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

| | | |
|---|---|---|
| In the Matter of the Application for Site Certificate for the Madras Solar Energy Facility | ) ) ) ) | FINAL ORDER ON APPLICATION FOR SITE CERTIFICATE |

June 25, 2021

**TABLE OF CONTENTS**

**I. INTRODUCTION** ..... **1**
**II. PROCEDURAL HISTORY** ..... **2**
**II.A NOTICE OF INTENT** ..... **2**
**II.B PROJECT ORDER** ..... **3**
**II.C APPLICATION FOR SITE CERTIFICATE** ..... **3**
**II.D COUNCIL REVIEW PROCESS** ..... **4**
**III. DESCRIPTION OF THE FACILITY** ..... **5**
**III.A FACILITY COMPONENTS** ..... **5**
III.A.1 Facility Construction Activities and Schedule ..... 10
III.A.2 Facility Operational Activities and Schedule ..... 10
III.A.3 Facility Retirement Activities ..... 11
**III.B. FACILITY LOCATION AND SITE BOUNDARY** ..... **11**
**IV. EVALUATION OF COUNCIL STANDARDS** ..... **14**
**IV.A GENERAL STANDARD OF REVIEW: OAR 345-022-0000** ..... **15**
**IV.B ORGANIZATIONAL EXPERTISE: OAR 345-022-0010** ..... **21**
**IV.C STRUCTURAL STANDARD: OAR 345-022-0020** ..... **28**
**IV.D SOIL PROTECTION: OAR 345-022-0022** ..... **37**
**IV.E LAND USE: OAR 345-022-0030** ..... **41**
IV.E.1 Local Applicable Substantive Criteria ..... 43
IV.E.2 Directly Applicable State Statutes and Administrative Rules ..... 86
IV.E.3 Goal 3 Exception ..... 99
**IV.F PROTECTED AREAS: OAR 345-022-0040** ..... **106**
**IV.G RETIREMENT AND FINANCIAL ASSURANCE: OAR 345-022-0050** ..... **118**
**IV.H FISH AND WILDLIFE HABITAT: OAR 345-022-0060** ..... **126**
**IV.I THREATENED AND ENDANGERED SPECIES: OAR 345-022-0070** ..... **137**
**IV.J SCENIC RESOURCES: OAR 345-022-0080** ..... **139**
**IV.K HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES: OAR 345-022-0090** ..... **155**
**IV.L RECREATION: OAR 345-022-0100** ..... **158**
**IV.M PUBLIC SERVICES: OAR 345-022-0110** ..... **176**
**IV.N WASTE MINIMIZATION: OAR 345-022-0120** ..... **189**
**IV.O DIVISION 23 STANDARDS** ..... **193**
**IV.P DIVISION 24 STANDARDS** ..... **193**
IV.P.1 Siting Standards for Transmission Lines: OAR 345-024-0090 ..... 193
**IV.Q OTHER APPLICABLE REGULATORY REQUIREMENTS UNDER COUNCIL JURISDICTION** ..... **195**
IV.Q.1 Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce: OAR 340-035-0035 ..... 195
IV.Q.2 Removal-Fill Law ..... 203
IV.Q.3 Water Rights ..... 204
**V. FINAL CONCLUSIONS AND ORDER** ..... **208**

**LIST OF TABLES**

Table 1: Jefferson County Applicable Substantive Criteria ..... 44
Table 2: Protected Areas within 20-mile Analysis Area ..... 109
Table 3: Facility Decommissioning Cost Estimate and Sum Total Costs ..... 122
Table 4: Estimated Permanent and Temporary Habitat Impacts from Facility ..... 129
Table 5: State Sensitive Species with Potential to Occur within 5-Mile Analysis Area ..... 133
Table 6: Identification of Applicable Local, State, Tribal, and Federal Land Use and Management Plans for Lands within 10-Mile Scenic Resources Analysis Area ..... 140
Table 7: Scenic Resources Identified in Applicable Local, State, Tribal, and Federal Land Use and Management Plans, Potential Visibility, and Analysis Results ..... 147
Table 8: Recreational Opportunities within the 10-Mile Analysis Area and Distance from Proposed Site Boundary ..... 159
Table 9: Anticipated Increase in Traffic Volume from Construction on Transportation Routes. 180
Table 10: Statistical Noise Limits for Industrial and Commercial Noise Sources ..... 198
Table 11: Summary of Ambient Noise Measurement Results ..... 201
Table 12: Estimated Maximum Water Use from Construction and Operation ..... 205

**LIST OF FIGURES**

Figure 1: Facility Regional Location ..... 13
Figure 2: Protected Areas within 20-Mile Analysis Area ..... 110
Figure 3: Proposed Habitat Mitigation Area ..... 132
Figure 4: Applicant's ZVI Analysis for Scenic Resources within 10-Mile Analysis Area. ..... 150
Figure 5: Recreational Opportunities within the Analysis Area ..... 161

**ATTACHMENTS**

Attachment A: Site Certificate
Attachment B: Index of Reviewing Agency Comments on preliminary/complete ASC; Comments Relied upon in DPO
Attachment C: Draft Proposed Order Index/Comments
Attachment D: Draft Outline of Spill Prevention, Control and Countermeasure Plan
Attachment E: Draft Erosion and Sediment Control Plan and Best Management Practices
Attachment F: Draft Revegetation Plan
Attachment G: Draft Noxious Weed Control Plan
Attachment H: Draft Habitat Mitigation Plan
Attachment I: Inadvertent Discovery Plan

**ACRONYMS AND ABBREVIATIONS**

| | |
|---|---|
| ACDP | Air Contaminant Discharge Permit |
| Applicant | Madras PV1, LLC |
| AR | antireflective |
| ASC | Application for Site Certificate |
| Aviation | Oregon Department of Aviation |
| BIA | Bureau of Indian Affairs |
| BLM | Bureau of Land Management |
| BMP | Best Management Practice |
| BH | Bird Habitat Overlay Zone |
| CadnaA | Computer Aided Noise Abatement |
| CES | Cascade Earth Sciences |
| CFR | Code of Federal Regulations |
| cfs | Cubic feet per second |
| CMCP | City of Madras Comprehensive Plan |
| Council | Oregon Energy Facility Siting Council |
| COAREC | Central Oregon Agriculture Research and Extension Center |
| CSZ | Cascadia Subduction Zone |
| CTWSRO | Confederated Tribes of the Warm Springs Reservation of Oregon |
| dBA | A-weighted decibel |
| Department | Oregon Department of Energy |
| DEQ | Oregon Department of Environmental Quality |
| DC | Direct current |
| DOGAMI | Oregon Department of Geology and Mineral Industries |
| DPO | Draft Proposed Order |
| DSL | Oregon Department of State Lands |
| EFSC | Oregon Energy Facility Siting Council |
| EFU | Exclusive Farm Use |
| EPA | United States Environmental Protection Agency |
| ESCP | Erosion and Sediment Control Plan |
| FAA | Federal Aviation Administration |
| GCR | Ground-coverage ratio |
| HMA | Habitat Mitigation Area |
| HMP | Habitat Mitigation Plan |
| HMBP | Hazardous Materials Business Plan |
| IBC | International Building Code |
| IPaC | Information for Planning and Conservation |
| ISO | International Organization for Standardization |
| JCCP | Jefferson County Comprehensive Plan |
| JCFD1 | Jefferson County Fire District #1 |
| JCTS | Jefferson County Transfer Station |
| JCZO | Jefferson County Zoning Ordinance |
| km | kilometers |
| kV | kilovolts |
| LCDC | Land Conservation and Development Commission |
| LLC | Limited liability company |

