. The holder of the Site Certificate may propose remedial actions and/or additional monitoring for areas that have not met the success criteria. Alternatively, revegetation efforts may in some cases be deemed to have failed, and mitigation may be proposed in such cases to compensate for the permanent habitat loss.

In all cases, ODOE, in consultation with ODFW, will review the Applicant's proposed remedial actions, and may recommend or require one or more of those actions and/or additional remedial actions.

7.0 PLAN AMENDMENT

This Revegetation and Noxious Weed Control Plan may be amended by written agreement of the holder of the Site Certificate and the Oregon Energy Facility Siting Council. Amendments to this Plan will not require an amendment of the Site Certificate.

Attachment E: Wildlife Monitoring and Adaptive Management Plan

1.0 BACKGROUND AND GOALS

Boardman Solar Energy LLC (Certificate Holder) has prepared a Wildlife Monitoring and Adaptive Management Plan (WMAMP) for the Boardman Solar Energy Facility (BSEF or Facility) Application for Site Certificate (ASC) submitted to the Oregon Department of Energy (ODOE) (Application). The WMAMP provides a detailed plan for post-construction wildlife monitoring and adaptive management, to be finalized with input from Oregon Department of Fish and Wildlife (ODFW). Preliminary concepts associated with this proposed plan have been discussed with ODFW staff.

The specific goals of the WMAMP are to

1) describe a post-construction monitoring protocol designed to determine the estimated bird and bat fatality rates at the BSEF during four seasons of operation;
2) assess effectiveness of avoidance and minimization measures with respect to birds and bats as outlined in Exhibits P and Q to the Application and implemented during design, construction, operation, maintenance, and decommissioning; and
3) identify adaptive management procedures to guide management actions for the life of the BSEF.

2.0 MONITORING PLAN

2.1 Monitoring Goals

The WMAMP will involve surveys designed to estimate bird and bat fatality rates at the BSEF. Post-construction monitoring results will be evaluated through adaptive management, which could include more extensive monitoring (as described in Section 3 in this WMAMP). Certificate Holder will analyze bird and bat carcass monitoring data to accomplish the following goals:

- detect carcasses and estimate bird and bat fatality rates for the BSEF;
- estimate fatality rates for species of concern, if practicable; and
- determine whether additional conservation measures are needed to reduce impacts to birds and bats at the BSEF.

2.2 Monitoring Methods

2.2.1 Study Design

This proposed WMAMP is designed to maximize the accuracy of the fatality estimates and to correct for the following sources of field-sampling error: (1) carcasses that occur on a highly periodic basis, (2) carcass removal by scavengers, (3) searcher efficiency, and (4) carcasses or injured birds or bats that may land or move to areas not included in the search transects (Kunz et al. 2007). Post-construction monitoring at the BSEF will involve standardized distance-sampling based carcass searches, searcher efficiency trials, and carcass persistence trials, consistent with recommendations from Huso et.al (2016b) and accepted monitoring designs at other utility-scale solar facilities (WEST 2016a-c).

Surveys of the PV panel area will be conducted using a distance-sampling based methodology. The layout of PV facilities is often well-suited to a distance-sampling approach. Distance sampling involves searching a transect line and assumes that searcher efficiency decreases (possibly dramatically) as a function of distance from the observer, and is ideally suited to situations in which animals (or carcasses) are sparsely distributed across a landscape (Buckland et al. 1993). As the landscape at the BSEF is flat and relatively clear of vegetation, a distance sampling design is well supported, as demonstrated at other PV solar facilities (WEST 2016a; Huso et. al 2016b).

Distance sampling adjusts carcass counts for variable searcher efficiency by calculating the *effective* searcher efficiency along a transect. Effective searcher efficiency is the average probability of detection in the searched area, derived from the detection function. As a highly simplified example, if a searcher walks a 10-m (33-ft) long transect line and detects 90% of all carcasses within 10-m of the line, and 60% of carcasses that are 10 to 30 m (33 to 99 ft) from the line, then the effective searcher efficiency between zero and 10 m would be 0.9 and the effective searcher efficiency between 10 and 30 m would be 0.6. For the total 10 by 30-m area, the effective searcher efficiency would be $\frac{0.9+\ 0.6}{100\ m^2+\ 200\ m^2} = 0.5$.

In practice, searcher efficiency is modeled as a continuous function of distance, and the detection function is estimated from bias trial data. An advantage to the use of data from bias trials is that the assumption that carcasses are randomly distributed within the search area (typical of most distance sampling designs) becomes unnecessary. Furthermore, having a sufficient sample size to fit the detection function is no longer dependent on what is observed, as in most distance sampling studies, and trials can be placed to measure potential covariates such as carcass size and ground cover. The fitted detection function is used to determine the overall probability of detection as well as to inform the approximate effective view shed of non-zero detection probability for observers.

Assuming that vegetation will be well controlled during the monitoring period, searchers will be able to visually scan the full length of the PV array rows (90 m or 295 ft; Figure 1). This will allow observers to walk or drive using ATVs along the Facility's access roads, perpendicular to panel rows, and search 90 meters (295 ft). Surveys will include a 50% sample of the blocks in the PV panel area.

2.2.2 Search Interval and Search Period

Surveys will be conducted once every three weeks November through February, and once every two weeks from March through October in the year following construction; this period includes spring and fall migration and summer nesting/maternity seasons for birds and bats, respectively. Carcass persistence trials will be conducted concurrently with carcasses searches, and if documented scavenger rates indicate that shorter or longer search intervals are needed, the search intervals may be modified to improve carcass detection rates. Guidance from Huso et. al (2016b) suggests determining search intervals such that the average probability a carcass is available to be found is at least 50%. Since carcass persistence may vary by carcass size, search intervals should be determined based on the size or sizes of principal species of interest; for example, if impacts to water-associated birds are a focus, then search intervals can be adjusted based on persistence times for large and medium-sized birds, such as grebes, ducks, and loons.