| | |
|---|---|
| MGD | Million gallons per day |
| MW | Megawatt(s) |
| NCDEQ | North Caroline Department of Environmental Quality |
| NOI | Notice of Intent |
| NFPA | National Fire Protection Association |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NUID | North Unit Irrigation District |
| O&M | Operations and Maintenance |
| OAR | Oregon Administrative Rule |
| ODA | Oregon Department of Agriculture |
| ODFW | Oregon Department of Fish and Wildlife |
| ODOE | Oregon Department of Energy |
| ODOT | Oregon Department of Transportation |
| OPRD | Oregon Parks and Recreation Department |
| ORBIC | Oregon Biodiversity Information Center |
| ORS | Oregon Revised Statutes |
| OSSC | Oregon Structural Specialty Code |
| OWRD | Oregon Water Resources Department |
| pASC | Preliminary Application for Site Certificate |
| PCS | Power conversion station |
| POI | Point of Interconnect |
| PGE | Portland General Electric Company |
| Facility | Madras Solar Energy Facility |
| RAI | Request for Additional Information |
| RPS | Renewable Portfolio Standard |
| RV | Recreational vehicle |
| SAG | Special Advisory Group |
| SCADA | Supervisory Control and Data Acquisition system |
| SC | Sensitive critical |
| SEIA | Solar Energy Industries Association |
| SHPO | State Historic Preservation Office |
| SLIDO-2 | Statewide Landslide Information Database for Oregon, Release 2 |
| SPCC | Spill Prevention Control and Countermeasure Plan |
| SV | Sensitive Vulnerable |
| T&E | Threatened and Endangered |
| USGS | United States Geological Survey |
| USFWS | United States Fish and Wildlife Service |
| U.S. | United States |
| VOC | Volatile Organic Compound |
| Water District | Deschutes Valley Water District |
| WEGS | Wind Erodibility Groups |
| WPCF | Water Pollution Control Facilities |
| ZVI | Zone of Visual Influence |

## I. INTRODUCTION

This Final Order approves the Application for Site Certificate (ASC) for the proposed Madras Solar Energy Facility (facility) and comments and recommendations received during review of the preliminary and complete ASC from state agencies, local governments, and tribal governments; and reviewing agency comments received on the record of the draft proposed order public hearing. This final order includes conditions of approval for inclusion in the site certificate to ensure or maintain compliance with applicable rules and standards during facility construction, operation and retirement. facility

The Energy Facility Siting Council (EFSC or Council) authorizes Madras PV1, LLC (applicant), a wholly owned subsidiary of Ecoplexus Inc., to construct and operate up to 63 megawatts (MW) of solar photovoltaic energy generation facility components, and related or supporting facilities including: above- and belowground 34.5 kilovolt (kV) electrical collector lines; point of interconnection switching station; substation and associated equipment; an operations and maintenance enclosure; communication and supervisory control and data acquisition (SCADA) system; site access, internal service roads, up to 8-foot perimeter fencing, and gates; temporary staging areas; temporary concrete batch plant; and up to 63 MW of either lithium-ion or flow battery storage system.

The facility would occupy up to 277 acres on Exclusive Farm Use zoned land, composed of approximately 126.5 acres of Class III soils (arable land) and 157.6 acres of Class IV soils (non-arable land), within an approximately 284 acre site boundary. The facility site is within the bounds of the North Unit Irrigation District (NUID), which designates the site, regardless of underlying soil conditions or National Resource Conservation District (NRCD) soil classification, as high-value farmland pursuant to ORS 195.300(10)(c)(B). The facility site would be located in Jefferson County, just east of Lake Simtustus, and approximately 5 miles west of the City of Madras.

In addition to the conditions of this final order, the applicant is subject to the applicable substantive criteria in effect on the date the preliminary ASC was submitted, the rules and standards of the Council and state laws in effect on the date the site certificate is executed. Under ORS 469.401(2), the site certificate shall require the Council and applicant to abide by state law and the rules of the Council in effect on the date the site certificate is executed, except upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, then Council may require compliance with such later-adopted laws or rules. The Council recognizes that many specific tasks related to the design, construction, operation, and retirement of the facility would be undertaken by the applicant's agents or contractors. Nonetheless, the applicant would be 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, 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. However, nothing in ORS chapter 469 shall be construed to preempt the jurisdiction of any state agency or local government over matters that are not included in and governed by the site certificate or amended site certificate.[1] Also outside the Council's jurisdiction are matters of land-acquisition, land purchases, land leases and right-of-way easements.

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 within an approved site, incorporating all conditions imposed by the Council in the site certificate.[2] A site certificate issued by EFSC binds the state and all counties, cities and political subdivisions of Oregon. Once EFSC issues a site certificate, any affected state agency, county, city or political subdivision with an applicable permit identified in the ASC and to be governed by the site certificate, 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.[3] The Council has continued authority over the site for which the site certificate is issued and may inspect, or direct Department staff 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.[4]

## II. PROCEDURAL HISTORY

### II.A Notice of Intent

On May 16, 2019, the Department received a Notice of Intent (NOI) from Madras PV1, LLC (applicant) to file an application for site certificate (ASC) for a proposed 63 megawatt (MW) solar photovoltaic energy facility. At the May 16, 2019 meeting, the Energy Facility Siting Council (EFSC or Council) appointed the Jefferson County Board of Commissioners as the Special Advisory Group (SAG) for siting proceedings associated with the facility, in accordance with ORS 469.480(1).[5] On June 12, 2019, the Department issued public notice of the NOI to the Council's general mailing list and to adjacent property owners as defined at OAR 345-020-0011(1)(f). Further, in accordance with OAR 345-020-0040, the Department distributed the NOI to the SAG, reviewing agencies, and tribal governments along with a memorandum requesting comments on the NOI. The Department also published notice of the NOI on June 19 and 20, 2019 in The Madras Pioneer, a newspaper of general circulation within the vicinity of the facility, and as a courtesy to reach a greater regional population, the Bend Bulletin. The NOI comment deadline was July 19, 2019. Pursuant to OAR 345-015-0140, the Department provided

[1] ORS 469.401(4).
[2] ORS 469.300(26).
[3] ORS 469.401(3).
[4] ORS 469.430.
[5] MSEFNOI Jefferson County SAG Appointment Letter 2019-06-07. Under ORS 469.480(1), the Council must designate as a Special Advisory Group the governing body of any local government within whose jurisdiction the facility is proposed to be located.

copies of each public comment to the applicant for consideration in the development of the ASC.

**II.B Project Order**

Pursuant to ORS 469.330(3) and OAR 345-015-0160(1), the Department issued a project order on September 12, 2019, 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 facility. The project order outlines the ASC requirements from OAR 345-021-0010 that are relevant to the facility. Under OAR 345-015-0160, the project order also establishes analysis areas for the facility which are areas that may contain resources that the facility may affect and that must be evaluated in the ASC.[6] A facility may have different analysis areas for different types of resources. Further, the Department considered the size and type of the facility in determining the analysis areas the applicant must evaluate in the ASC.[7] Finally, under OAR 345-015-0160(3), the Department or Council may amend the project order at any time.

**II.C Application for Site Certificate**

The Department received the preliminary Application for Site Certificate (pASC) on December 6, 2019. The Department distributed the pASC to reviewing agencies and requested pASC review and comment by January 17, 2020. Additionally, the Department posted an announcement on its project website notifying the public that the pASC had been received.

Pursuant to OAR 345-015-0190(1), following review of the pASC, the Department determined the pASC to be incomplete and issued requests for additional information (RAIs) on February 4 and February 21, 2020. The applicant responded to the Department's information requests on March 16, April 1, and August 14, 2020; and, provided supplemental responses to information requested for one mitigation option proposed in the draft Habitat Mitigation Plan on October 22, 2020 (note that this information was not necessary in order for the Department to deem the ASC complete). After reviewing the applicant's responses and revised pASC exhibits, the Department determined the pASC to be complete on October 30, 2020.[8,9] The applicant filed a complete ASC on November 9, 2020.[10]

Public notice of the complete ASC was issued via U.S. Mail to property owners within 500-feet of the property on which the facility site boundary would be located, electronically via ClickDimensions to all individuals signed up to receive email notices from the Department regarding the facility or all EFSC facilities, and in a newspaper of general circulation in the

[6] OAR 345-015-0160(1)(f) and OAR 345-001-0010(2).
[7] OAR 345-015-0160(2).
[8] Pursuant to OAR 345-015-0190(5), an ASC is complete when the Department finds that the applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards.
[9] MSEFAPP ASC Determination of Complete Application Letter 2020-10-30.
[10] MSEFAPP ASC Filing Date Letter 2020-11-13.

vicinity of the facility (The Madras Pioneer) on November 13, 2020.[11] The Department held a remote public information meeting on the complete ASC on December 1, 2020.[12] Pursuant to OAR 345-015-0200, the Department distributed electronic copies of the complete ASC to reviewing agencies, along with a request for agency reports on the complete ASC by December 9, 2020. The Department received comments from two agencies, the Oregon Department of Fish and Wildlife (ODFW) and the Oregon Department of Aviation (Aviation), which are provided in Attachment B of this order and referenced in Section IV.H. *Fish and Wildlife Habitat* and IV.M. *Public Services, Traffic Safety*, respectively, of this order.

On May 21, 2020, the Council appointed Joe Allen, J.D., Senior Administrative Law Judge at the Oregon Office of Administrative Hearings, as the hearing officer to conduct the public hearing on the draft proposed order and to conduct the contested case proceeding.[13]

**II.D Council Review Process**

The Department issued the DPO on March 23, 2021, initiating a 30-day comment period extending from March 23, 2021 to April 22, 2021, at the close of the scheduled public hearing. The Council-appointed, third-party hearing officer conducted a public hearing on the DPO on Thursday, April 22, 2021 at the Inn at Cross Keys Station in Madras, Oregon – representing the geographic area that would be affected by the facility. The Department accepted written comments during the 30-day comment period, in addition to oral testimony accepted by the hearing officer at the public hearing.[14] On May 10, 2021, the Department issued a Proposed Order, taking into consideration Council comments and 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 from March 23 through April 22, 2021).[15] The Council reviewed the DPO and comments received on the record at its regularly scheduled Council meeting on April 23, 2021.

The Department received four comments on the record of the DPO, including oral testimony received at the April 22, 2021 public hearing from the certificate holder and reviewing agencies. All comments were transmitted to Council for its review and consideration. Substantive and specific issues raised by commenters that are within Council jurisdiction are further addressed below, under the applicable standards section.[16]

[11] MSEFAPP Property Owner Information 2020-11-09. Property owner information was provided by the applicant in ASC Exhibit F, obtained from Jefferson County on September 4, 2020.

[12] The NOI Informational Meeting was held via WebEx and teleconference and did not include opportunity for in-person participation due to limitations on in-person gatherings due to the COVID-19 pandemic. Because NOI Informational Meetings are optional, the Department has the discretion to determine location of the meeting, including whether to host the meeting in-person or remotely, as was exercised for the December 1, 2020 meeting.

[13] MSEFAPP Hearing Officer Appointment 2020-05-22.

[14] ORS 469.370(2).

[15] OAR 345-015-0230(2)

[16] MSEFAPP DPO comments (Jefferson County) Testimony 2021-04-22. On the record of the DPO, Phil Stenbeck on behalf of Jefferson County expressed that coordination and collaboration with ODOE throughout the review of the Madras Solar Energy Facility has generally been a positive experience.

On May 10, 2021, the Department issued a proposed order and a Notice of Proposed Order and Contested Case.[17] Only those persons who commented in person or in writing on the record of the DPO 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, 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."[18]

No requests for party status were received by the June 10, 2021 deadline. On June 11, 2021, hearing officer Joe Allen issued the Order Concluding the Contested Case in the matter of the Application for a Site Certificate for the Madras Solar Energy Facility.

At the Council's regularly scheduled June 25, 2021 meeting (conducted via WebEx Teleconference/Webinar), Council reviewed the proposed order, focusing on changes incorporated based on comments received on the record of the DPO public hearing; and, following the review, voted to approve the Department's proposed order as the final order and grant issuance of a site certificate for the Madras Solar Energy Facility.

## III. DESCRIPTION OF THE FACILITY

The information presented in this section is based upon details provided in ASC Exhibits B and C. Section III.A., *Facility Components* describes facility components and Section II.B., *Facility Location* describes the proposed location and site boundary of the facility.

The facility may be constructed in phases, either by activity such as clearing, excavation, foundation, erection and finishing; or by component or portions of components such as battery storage system, solar arrays or roads.[19] Therefore, any Department recommended site certificate conditions related to facility design, preconstruction and construction account for a potential phased construction schedule.

### III.A Facility Components

The facility would occupy up to 277 acres and includes the energy facility together with related or supporting facilities. Related or supporting facilities means any structure proposed by the applicant to be constructed or substantially modified in connection with the construction of an energy facility.[20] As stated in ASC Exhibit B, the facility includes solar photovoltaic power

[17] See ORS 469.370(4) and OAR 345-015-0014.
[18] ORS 469.370(3).
[19] MSEFAPP ASCDoc1-24 Exhibit X Noise 2020-11-09, Table X-5.
[20] OAR 345-001-0010(21) and – (50)

generation components and related or supporting facilities, with a nominal and average generating capacity of approximately 63 MWs.

*Energy Facility*

The proposed energy facility would be comprised of up to 60 module blocks (crystalline silicon modules) which would include tracker system/racks, ballasted posts (approx. 30,000 steel posts) and related electrical equipment (cabling; inverters and transformer; and switchgear).[21] The solar array would be enclosed with an up to 8-foot (height), chain-link perimeter fence.[22]

The tracking system would consist of metal table frames or "racks" with a rotating drive gear that could rotate up to 60 degrees in an east to west direction such that the modules track the sun throughout the day in order to increase solar production. The modules would be approximately 4 to 5 feet off the ground when fully stowed. When fully rotated, the highest point of the module would be approximately 8 feet off the ground, while the minimum distance to the ground when fully rotated would range from 1 to 2 feet.