2.2.3 Searcher Qualifications

Searchers will be trained to conduct carcass searches and will be familiar with and able to accurately identify bird and bat species likely to be found in the BSEF area. Any unknown birds and bats or suspected state or ESA-listed species discovered during carcass searches will reported to a qualified biologist for positive identification.

2.2.4 Data Collection

For each carcass found, data recorded will include the following:

- Photos of the carcass from different angles and including a size-referencing object
- Date and time
- Initial species identification
- Sex, age, and reproductive condition (when possible)
- GPS location
- Nearest BSEF component (PV array, control house/storage facility, equipment, or other)
- Distance from observer when carcass first observed Distance to nearest PV panel
- Substrate/ground cover conditions

- Condition of specimen
    - Alive, no sign of physical trauma
    - Dead and intact
    - Dismembered
    - Feather spot (at least two or more primary feathers, five or more tail feathers, or ten or more feathers)
    - Injured
- Carcass condition (fresh/dry, intact/scavenged)

Bird and bat carcasses found in non-search areas (i.e., outside of the sampled areas described in Section 2.2.1) will be coded as incidental finds and documented in a similar fashion to those found during standard searches. Incidental finds will be included in the raw survey summary totals but will not be included in the estimated fatality calculations.

Searchers will not collect or handle carcasses, and therefore neither state nor federal collecting/salvaging permits will be acquired for this study. Searchers will mark the carcasses with spray paint to prevent recounting.

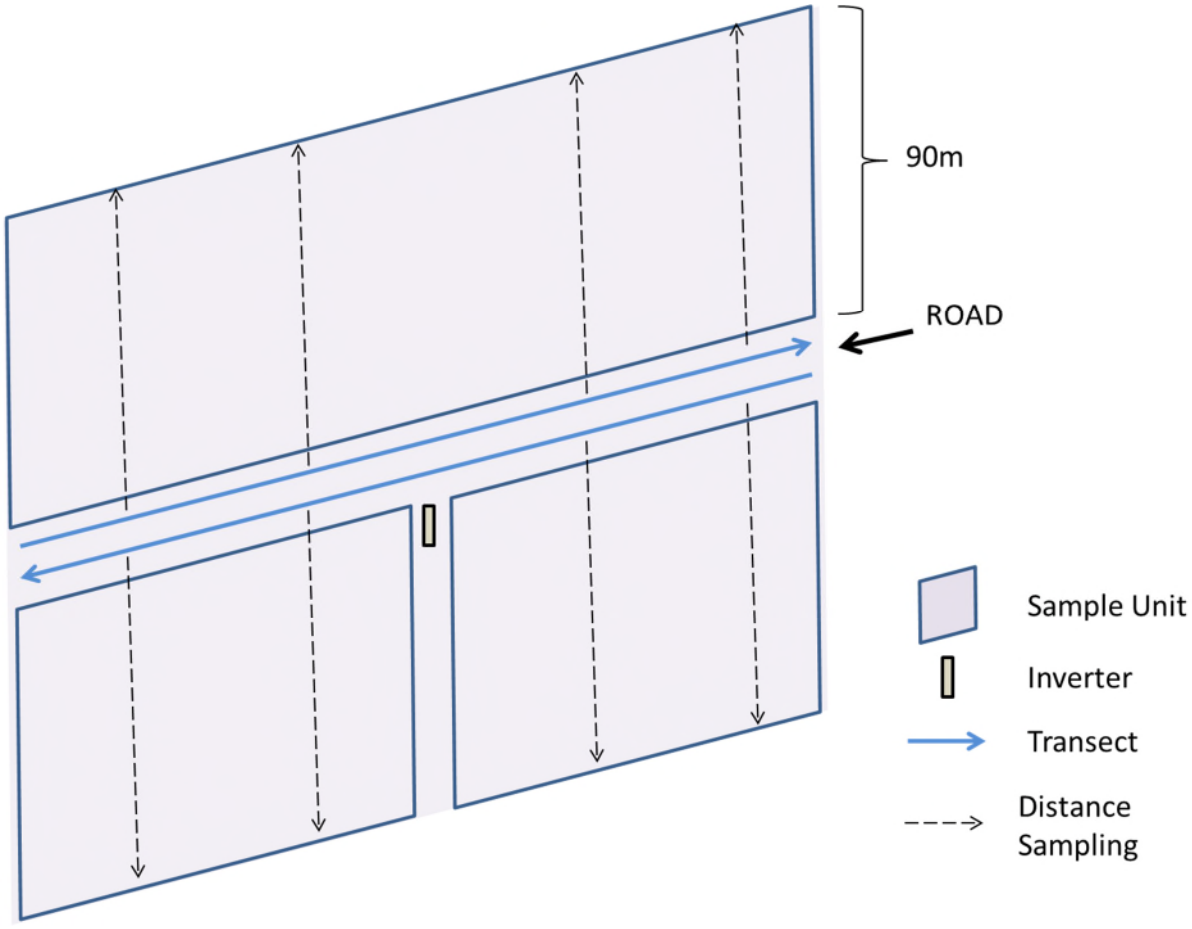


Figure 1. Example illustration of generic PV sampling unit with travel routes and searches using distance sampling ('observation perspectives').