Each tracker table would be bolted to steel posts driven into the ground to serve as the foundation. The post depths would vary depending on soil conditions, which would be confirmed via a detailed geotechnical investigation, but are typically driven to a depth of at least 8 feet below the surface. Approximately 1,000 posts would be installed per module block or a maximum of approximately 30,000 posts for the facility at full build-out. Post locations would be determined by the ground-coverage ratio (GCR), which is the ratio of the area of the modules to the total area. The GCR for the facility is approximately 39 percent. A ballasted design may be used in portions of the site featuring significant subsurface rock formations, which involves mounting the tracker tables on foundations embedded in concrete blocks (ballasts) that would rest on the surface of the ground rather than on posts driven into the ground (the analysis presented in the DPO, as applicable, assumes tracker systems would use a ballasted design, resulting in a worst-case estimate for water and concrete usage, and decommissioning estimate).

Electrical cables connecting the modules to each other would be mounted to the back of the modules using cable trays or wire harnesses. Several rows of modules would then be collected in a combiner box located at the end of one of the rows. Other electrical cables within arrays would be buried to a depth of at least 3 feet.

The direct current output from the modules would be combined in parallel in combiner boxes and, from the combiner boxes, it would be converted into alternating current via the inverters, the output of which would be fed into transformers that step up in voltage to 34.5 kilovolt (kV). The inverters and transformers would be mounted on a concrete pad measuring approximately

[21] Ballasted design may be required given soil conditions at the site, where tracking table posts would mounted on foundations embedded in concrete blocks. MSEFAPP ASCDoc1-7 Exhibit G Materials 2020-11-09, p.G-2.
[22] The applicant represents that the security fence may be 6 feet tall with two strands of barbed wire, or 8 feet tall with no barbed wire.

20 by 40 feet, with a maximum height of approximately 10 feet (including the inverters and transformers). The combination of the inverters and transformers is referred to as a power conversion station (PCS). A total of 19 PCSs are proposed. Each PCS would be located within the interior of the arrays. Each tracker column would be equipped with on-board batteries that would act as a backup power source to rotate the tracker units into the stowed position during high wind events and a loss of the primary 230 kV connection to the electrical grid. The transformers would then convey the power via 34.5 kV underground collector lines to the switchgear, which consists of an industry standard electrical protection device that controls, protects, and isolates electrical equipment. The metal-clad switchgear enclosures typically measure approximately 33 feet long by 12 feet wide and 11 feet high.

*Related or Supporting Facilities*

Proposed related or supporting facilities, as further described below, would include:

- 34.5 kV electrical collector lines
- Substation
- Point of interconnection switching station
- 230 kV transmission line
- Operations and maintenance enclosure
- Security fencing and gates
- Service roads
- Temporary construction areas
- Battery storage system

*34.5 kV Electrical Collector Lines*

The facility would include approximately 4 miles of belowground 34.5 kV collector lines that would carry power from the switchgear to the proposed substation. The 34.5 kV collector lines are proposed to run underground, and would be buried at a depth of approximately 3 feet.

*Substation*

The facility would include one substation, on approximately 2 acres. The proposed substation would include incoming 34.5 kV feeder breakers; a main step-up transformer (from 34.5 to 230 kV); control enclosure; dead-end and shield pole; support steel; auxiliary station service transformer; circuit breaker; and a motor-operated disconnect switch. Components within the proposed substation would range up to 10 feet in height. The main step-up transformer would contain up to 8,000 gallons of mineral oil and would be located within an appropriate secondary spill containment system. The auxiliary station service transformer would contain environmentally acceptable ester oil and therefore would not require secondary containment, however would be located on a concrete pad.

*Point of Interconnection Switching Station*

The proposed point of interconnection (POI) switching station would consist of a control house; circuit breaker; circuit switcher; metering, communications, protection and control; protection and control panel; and Supervisory Control and Data Acquisition (SCADA) and metering equipment. The switching station would feature a three-breaker, ring-bus configuration.[23]

*230 kV Transmission Line*

The proposed 230 kV transmission line would extend approximately 200 feet within the proposed site boundary and would connect the Point of Interconnect to PGE's existing Pelton Dam to Round Butte 230 kV transmission line. The 230 kV transmission line would use up to 4, 80-foot H-frame poles, each placed in concrete foundations approximately 12 feet deep and 4 feet in diameter.[24]

*Operations and Maintenance Enclosure*

The proposed O&M enclosure would consist of a single, 8.5-foot-tall, 320-square-foot dry-storage shed located within the proposed site boundary. Restroom facilities would be provided in the form of temporary portable toilets, while any required water would be trucked in from offsite sources. Approximately 10 gallons of sanitary wastewater would be generated per day and would be collected and transported offsite for treatment. Electric power and telephone would be provided via local service providers.

The O&M enclosure would contain basic firefighting equipment for use onsite during maintenance activities, including shovels, beaters, portable water for hand sprayers, fire extinguishers and other equipment.

*Security Fencing and Gates*

The facility would include a perimeter security fence, consisting of chain-link or notch-style fencing. The security fence would either be 6 feet tall with two strands of barbed wire, or 8 feet tall with no barbed wire. The security fence would feature gated access at several points.

The fenced perimeter would include a clearance area between the fence and facility equipment to ensure noncombustible, defensible space.

*Site Access and Service Roads*

[23] In ASC Exhibit B, the applicant represents that the POI switching station would likely be owned by Portland General Electric Company (PGE), nonetheless it is represented as a related or supporting facility to the energy facility and therefore the applicant bears responsibility of all applicable compliance requirements.

[24] H-frame transmission structure foundation depth is an assumption.

The facility would have three main points of access from SW Elk Drive for construction and operation as shown on the conceptual site plan (see ASC Exhibit C Figures C-2A and C-2B). Two points of access would be 20-foot-wide gravel access road segments into the southern end of the facility. One of these access points extends into the portion of the facility west of SW Elk Drive and the other extends into the southern end of the facility east of SW Elk Drive. The graveled entrance/exit point west of SW Elk Drive ends within the proposed site after approximately 120 feet and the graveled entrance/exit point east of SW Elk Drive ends within the proposed site after approximately 140 feet. At the end of the access road segments, internal circulation would be via the 16- to 20-foot-wide clear spaces between the rows of solar modules. The main access road providing access to the construction staging and laydown area, O&M enclosure, facility substation, point of interconnection and northern end of the facility would be a 24-foot-wide graveled road extending east from SW Elk Drive (see ASC Exhibit C Figures C-2A and C-2B) for approximately 960 feet before ending at the facility substation.

*Temporary Construction Areas*

Temporary construction areas would be located within the proposed site boundary. The temporary construction areas would be used for equipment staging, parking and construction trailer. The temporary parking area would be graveled.

*Temporary Concrete Batch Plant*

The facility may include a temporary concrete batch plant, for aggregate storage and concrete preparation for foundations. Any rock would be obtained from existing, permitted quarries, and may be crushed at the quarry or onsite, as needed. The projected maximum cubic yards of concrete to be produced would range from 5,000 to 25,000 cubic yards within any six month period. The applicant would obtain a Basic Air Contaminant Discharge Permit (ACDP), a federally-delegated permit, from the Oregon Department of Environmental Quality (DEQ), if a batch plant is needed at the site to support construction activities. The temporary concrete batch plant would be prohibited from operating onsite more than 6-months in any 12-month period, and would be removed from the site prior to commercial facility operation.[25]

*Battery Storage System*

The proposed battery storage system would be comprised of either Lithium-ion or flow batteries, and would include the following elements:

- Battery Storage Equipment (including batteries, racks, direct current (DC)-DC converters, and DC switchboards)
- Balance of Plant Equipment (low-voltage electrical systems; fire suppression; heating, ventilation, and air conditioning systems; building auxiliary electrical systems; and network/SCADA systems)

[25] See Final Order Section IV.E.1. Local Applicable Substantive Criteria, JCZO Section 422.

- Cooling System (separate chiller or condenser unit located outside the battery racks with chillers, pumps and heat exchangers)
- Standard-sized shipping containers, approximately 8 feet wide by 40 feet long by 9.5 feet high on a concrete slab. Each container would hold the batteries, SCADA system, cooling system, if needed, and a fire suppression system

Both the Lithium-ion and flow batteries would be placed inside standard-sized shipping containers (8 feet wide, 40 feet long, 9.5 feet high), which would be located atop a concrete slab. Each container would hold the batteries, a SCADA system, a cooling system (if needed), and a fire suppression system.

If Lithium-ion batteries are selected, the fire suppression system would include internal Stat-X 1500E aerosol fire suppression units inside each battery storage container, connected to a photo/heat detector. The battery storage system would be designed to comply with the most current adopted version of the National Fire Protection Association's (NFPA) 855 Standard for the Installation of Stationary Energy Storage Systems.

III.A.1 Facility Construction Activities and Schedule

Facility construction is anticipated to take 9-months. Construction activities would employ an average of 100 people and a maximum of 200 people during peak summer months. The applicant represents that construction would occur in phases including: clearing (between September 1 and March 1 to the greatest extent feasible to avoid impacts on wildlife), excavation, foundation, erection and finishing. During foundation work, the applicant may utilize a temporary concrete batch plant, with a maximum production of 5,000 to 25,000 cubic yards, and is limited as a temporary use at the site to no more than 6-months at within any 12-month period.
Separate contractors may be hired for road and solar array foundation construction, electrical substation construction, solar module installation, and array connection and commissioning. Subsequently, construction may be phased based on activity, facility component and/or construction contractor schedule.

The facility may be constructed in phases. In accordance with ORS 469.300(6), preconstruction conditions, if specified, may be satisfied for the applicable phase, facility component or for the facility, as applicable, based on final design and configuration.

III.A.2 Facility Operational Activities and Schedule

Facility operation would include remote monitoring and would not include any full-time operations and maintenance (O&M) staff. Facility O&M activities would include routine, monthly inspections of the battery storage systems, unless otherwise recommended by the manufacturer.

O&M activities would include replacement of electrolyte solutions every 10 to 20 years, if flow batteries are selected. If lithium-ion batteries are selected, O&M activities would include battery replacement every 5 to 10 years. Nonfunctional solar panels would be recycled through the Solar Energy Industries Association (SEIA) National PV Recycling Program, to the maximum extent feasible.

O&M activities may include washing of solar modules. It is conservatively assumed that solar modules would be washed twice a year, which would require approximately 1,650,000 gallons of water per year. A third-party contractor would obtain water for panel cleaning from an offsite source. Water would then be applied via a tanker truck and would not have any cleaning solvents in it, unless otherwise approved by the Department (recommended Soil Protection Condition 3). Washwater would be discharged by evaporation and seepage into the ground.

III.A.3 Facility Retirement Activities

Facility retirement would include disassembling the solar modules and electrical equipment and wires, and related electrical equipment including large transformers and battery components. Disassembly would use conventional construction equipment with the objective of maximizing the recycling of materials and minimizing the amount of disposed waste.
Disassembling the solar modules would involve removing the solar panels from their trackers, removing the steel trackers from their posts, and extracting the steel posts. The solar modules would be directly loaded onto recycler trucks and hauled off site, while the steel trackers and posts would be stockpiled and staged onsite awaiting loading by a recycler. Concrete equipment foundations and underground cables would be removed to a minimum depth of 3 feet below grade, and then disposed of at the Jefferson County Transfer Station (JCTS).
Both the perimeter fencing and gravel (placed on access road segments and in the substation and laydown areas) would be removed, but would also be kept onsite until the material could be loaded by a recycler. The facility site would then be restored through minimal grading and revegetation with plants or seed mix consistent with the Noxious Weed Plan (Attachment G of this order) or landowner interests.

**III.B. Facility Location and Site Boundary**

The facility site is located within Jefferson County, Oregon, west of the City of Madras, as presented in Figure 1: *Facility Regional Location*. The facility site is located east of Lake Simtustus, south and west of Willow Creek, and approximately 0.5 miles from the eastern boundary of the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO).

The proposed site boundary includes approximately 284 acres of private land on which the applicant has negotiated an exclusive, long-term option to lease. 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

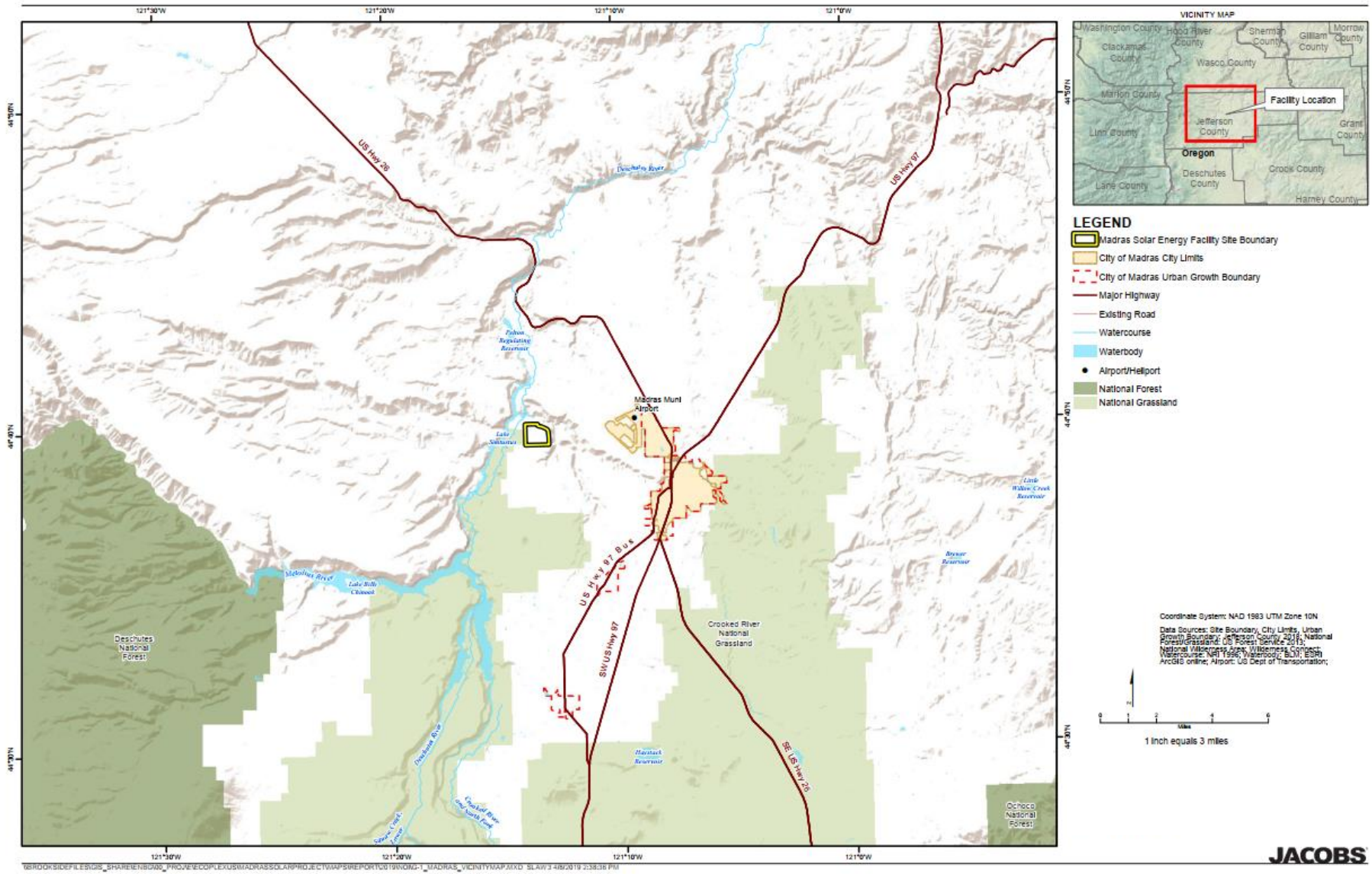
proposed by the applicant; "site" means all land upon which an energy facility and its related or supporting facilities is located or proposed to be located.[26]