2.2.4.1 *Searcher Efficiency and Carcass Persistence Trials*

Searcher efficiency and carcass persistence trials will be conducted in conjunction with standard carcass surveys. Searcher efficiency trials will be placed throughout each season on scheduled search days to ensure trials are representative of search conditions throughout each season. Trials will be placed on at least five different days throughout each season. Searcher efficiency trials will be used to estimate the percentage of bird and bat carcasses that are detected during the carcass searches. Using the detection function fit from searcher efficiency trial data, the average probability of detecting a carcass over the 90m (295 ft) length of panel rows can be calculated and used to adjust discovered carcasses for detection bias. Similarly, carcass persistence trials will be used to estimate the percentage of bird and bat carcasses that persist (i.e. are not removed by scavengers) long enough to be located by searchers. When considered together, the results of searcher efficiency and carcass persistence trials will inform the likelihood that a bird or bat carcass that falls within the searched area will be recorded. These correction factors will be incorporated into a fatality estimate model to estimate fatality rates.

The bias-trial sample sizes required to produce precise, adjusted fatality estimates are not well established, in part because needs may vary substantially depending on actual project-specific searcher efficiency, carcass persistence, and fatality rates. However, using searcher-efficiency trials to help evaluate the efficacy of the distance-sampling approach used in this investigation will require larger sample sizes to produce a sampling design that effectively accounts for distance as a key covariate of interest. A minimum of 25 carcass samples per small size class, 15 for medium, and 10 for large is anticipated within the solar array, per season. Searcher efficiency will be summarized for each individual searcher, but to avoid needlessly inflating the variance of the estimate, individual searcher effects will not be included in the fatality estimation model.

Table 1. Approximate Searcher efficiency trial sample sizes per season.

Project component	Size	sample size
Solar arrays	Small	25
	Medium	15
	Large	10
Totals		**50**

Carcasses from non-listed bird and bat species recovered during the study may be re-used in the searcher efficiency trials, as carcass condition allows. Species such as house sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*) may be used to represent small-sized birds; rock doves (*Columba livia*) and commercially raised hen mallards (*Anas platyrhynchos*) or hen pheasants (*Phasianus colchicus*) may be used to represent medium to large-sized birds. If visibility classes are established, to account for differences in vegetation, trial carcasses will be placed in a variety of vegetation types so that searcher efficiency rates can be determined for each visibility class. The number of carcasses used will be limited to ensure that a scavenger swamping does not occur.

Searcher efficiency trials will be conducted blindly; the searchers will not know when trials are occurring, within which transects the trial carcasses are placed, or where trial carcasses are located within the BSEF. The number and location of trial carcasses found by searchers will be recorded and compared to the total number placed in the transects. Searchers will be instructed prior to the initial search effort to leave carcasses, once discovered to be trial carcasses, in place (these carcasses will also be used to calculate carcass persistence). The number of trial carcasses available for detection (non-scavenged) will be

determined immediately after the conclusion of the trial. Searcher efficiency of the surveyors will generate the estimate of searcher bias for input into the fatality estimate models (Section 2.2.4.4).

Carcass persistence trials will be conducted concurrently with searcher efficiency trials and, to the extent possible, using the same carcasses from the searcher efficiency trials. In total, 30 small, 20 medium, and 10 large carcasses will be randomly placed and monitored within the solar arrays, each season. Carcass persistence trials in the solar arrays will be monitored, using motion-triggered, digital trail cameras (e.g., see Smallwood et al. 2010). The status of each trial carcass (e.g. gone/present, fresh/desiccated, whole/partial) will be recorded throughout the trial. The length of time carcasses persist on the ground will be used to generate the estimate of carcass persistence for input into of the fatality estimate models (Section 2.2.4.4).

Table 2. Approximate carcass persistence trial sample sizes per season.

Project component	Size	sample size
Solar arrays/fence	Small	30
	Medium	20
	Large	10
Totals		**60**

Fake cameras or cameras without bias trial carcasses may also be placed to avoid training ravens to recognize cameras as "feeding stations". Periodic ground-based checking of carcasses also will occur to guard against misleading indicators of carcass removal, such as wind blowing the carcass out of the camera's field of view. To minimize potential bias caused by scavenger swamping (Smallwood 2007, Smallwood et al. 2010), carcass-persistence specimens will be distributed across the entire Facility, not just in areas subject to standard surveys, and new specimens will be placed every two to three weeks in small numbers.

2.2.4.2 *Data Analysis and Modeling*

Because the detectability of carcasses during field surveys can be imperfect, raw carcass counts generally underestimate actual mortality. Therefore, the Huso fatality estimator (Huso 2011; Huso et al. 2012, Huso et. al 2016a), modified to account for distance sampling (WEST 2016a, Huso et. al 2016b), will be applied to generate corrected fatality rate estimates for the BSEF.

The Huso fatality estimator (Huso 2011; Huso et al. 2012) allows the user to model categorical covariates that may affect searcher efficiency and carcass persistence. AICc scores are used to evaluate the effectiveness of candidate models before generating final fatality estimates. Because the underlying assumption that searchers have a single opportunity to discover a carcass, only those carcasses determined to have occurred within the previous search interval will be used to generate adjusted fatality estimates. In addition, the model does not produce reliable estimates when there are few carcasses included in analysis. When fewer than five carcasses belonging to a group of interest (e.g. small birds) are found and included in analysis, estimates will not be provided.

Corrected fatality estimates will be reported for the solar Facility (PV panel area). Estimated mortalities will be expressed in terms of carcasses/MW/season and in other metrics appropriate for a solar facility to facilitate comparison with other studies.

Analysis of data collected during the post-construction study will include seasonal fatality estimates for all birds and bats to the taxonomic level where fatality estimates can be calculated. Fatality estimates and confidence intervals will be compared to determine if differences in fatality estimates between taxa or group

(e.g. birds compared to bats, large birds compared to small birds), or season. Because representative fatality estimates are more challenging to develop for small (i.e. <5) numbers of carcasses, appropriate taxonomic-level fatality estimates will only be calculated if the number of carcasses is sufficient.