The applicant requests that the site boundary be considered a "micrositing area" given the extent of analysis provided in the ASC and commits to limiting temporary and permanent disturbance within the site boundary to approximately 7 and 277 acres, respectively. A micrositing corridor, by definition, means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.[27] Micrositing corridors or areas are intended to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. As presented in Section IV. *Evaluation of Council Standards*, based on the applicant's methodology and assessment of impacts under applicable Council standards, the Department recommends Council authorize the site boundary as a micrositing area.

As described in Section III.A *Facility Components*, the proposed 230 kV transmission line would be located within the site boundary, within a presumed "corridor" consistent with Council's definition, limited to one-half mile in width, and extending approximately 200 feet.

[26] ORS 469.300(25)
[27] OAR 345-001-0010(32)

**Figure 1: Facility Regional Location**



## IV. EVALUATION OF COUNCIL STANDARDS

As discussed above, ORS 469.320 requires a site certificate from the Energy Facility Siting Council (EFSC or Council) before construction of a "facility." ORS 469.300(14) defines "facility" as an "energy facility together with any related or supporting facilities." The facility qualifies as an "energy facility" under the definition in ORS 469.300(11)(a)(D)(i).[28]

To issue a site certificate for a 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."[29] The Council must also determine that the 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[30] and excluding compliance with requirements of federally-delegated programs.[31] Nevertheless, the Council may consider these programs in the context of its own standards to ensure public health and safety and protection of the environment.[32]

Under ORS 469.310, the Council is charged with ensuring that the "siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety." ORS 469.401(2) further provides that the Council must include in the 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."[33] The Council implements this statutory framework and ensures the protection of public health and safety by adopting findings of fact, conclusions of law, and conditions of approval concerning the facility's compliance with the Council's Standards for Siting Facilities at OAR 345, Divisions 22, 24, 26 and 27.

This final order presents the Council's analysis of whether the applicant has demonstrated an ability to satisfy each applicable Council Standard (with mitigation and subject to compliance with recommended conditions, as applicable), based on the information in the ASC and comments received on the record of the DPO and during Council's DPO review.

[28] ORS 469.300(11)(a)(D)(i) defines an EFSC jurisdictional solar photovoltaic power generation facility as using more than 160 acres located on high-value farmland as defined in ORS 195.300.
[29] ORS 469.503(1).
[30] 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.
[31] ORS 469.401(4); ORS 469.503(3).
[32] 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.
[33] ORS 469.401(2).

Where the following language is included in a condition, "before beginning construction of the facility or a facility component," the certificate holder is authorized to construct in a phased approach. If the facility is to be constructed in separate phases, only conditions, or portions of conditions, related to that phase and related facility components are required to be met to begin construction of that phase.

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

*(1) To issue a site certificate for a 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 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 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 a facility would comply with the requirements of EFSC statutes and the siting standards adopted by the Council and that a facility would comply with all other Oregon statutes and administrative rules applicable to the issuance of a site certificate for the facility.

The requirements of OAR 345-022-0000 are discussed in the sections that follow. The Department consulted with other state agencies, and the Jefferson County Board of Commissioners, as the appointed Special Advisory Group (SAG) for the facility, during review of the preliminary Application for Site Certificate (pASC) and ASC to aid in the evaluation of whether the facility would satisfy the requirements of applicable statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Department relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards.

OAR 345-022-0000(2) and (3) apply to ASCs where an applicant has shown that the 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 facility would not 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)

ORS 469.370(12) requires the Council to "specify in the site certificate the 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 345-025-0006(4), the certificate holder must begin construction on the facility no later than the construction beginning date specified by Council in the site certificate. "Construction" is defined in ORS 469.300(6) and OAR 345-010-0010(12) 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."

In ASC Exhibit B, the applicant represents a tentative construction schedule that would span a nine-month period, from June 1, 2021 to March 1, 2022. Based on the Council'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. Council also points to the pre-construction obligations in conditions of approval that are in this order. An applicant is obligated to comply with all applicable pre-construction conditions prior to beginning construction activities. Pre-construction conditions include verification surveys related to raptor nests, habitat mitigation area, and geotechnical investigation as well as the finalization of mitigation plans currently in draft form. Several pre-construction conditions include review and approval by the Department, in coordination with applicable reviewing agencies. Given that the applicant represents a 9-month maximum construction schedule, the Council established a construction commencement deadline that provides sufficient time for planning and unexpected delays of three years after the issuance of the site certificate, and an 18-month completion deadline once construction commences.

**General Standard Condition 1:** The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.

a. Construction of the facility or facility component(s) shall commence within three years after the date of Council action [June 25, 2024]. Within 7 days of construction commencement, the certificate holder shall provide the Department written verification that it has met the construction commencement deadline by satisfying applicable preconstruction conditions and completing at least $250,000 work at the site.
b. Construction of the facility shall be completed within 18-months after the construction commencement date. Within 7 days of construction completion, the certificate holder shall provide the Department written verification that it has met the construction completion deadline.

[GEN-GS-01; Mandatory Condition OAR 345-025-0006(4)]

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

OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site certificate. Mandatory conditions OAR 345-025-0006(7) through (9) and (16) are discussed and applied in Section IV.G *Retirement and Financial Assurance* of this order as they relate to the restoration of the site, Council approval of a retirement plan, and bonding requirements. Mandatory conditions OAR 345-025-0006(12) through (14) are discussed and applied in Section IV.C *Structural Standard*, because they are associated with the design, construction and operation of the facility to avoid dangers of seismic hazards, coordination with and notifications to the Department of Geology and Mineral Industries (DOGAMI). 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. 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.

The following are applicable mandatory conditions required pursuant to OAR 345-025-0006:

**General Standard Condition 2:** The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility or any phase 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.

[GEN-GS-02; Mandatory Condition OAR 345-025-0006(2)]

OAR 345-025-0006(3) establishes, as a mandatory condition, that the certificate holder design, construct, operate, and retire the facility substantially as described in the site certificate 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 with all applicable permit requirements of other state agencies. In ASC Exhibit E, the applicant

identifies several federally-delegated state permits necessary for construction of the facility, including an Air Contaminant Discharge Permit (ACDP) and National Pollutant Discharge Elimination System (NPDES) 1200-C Permit, which would be issued by the Oregon Department of Environmental Quality (DEQ), for the use of a temporary batch plant and stormwater management.[34] Compliance with the ACDP and NPDES 1200-C permit would be required under OAR 345-025-0006(3).[35]

**General Standard Condition 3:** The certificate holder shall design, construct, operate and retire the facility substantially as described in the site certificate:

a. Use or occupation of land by solar photovoltaic energy generation components, as described in the site certificate, not to exceed 277 permanent acres;
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;
c. In compliance with all applicable permit requirements of other state agencies; and,
d. In compliance with all applicable lawful rules and requirements of federal agencies.

[GEN-GS-03; Mandatory Condition OAR 345-025-0006(3); OAR 345-026-0015(3)]

**General Standard Condition 4:** 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.

[PRE-GS-01; Mandatory Condition OAR 345-025-0006(5)]

**General Standard Condition 5:** If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility or any phase of 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.

[GEN-GS-04; Mandatory Condition OAR 345-025-0006(6)]

[34] MSEFAPP ASCDoc1-5 Exhibit E Permits Required 2020-11-09, Table E-3.

[35] An ACDP regulates minor sources of air contaminant emissions and includes enforceable conditions with which the owner or operator must comply. An ACDP establishes limits on the types and amounts of air pollution allowed, operating requirements for pollution control devices or pollution prevention activities, and monitoring and reporting requirements.

**General Standard Condition 6:** Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. 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. [OPR-GS-01; Mandatory Condition OAR 345-025-0006(11)]

**General Standard Condition 7:** Before any transfer of ownership of the facility, any phase 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 345-027-0400 apply to any transfer of ownership that requires a transfer of the site certificate. [GEN-GS-05; Mandatory Condition OAR 345-025-0006(15)]

*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.[36]

Because the facility includes a 230 kV transmission line, the Council adopts the following site-specific conditions:

**General Standard Condition 8:** The certificate holder shall:

a. Design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code as approved 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.
c. Design the battery storage system in accordance with the requirements of the National Fire Protection Association's (NFPA) 855: Standard for the Installation of Stationary Energy Storage Systems (NFPA, 2020) or most current version.

[GEN-GS-06; Site Specific Condition OAR 345-025-0010(4)]

**General Standard Condition 9:** The certificate holder is authorized to construct a 230 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor extends approximately 200 feet in length between the facility substation and the Point of Interconnect, and 0.5-of-a-mile in width.

[36] Site-Specific Conditions at OAR 345-025-0010(1)-(3), and (6)-(7) do not apply to the facility based on facility energy source/type (solar photovoltaic power generation facility with related or supporting facilities including a proposed 230 kV transmission line).

[GEN-GS-07; Site Specific Condition OAR 345-025-0010(5)]

As noted above, General Standard Condition 8(c) includes a design requirement applicable to the proposed battery storage system. As represented in ASC Exhibit B, the applicant represents that, to minimize potential fire hazards from battery storage system operation, the systems would be designed in accordance with *NFPA 855: Standard for the Installation of Stationary Energy Storage Systems* (NFPA, 2020). The Council finds this representation to be both binding and necessary to ensure fire related hazards from battery storage operation are minimized. Therefore, the Council reflects this representation in General Standard Condition 8(c).

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

The Council 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 applicant must construct the facility substantially as described in the site certificate and the applicant must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.[37]

The Council adopts General Standard Condition 10 and 11, as presented below, to support the Department's review of ongoing site certificate compliance, in accordance with OAR Chapter 345, Division 26.

**General Standard Condition 10:** At least 90 days prior to beginning construction, (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department a compliance plan 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. [PRE-GS-02; OAR 345-026-0048]

**General Standard Condition 11**: The certificate holder shall:

a. Within six months after beginning construction, and every six months thereafter during construction, submit a semiannual construction progress report to the Department. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall report on the progress of construction and shall address the subjects listed in (b). When the reporting date coincides, the certificate holder may include the construction progress report within the annual report described in this rule.

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

b. After January 1 but no later than April 30 of each year after beginning operation of the facility, the certificate holder shall submit an annual report to the Department addressing the following for the calendar year preceding the date of the report:
   i. Facility Status: An overview of site conditions, the status of facilities under construction and a summary of the operating experience of facilities that are in operation. The certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.
   ii. Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors and shall describe any actions taken to prevent the recurrence of such problems.
   iii. Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period.
   iv. Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes.
   v. Compliance Report: A report describing the certificate holder's compliance with all site certificate conditions that are applicable during the reporting period. For ease of review, the certificate holder shall, in this section of the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate.
   vi. Facility Modification Report: A summary of changes to the facility that the certificate holder has made during the reporting period without an amendment of the site certificate in accordance with OAR 345-027-0350.

[GEN-GS-08; OAR 345-026-0080]

**Conclusions of Law**

Based on the foregoing recommended findings of fact, conclusions of law, and subject to recommended, mandatory and site-specific conditions, the Council finds that the 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 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 facility in compliance with site certificate conditions and in a manner that protects public health and safety*

*and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.*

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

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

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

**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, and in a manner that protects public health and safety, as well as its ability to restore the site to a useful, non-hazardous condition. The Council may consider the 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 third party permits.

*Construction, Operation and Retirement of the Facility*

The Council may consider an applicant's past performance, including but not limited to the quantity or severity of any regulatory citations in the construction or operation a facility, type of equipment, or process similar to the facility, in evaluating whether the applicant has

demonstrated an ability to design, construct and operate a facility in compliance with Council standards and site certificate conditions.[38]

Madras PV1, LLC is a project-specific limited liability company (LLC) and therefore relies upon the organizational expertise and experience of its parent company, Ecoplexus, to demonstrate compliance with the Council's Organizational Expertise standard. ASC Exhibit D states that Ecoplexus's central development focus is on utility-scale solar PV facilities in the 20- to 100-megawatt (MW) range, along with large-scale government and commercial solar installations. As provided in ASC Exhibit D Table D-1, the applicant identifies over 30 operational solar projects ranging in size up to 26 MW, completed by Ecoplexus. Furthermore, the applicant indicates that by the end of 2019, Ecoplexus would have developed and constructed over 300 MWs of direct current (DC), renewable generation facilities in the United States (U.S.) alone and is currently developing over 3.5 gigawatts of utility-scale assets across the U.S., Mexico, and Asia.[39] The applicant explains that is has experience in battery storage system operations, but does not have direct experience in battery storage construction.