2.3 Reporting

The Certificate Holder will document the results of the monitoring in a summary report following the completion of the post-construction monitoring. 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.

The summary report will include fatality estimates and data summaries. The report will include all data analyses, including correlation analyses and overall fatality estimates, and a discussion of monitoring results and their implications. The Certificate Holder shall notify the appropriate agency as outlined in Section 3.2 immediately upon the discovery of a carcass of any state-listed, ESA-listed species or eagle on the Facility site.

2.4 Amendment

This WMAMP may be amended by written agreement of the Certificate Holder and the Oregon Energy Facility Siting Council. Amendments to this WMAMP will not require an amendment of the Site Certificate.

3.0 ADAPTIVE MANAGEMENT

3.1 Adaptive Management Goals

The goals of the adaptive management process for this Facility are to enable the incorporation of relevant new information into the BSEF's avoidance and minimization measures as outlined in Exhibits P and Q to the Application. Additional avoidance and minimization measures may be incorporated at any time by Certificate Holder. However, certain trigger events and subsequent changes to avoidance and minimization measures have been defined as a part of the adaptive management process. Adaptive management will allow Certificate Holder to meet the BSEF's goals of avoiding and minimizing impacts to birds and bats. After the end of the first year of post-construction monitoring, if the fatality rates do not exceed any thresholds of concern identified in Section 3.2, no additional monitoring will be conducted. However, if the fatality rates do exceed any of the thresholds of concern in Section 3.2, ODOE, in consultation with ODFW and the Certificate Holder, will determine if additional monitoring is warranted, based on the number of observed carcasses and estimated fatality rates, and consideration of any other significant information available at the time.

3.2 Adaptive Management Process

To enable new information, including the results of post-construction monitoring, to influence and improve the avoidance and minimization measures of the BSEF, certain trigger events and the subsequent changes or actions have been established.

The events that would trigger changes to avoidance and minimization measures presented herein would be:

- Discovery of an eagle carcass
- New ESA-listing of a bird or bat species

- Discovery of an ESA-listed species carcass
- New state-listing of a bird or bat species
- Discovery of a state-listed species carcass
- The total number of observed bird and bat mortalities is higher than expected and likely to be significant, as defined in Section 3.2.6.

3.2.1 Discovery of an Eagle Carcass

If an eagle carcass is discovered at the BSEF, the following actions will be taken:

- Certificate Holder will, working with a qualified wildlife biologist, promptly identify and secure the carcass at the place of its discovery in the field until USFWS personnel can be reached and provide the further instruction for the storage of the carcass.
- Certificate Holder will notify USFWS, ODFW, and ODOE within one business day after discovery and positive identification of the carcass.
- Certificate Holder will work with the USFWS to evaluate available data concerning the find and, as appropriate, identify and implement avoidance and minimization measures to reduce the risk of future carcasses. Potential adaptive management approaches are presented in Section 3.2.7 below.
- Certificate Holder will assess the need to obtain additional authorizations in view of the new information.

3.2.2 New ESA-listing of a Bird or Bat Species

If a bird or bat species, known to occur or that has a high likelihood to occur within the BSEF area, becomes listed under the ESA during the life of the BSEF, Certificate Holder will coordinate with USFWS. If this trigger is met, Certificate Holder will work with USFWS to assess the potential for the BSEF to impact the species and subsequently to determine the appropriate action(s) for the BSEF, if any.

3.2.3 Discovery of an ESA-listed Species Carcass

If a carcass of an ESA-listed species is discovered at the BSEF, the following actions will be taken:

- Certificate Holder will, working with a qualified wildlife biologist, promptly identify and secure the carcass at the place of its discovery in the field until USFWS personnel can be reached and provide the further instruction for the storage of the carcass.
- Certificate Holder will notify USFWS, ODFW, and ODOE within one business day after the discovery and positive identification of the carcass.
- Certificate Holder will work with the USFWS to evaluate available data concerning the discovery and, as appropriate, identify and implement avoidance and minimization measures to reduce the risk of future mortalities.
- Certificate Holder will assess the need to obtain additional authorizations in view of the new information.

3.2.4 New State-listing of a New Bird or Bat Species

If a bird or bat species, known to occur or that has a high likelihood to occur within the BSEF area, becomes listed by ODFW during the life of the BSEF, Certificate Holder will coordinate with ODFW and ODOE. If this trigger is met, Certificate Holder will work with ODFW and ODOE to assess the potential for the BSEF to impact the species and subsequently to determine the appropriate action(s) for the BSEF, if any.

3.2.5 Discovery of a State-listed Species Carcass

- Certificate Holder will, working with a qualified wildlife biologist, promptly identify and secure the carcass at the place of its discovery in the field until ODFW personnel can be reached and provide the further instruction for the storage of the carcass.
- Certificate Holder will notify ODFW and ODOE within one business day after the discovery and positive identification of the carcass.
- Certificate Holder will work with the ODFW and ODOE to evaluate available data concerning the discovery and, as appropriate, identify and implement avoidance and minimization measures to reduce the risk of future mortalities.
- Certificate Holder will assess the need to obtain additional authorizations in view of the new information.

3.2.6 Total Number of Observed Bird and Bat Mortalities is Higher than Expected and Likely to be Significant

Avian use and species richness are expected to be low during pre-construction avian surveys. Similarly, bat use of the area is expected to be limited to foraging and also expected to be low. Thus, mortalities to birds and bats during operations are expected to be low. Significance of the levels of mortality of any bird or bat species would be determined in coordination with USFWS, ODFW and ODOE in a separate document, which shall be incorporated herein by reference at that time and would be based on the best available information, including the most recent data on species' population sizes and trends and fatality rates at technologically and geographically similar facilities if available. At the time of this permit application, there is no publicly available avian fatality data at PV facilities in Oregon but there may be in the future. This approach recognizes that higher levels of mortality of common species may not be significant. Conversely, lower levels of mortalities of less common species may be of more concern, particularly if these species appear to be at risk (e.g., Oregon sensitive-critical species). Given the assessment and prediction that impacts are likely to be low, the following actions are suggested in response to monitoring outcomes:

1. If documented fatalities are lower or not different than predicted and are not significant, no mitigation will be conducted.
2. If fatalities are greater than predicted and are likely to be significant, Certificate Holder will meet and confer with the ODFW and ODOE and the applicable actions presented below will be carried out. If a particular cause can be identified, Certificate Holder will develop specific mitigation measures in consultation with ODFW and ODOE to address the occurrence.

3.2.7 Potential Adaptive Management Approaches

Circumstances that trigger the need for adaptive management will be investigated such that the Certificate Holder can, in consultation with ODFW and ODOE, implement avoidance, minimization, and mitigation measures designed and implemented to reduce impacts to birds and/or bats while maintaining Facility viability. If ODOE determines that additional avoidance, minimization or mitigation measures are appropriate based on analysis of the data, consultation with ODFW, and consideration of other significant information available at the time, the Certificate Holder, in consultation with ODOE and ODFW shall propose and implement measures to address the concern, subject to the approval of ODOE.

Avoidance, minimization, and mitigation actions that may be taken under adaptive management include, but are not limited to, the following:

1) Remove or modify any identified sources of bird or bat attraction to the extent practicable.

2) If more than one eagle carcass is discovered in a 5-year time period, Certificate Holder will develop and implement a roadkill removal program on roads within or near the BSEF, as appropriate, to offset BSEF impacts to eagles.

3) Implement technological solutions. If bird and/or bat carcass discoveries exceed the above-defined adaptive management triggers and new techniques or technology become available, the Certificate Holder, ODOE, and/or ODFW shall propose new approaches, techniques or technology designed to avoid and/or minimize impacts to the affected species, taking into consideration factors including but not limited to cost effectiveness and feasibility to implement, subject to the approval of ODOE. At the time of this permit application, there are no technological solutions available.

If ODOE determines that additional monitoring is appropriate based on analysis of the data, consultation with ODFW and Certificate Holder, and consideration of any other significant information available at the time, the Certificate Holder shall conduct additional specific, targeted monitoring to determine if adaptive management measures are effective.

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Western EcoSystems Technology, Inc. (WEST). 2016b. Bird and Bat Conservation Strategy, Blythe Solar Energy Project, Riverside County, California. 57 pp.

Western EcoSystems Technology, Inc. (WEST). 2016c. Bird and Bat Conservation Strategy, McCoy Solar Energy Project, Riverside County, California. 57 pp.

Attachment F: Monitoring Plan for Cultural Resources

Monitoring Plan for Cultural Resources, Boardman Solar Energy Facility, Morrow and Gilliam Counties, Oregon

Consultation with the Oregon State Historic Preservation Office (SHPO) and Confederated Tribes of the Umatilla Indian Reservation (CTUIR), along with additional background research, has identified the possibility that buried archaeological resources or human remains may be present along a traditional travel corridor for the Umatilla and other peoples of the mid-Columbia River. As a result of consultation and the additional background research, the survey conducted for the proposed Boardman Solar Energy Facility (Facility) and documented in *Technical Report: Cultural Resources Survey of the Proposed Boardman Solar Energy Facility, Gilliam and Morrow Counties, Oregon* (CH2M, 2017) resulted in a recommendation for cultural resources monitoring during fieldwork activities. This monitoring plan was designed to identify and protect archaeological resources or burials that may be present within the Facility area and provides guidelines to be implemented during Facility construction and operation. Representatives of the CTUIR should be notified at least 1 week prior to the commencement of ground-disturbing Facility activities and offered a chance to participate in monitoring.

Cultural Resources Monitor

The Cultural Resources Monitor (Monitor) will have at a minimum an undergraduate degree in anthropology, archaeology, historic archaeology, or a related field and at least 1 year of professional archaeological experience or equivalent specialized training. The Monitor will work closely with the construction managers to provide status updates on a daily basis. The Monitor's actions and activities will be reviewed on a daily or as-needed basis by a cultural resource professional meeting the Secretary of Interior Standards of professional archaeology.

Monitoring Duties

The Monitor will provide a cultural resource awareness training (CH2M, 2017: Appendix F) to construction personnel on the role and responsibility of the Monitor and the procedures to be followed in the event of a cultural resource discovery.

The Monitor will be present during ground-disturbing activities to watch and inspect cleared ground and excavated areas for signs of previously undiscovered archaeological resources. Ground-disturbing activities include those activities that remove earth with excavating equipment but exclude those activities that involve post-driving equipment. The Monitor will observe activities involving native soil disturbance in areas where subsurface deposits may exist.

If the Monitor or other construction personnel discover archaeological materials during construction, the Monitor will have authority to halt construction and will notify the designated cultural resource contacts. If archaeological materials are discovered, all work will stop in the immediate area (100 feet [30 meters]) of discovery. The discovery perimeter will be flagged to prevent access and protect further disturbance to materials.

The Monitor will prepare a daily monitoring log (briefly describing the field conditions, type of construction equipment being used, construction progress and activities) and record any finds of archaeological material.

It is the Monitor's responsibility to ensure that the appropriate cultural resource protections (for example, flagging avoidance areas and installing no entry signs) are in place at the only recorded archaeological site, 35GM402, in the vicinity of the Facility before construction work begins on the transmission line and associated service road.

Construction-Related Discoveries

The Monitor will photograph the work area and any cultural resources in the immediate area before work begins to establish a record of baseline conditions in the proposed Facility area.

In the event that previously unidentified archaeological materials are encountered during monitoring, the Monitor will stop construction-related activities within the immediate vicinity (100 feet [30 meters]) of the discovery. The monitor will follow the guidelines outlined in the *Inadvertent Discovery Plan for Cultural Resources* (CH2M, 2017: Appendix G)

The Monitor will evaluate whether significant cultural resources are present and, if so, whether they will be adversely affected by continuing operations. The types of cultural resources that may be encountered include prehistoric artifacts such as grinding stones, fire-cracked rock, shell fragments, projectile points, lithic materials, bone, cobble tools, or other indicators. Historic artifacts may include glass bottles, ceramic objects, metal objects, building foundations, bricks, concrete, or other indicators. The Monitor will be responsible for directing Facility-related activities away from the newly identified cultural resources.

The area of the discovery will be delineated using flagging tape, rope, or some other means to ensure Facility activities do not continue in the area of the discovery. The Monitor will notify the field construction manager and contact the Facility's Cultural Resources Manager or designee. Ground-disturbing activities in the immediate vicinity of the discovery will remain stopped to avoid any additional impacts to the discovery until significance is determined and an appropriate treatment can be identified and implemented through consultation between the Applicant, Oregon Department of Energy, SHPO, and the CTUIR. During this period, construction activities outside the find area will continue.

If the newly identified cultural resources are determined to be either an isolate or a site, the Monitor or designated Cultural Resources Specialist will determine whether the new material is a stand-alone cultural resource or part of an adjoining site. The Monitor will document the discovery and prepare an isolate or site form and request a Smithsonian trinomial from SHPO. Isolate discoveries will be recorded and construction will continue. Isolate finds will be reported in a final Facility monitoring report.

Discovery of Human Remains

In the event that human skeletal remains are discovered during construction activities, the Monitor will follow the protocol outlined in the *Inadvertent Discovery Plan for Cultural Resources* (CH2M, 2017: Appendix G)

Monitoring Documentation

Cultural resource monitoring will be documented in daily monitoring logs (see Attachment 1) and photographs. Areas monitored during the day will be marked on a map (see Figure 1 in Attachment 2). Photographic documentation will be collected by the Monitor before Facility construction begins, during ground-disturbing activities, and after work is complete.

Monitoring Report

A monitoring report will be prepared by the Monitor following the completion of monitoring activities. The monitoring report will include descriptions and photographs of monitored activities within the Facility area. The monitoring report will be submitted to SHPO, the CTUIR and the Oregon Department of Energy after completion of the monitoring activities.

Reference

CH2M HILL Engineers, Inc. (CH2M). 2017. *Technical Report: Cultural Resources Survey of the Proposed Boardman Solar Energy Facility, Gilliam and Morrow Counties, Oregon*. Prepared for Boardman Solar Energy, LLC, by David Sheldon and Jamelon Brown. Report on file at the Oregon State Historic Preservation Office, Salem. Revised July.

Attachment 1
Daily Cultural Monitoring Log

Daily Cultural Monitoring Log
Boardman Solar Energy Facility

Monitor Name(s): _____ Date: _____

Participant Name(s): _____

Job Site Contact: _____ Phone Number: _____

Project Description:

Conditions:

Location and Dimensions (Length x Width x Height) of Excavation:

Excavation Technique (include types of equipment used):

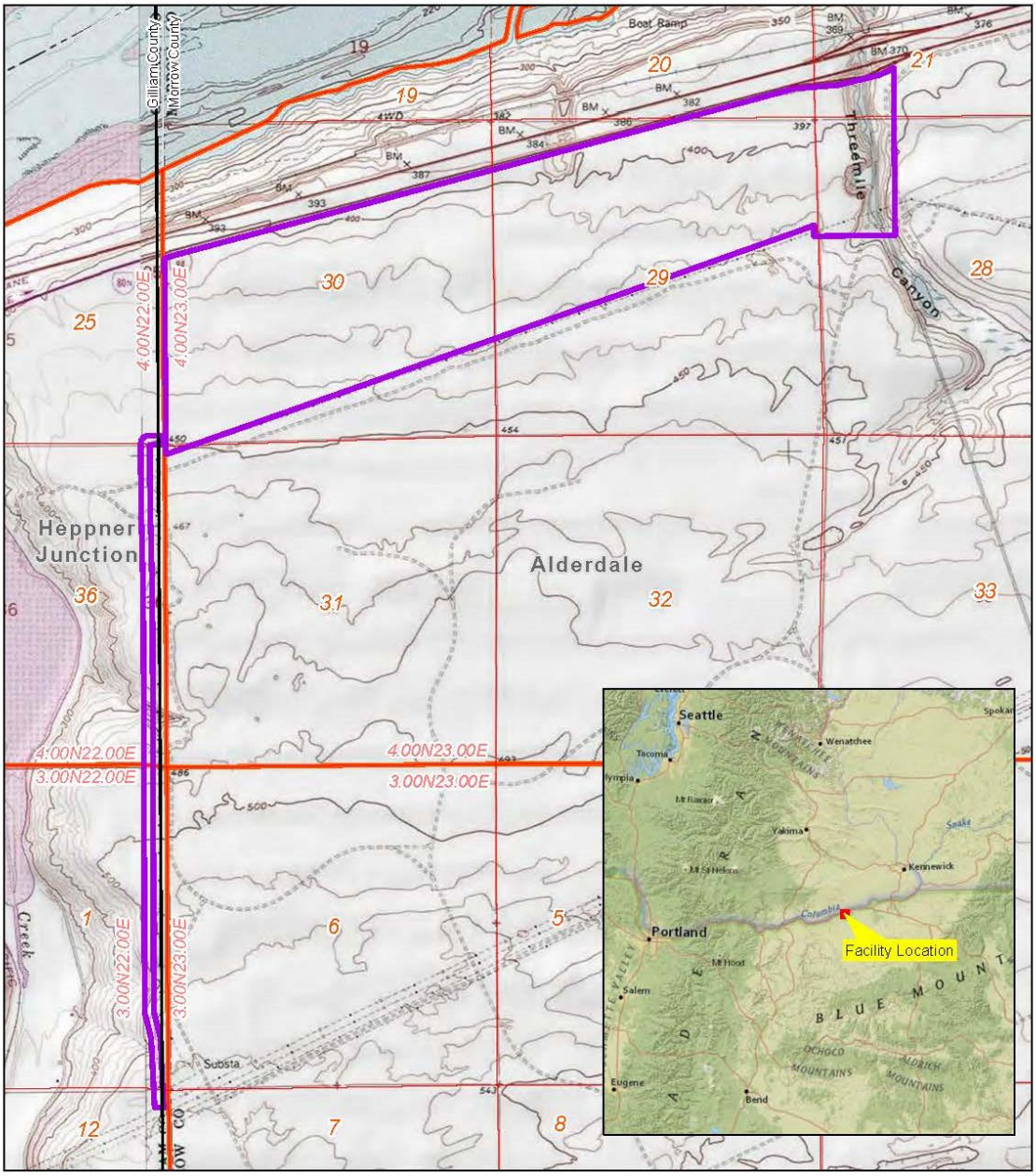
Sediment Description (if sediment is fill, explain why):

Cultural Materials Observed:

Additional Notes:

Sketch Maps of the Excavation and Sidewalls:

Attachment 2
Figure 1: Facility Site Boundary on Topographic Background



LEGEND

- Facility Site Boundary
- County
- USGS 7.5-minute Quadrangle
- Township and Range
- Section

0 2,250 Feet

Invenergy

FIGURE 1
Facility Site Boundary on Topographic Background
Boardman Solar Energy Facility
Morrow and Gilliam Counties, Oregon

ch2m

BAOTSP01 C:\GIS\PROJ\INVENERGY\421624HEPPNER\BOARDMAN_SOLAR_PROJECT\GIS\MAPFILES\2016\CULTURAL\NOVEMBER\FIG1_FACILITY_SITE_BOUNDARY_ON_TOPO.MXD

Attachment G: Inadvertent Discovery Plan for Cultural Resources

Inadvertent Discovery Plan for Cultural Resources, Boardman Solar Energy Facility, Morrow and Gilliam Counties, Oregon

Boardman Solar Energy LLC (Applicant) proposes to construct a photovoltaic solar power generation facility on approximately 798 acres of private land in Morrow and Gilliam counties, Oregon. The project will consist of photovoltaic panels, inverters, mounting infrastructure, electrical collection system, substation, operations and maintenance building, private service roads, a 115-kilovolt transmission line, and fencing. **The Inadvertent Discovery Plan should be followed if cultural materials, including human remains, are encountered during construction.**

Protocol for Coordination in the Event of Inadvertent Discovery

☐ In the event of an inadvertent discovery of possible cultural materials, including human remains, all work will stop immediately in the vicinity of the find. A 100-foot (30-meter) buffer should be placed around the discovery with work being able to proceed outside of this buffered area unless additional cultural materials are encountered.

☐ The area will be secured and protected by flagging and roping off the area and covering (not reburying) the cultural materials/human remains.

☐ The Project Manager/Land Manager will be notified. The Project/Land Manager will notify the State Historic Preservation Office (SHPO) and the Oregon Department of Energy (ODOE). If possible human remains are encountered, the Oregon State Police, Commission on Indian Services (CIS), SHPO, ODOE, and appropriate Tribes will also be notified, in accordance with Oregon Revised Statute 97.745(4). The Applicant's representative will be responsible for contacting the Tribe(s) after confirming the appropriate Tribe(s) with CIS.

- Oregon State Police: Chris Allori (503-731-4717)
- CIS: Karen Quigley (503-986-1067)
- Appropriate Tribes: As confirmed with CIS
- SHPO: Dennis Griffin (503-986-0674), John Pouley (503-986-0675), or Matt Diederich (503-986-0577)
- ODOE: Katie Clifford (503-302-0267)

☐ No work may resume until consultation with SHPO and ODOE has occurred and a professional archaeologist is able to assess the discovery.

☐ If human remains are encountered, do not disturb them in any way. *Do not call 911*. Do not speak with the media. Secure the location. Do not take photos. The location should be secured and work will not resume in the area of discovery until all parties involved agree upon a course of action.

☐ A professional archaeologist may be needed to assess the discovery and they will consult with SHPO, ODOE, and appropriate Tribal governments to determine an appropriate course of action.

☐ Archaeological excavations may be required. This is handled on a case-by-case basis by the professional archaeologist and Project Manager, in consultation with SHPO, ODOE, and appropriate tribes.

When to Stop Work

Construction work may uncover previously unidentified Native American or Euroamerican artifacts. This may occur for a variety of reasons, but may be associated with deeply buried cultural material, access restrictions during project development, or if the area contains impervious surfaces throughout most of the project area that would have prevented standard archaeological site discovery methods.

Work must stop when the following types of artifacts or features are encountered:

Native American artifacts may include (but are not limited to):

☐ Flaked stone tools (for example, arrowheads, knives scrapers)

☐ Waste flakes that resulted from the construction of flaked stone tools

☐ Ground stone tools like mortars and pestles

☐ Layers (strata) of discolored earth resulting from fire hearths (may be black, red, or mottled brown and often contain discolored cracked rocks or dark soil with broken shell)

☐ Human remains

☐ Structural remains—wooden beams, post holes, fish weirs

Euroamerican artifacts may include (but are not limited to):

☐ Glass (from bottles, vessels, windows)

☐ Ceramic (from dinnerware, vessels)

☐ Metal (nails, drink/food cans, tobacco tins, industrial parts)

☐ Building materials (bricks, shingles)

☐ Building remains (foundations, architectural components)

☐ Old wooden posts, pilings, or planks (these may be encountered above or below water)

☐ Remains of ships or seagoing vessels, or marine hardware

☐ Old farm equipment (may indicate historic resources in the area)

Even what looks to be old garbage could very well be an important archaeological resource.

When in doubt, call it in!

Proceeding with Construction

☐ Construction can proceed only after the proper archaeological inspections have occurred and environmental clearances are obtained. This requires close coordination with SHPO, ODOE, and the tribes.

☐ After an inadvertent discovery, some areas may be specified for close monitoring or no-work zones. Any such areas will be identified by the professional archaeologist to the Project Manager and appropriate contractor personnel.

☐ In coordination with SHPO and ODOE, the Project Manager will verify these identified areas and be sure that the areas are clearly demarcated in the field, as needed.

Detailed Protocol for Treatment of Native American Human Remains

Any Native American human skeletal remains will be treated with the utmost dignity and respect. Attached is a Tribal position paper on the treatment of human remains titled *Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Public, State-Owned Lands in Oregon* (Government to Government Cultural Resources Cluster Group, September 2006; accessed from SHPO Web site on March 30, 2017). The attached paper further describes the appropriate protocol for the treatment of Native American human remains.

Attachment
Tribal Position Paper on the Treatment of Human Remains

Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Public, State-Owned Lands in Oregon

Native American burial sites are not simply artifacts of the tribe's cultural past, but are considered sacred and represent a continuing connection with their ancestors. Native American ancestral remains, funerary objects, sacred objects and objects of cultural patrimony associated with Oregon Tribes are protected under state law, including criminal penalties (ORS 97.740-.994 and 358.905-.961). The laws recognize and codify the Tribes' rights in the decision-making process regarding ancestral remains and associated objects. Therefore both the discovered ancestral remains and their associated objects should be treated in a sensitive and respectful manner by all parties involved.

Identification of Human Remains

- Oregon laws (ORS 146.090 & .095) outline the types of deaths that require investigation and the accompanying responsibilities for that investigation. The law enforcement official, district medical examiner, and the district attorney for the county where the death occurs are responsible for deaths requiring investigation. Deaths that require investigation include those *occurring under suspicious or unknown circumstances*.
- If human remains that are inadvertently discovered or discovered through criminal investigations **are not clearly modern**, then there is high probability that the remains are Native American and therefore ORS 97.745(4) applies, which requires immediate notification with State Police, State Historic Preservation Office, Commission on Indian Services, and all appropriate Native American Tribes. To determine who the "appropriate Native American Tribe" the responsible parties should contact the Legislative Commission on Indian Services (CIS). To determine whether the human remains are Native American the responsible parties should contact the appropriate Native American Tribes at the initial discovery. It should be noted that there may be more than one appropriate Native American Tribe to be contacted.
- If the human remains are possibly Native American then the area should be secured from further disturbance. The human remains and associated objects **should not be disturbed**, **manipulated, or transported from the original location until a plan is developed in consultation with the above named parties.** These actions will help ensure compliance with Oregon state law that prohibits any person willfully removing human remains and/or objects of cultural significance from its original location (ORS 97.745).
- All parties involved and the appropriate Native American Tribes shall implement a culturally sensitive plan for reburial.

Notification

- State law [ORS 97.745 (4)] requires that any discovered human remains suspected to be Native American shall be reported to-
    1. State Police (current contact Chris Allori, Department of State Police, office phone 503-731-4717)
    2. State Historic Preservation Office (SHPO)

*Note: This document was created by the Government to Government Cultural Resource Cluster Group in September, 2006.

- Primary contact= Dennis Griffin, State Archaeologist, office phone 503-986-0674, cell phone 503-881-5038
- Secondary contacts= Asst. State Archaeologists John Pouley, office phone 503-986-0675, or Matt Diederich, office phone 503-986-0577

3. Commission on Indian Services (CIS)
   - Current contact= Karen Quigley, Director, office phone 503-986-1067. Karen will confirm the list of appropriate Native American Tribes.
4. All appropriate Native American Tribes provided by CIS.

   - Burns Paiute Tribe- Theresa Peck 541-573-1375 X6
   - Confederated Tribes of Coos, Lower Umpqua and Siuslaw- Arrow Coyote 541-888-9577 X4574
   - Confederated Tribes of Grand Ronde- Eirik Thorsgard 503-879-1630; cell 971-241-2696
   - Confederated Tribes of Siletz- Robert Kentta 541-444-2532; cell 541-351-0148
   - Confederated Tribes of the Umatilla Indian Reservation- Teara Farrow 541-276-3629, secondary contact; Catherine Dickson 541-966-2338
   - Confederated Tribes of Warm Springs- Sally Bird 541-553-3555
   - Coquille Indian Tribe- Nicole Norris 541-756-0904
   - Cow Creek Band of Umpqua Indians- Jessie Plueard 541-677-5575 X5577
   - Klamath Tribes- Perry Chocktoot 541-783-2219 X159

*Note: This document was created by the Government to Government Cultural Resource Cluster Group in September, 2006.