To demonstrate an ability to design, construct and operate the facility in compliance with site certificate conditions and applicable requirements, the applicant refers to the compliance history of both the applicant and Ecoplexus. The applicant asserts that it has received only one Notice of Violation in 2014, issued by the North Carolina Department of Environmental Quality (NCDEQ). The notice of violation was for a facility in Cumberland County for failure of certain erosion control measures in large part due to severe rains that plagued the area during November and December 2014. In response to the failed erosion control measures and subsequent notice of violation, Ecoplexus claims to have expeditiously pursued the completion of measures to restore the sites' compliance. The applicant claims that no additional enforcement actions were taken by NCDEQ once the site was restored back into compliance.[40]

The Council finds that the applicant's above-summarized project and compliance history demonstrate an ability to design, construct and operate the facility in compliance with site certificate conditions and applicable requirements. However, because the organizational expertise of Ecoplexus is relied upon to satisfy the requirements of the standard, the Council imposes the following condition to ensure that the applicant notifies the Department of any material change in the control, financial condition, governance, or management of the applicant's parent company (Ecoplexus):

> **Organizational Expertise Condition 1:** The certificate holder shall report to the Department, within 7 days, any material change in the control, financial condition, governance, or management of the certificate holder's parent company, including any change that may affect the certificate holder's access to resources, expertise, or personnel relied upon for the construction, operation and retirement of the facility. The certificate holder shall

[38] OAR 345-021-0010(1)(d)(D).
[39] MSEFAPP ASCDoc1-4 Exhibit D Applicant Expertise 2020-11-09, p. D-1.
[40] MSEFAPP ASCDoc1-4 Exhibit D Applicant Expertise 2020-11-09, p. D-4.

provide sufficient information for the Department to evaluate whether the material changes could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource or interest protected by an applicable law or Council standard (specifically Organizational Expertise and Retirement and Financial Assurance Standards).
[GEN-OE-01]

The applicant has not selected an architect, engineer, prime contractor, or a major component vendor for the facility, but states in ASC Exhibit D that it would rely upon its parent company's previous industry experience and extensive relationships with a variety of top-tier civil and electrical engineers, solar module and racking manufacturers, and engineering/procurement/construction firms to select qualified partners with experience in the solar industry. Because the ultimate responsibility for compliance with the site certificate would lie with the applicant, but it is recognized that the applicant would hire various contractors to design and build components of the facility, the that Council adopts the following conditions that clarify and confirm that the responsibility of compliance with the site certificate would be with the applicant.

**Organizational Expertise Condition 2:** Before beginning construction of the facility or a facility component, as applicable, the certificate holder shall provide to the Department the identity and qualifications of the major design, engineering and construction contractor(s). The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities and a demonstrated low rate of job incidence and injury rates. The certificate holder shall report to the Department any changes of major contractors.
[PRE-OE-01]

**Organizational Expertise Condition 3:** Before beginning construction of the facility or a facility component, as applicable, the certificate holder shall provide to the Department documentation that work contracts include provisions requiring that all construction contractors and subcontractors comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.
[GEN-OE-02]

**Organizational Expertise Condition 4**: The certificate holder shall notify the Department with 72 hours of any occurrence involving the facility if:

a. There is an attempt by anyone to interfere with its safe operation.
b. There is a significant natural event such as a fire, earthquake, flood, tsunami or tornado, or human-caused event such as a fire or explosion.
c. There is any fatal injury at the facility.

[GEN-OE-03; OAR 345-026-0170]

**Organizational Expertise Condition 5:** The certificate holder shall, as soon as reasonably possible:

a. Report incidents or circumstances that may violate the terms or conditions of the site certificate, terms or conditions of any order of the Council, or the terms or conditions of any order issued under OAR 345-027-0230, to the Department . In the report to the Department, the certificate holder shall provide all pertinent facts including an estimate of how long the conditions or circumstances existed, how long they are expected to continue before they can be corrected, and whether the conditions or circumstances were discovered as a result of a regularly scheduled compliance audit;
b. Initiate and complete appropriate action to correct the conditions or circumstances and to minimize the possibility of recurrence;
c. Submit a written report within 30 days of discovery to the Department. The report must contain:
    i. A discussion of the cause of the reported conditions or circumstances;
    ii. The date of discovery of the conditions or circumstances by the responsible party;
    iii. A description of immediate actions taken to correct the reported conditions or circumstances;
    iv. A description of actions taken or planned to minimize the possibility of recurrence; and
    v. For conditions or circumstances that may violate the terms or conditions of a site certificate, an assessment of the impact on the resources considered under the standards of OAR Chapter 345 Divisions 22 and 24 as a result of the reported conditions or circumstances.

[GEN-OE-04; OAR 345-029-0010]

**Organizational Expertise Condition 6**: The certificate holder shall:

a. Before beginning construction of the facility or a facility component, notify the Department of the identity, telephone number, e-mail address and qualifications of the full-time, on-site construction manager. Qualifications shall demonstrate that the construction manager has experience in managing permit and regulatory compliance requirements and is qualified to manage a utility-scale solar facility construction project.
b. Before beginning operation, notify the Department of the identity, telephone number, e-mail address and qualifications of the facility/asset manager. Qualifications shall demonstrate that the operations manager has experience in managing permit and regulatory compliance requirements and is qualified to manage operation of a utility-scale solar facility.
c. Before beginning facility retirement, notify the Department of the identity, telephone number, e-mail address and qualifications of the personnel or entity responsible for facility decommissioning and restoration activities. Qualifications shall demonstrate that the identified personnel have experience in managing permit and regulatory compliance requirements and are qualified to decommission a utility-scale solar facility.
d. The certificate holder shall notify the Department within 72-hours upon any change in personnel or contact information provided to satisfy Condition 6(a) through (c).

[GEN-OE-05]

*Relevant Experience in Habitat Mitigation*

Under the standard, the Council evaluates the applicant's experience with mitigation projects and the qualifications and experience of personnel upon whom the applicant would rely on for implementation, to the extent that the identities of such persons are known at the time, to determine whether the applicant can successfully complete mitigation necessary to satisfy site certificate requirements. As explained in ASC Exhibit D, the applicant and its parent company have limited, if any, experience in implementing large-scale, long-term mitigation for any of its previous or existing projects, given the facility location. The applicant describes that in-house staff and consultants have relevant previous experience in large-scale, long-term mitigation such as habitat mitigation for a 102-MW solar project in central California; revegetation for more than 1 gigawatts of solar throughout the U.S; and weed control on various projects throughout southern California. The applicant asserts that it would utilize best-in-class consultants to ensure mitigation, including habitat mitigation, revegetation and weed control are implemented in accordance with applicable requirements.

As presented in Section IV.H *Fish and Wildlife Habitat* of this order, the Council requires that the applicant select qualified specialists with substantial experience in creating, enhancing, maintaining and protecting habitat mitigation areas in Oregon, to satisfy the requirements of the standard (see recommended Fish and Wildlife Habitat Condition 3). Based on compliance with this condition, the Council finds that while the specific experience of the applicant and Ecoplexus in large-scale, long-term mitigation is limited, that its use of a consultant to prepare the ASC and its representations to utilize best-in-class consultants to support mitigation implementation and compliance reasonably represent an ability to comply with long-term mitigation-related site certificate conditions.

*Public Health and Safety*

Facility components including the solar array, substation transformers, transmission line, and battery storage system could result in health and safety impacts from unanticipated fire- and electrical hazards.

To minimize fire-risk and access to electrical components, facility components would be designed to meet the National Electrical Code and Institute of Electrical and Electronics Engineers standards. The proposed battery storage system would be designed in accordance with the requirements of NFPA 855: Standard for the Installation of Stationary Energy Storage Systems, which is addressed in Section IV.A, *General Standard of Review,* under General Standard Condition 8. As discussed in Section IV.M *Public Services*, under *Fire Protection*, the applicant proposes measures that would minimize potential fire risk during facility construction and operation, and potential impacts to the Jefferson County Fire District #1 (JCFD1). Public Services Condition 3 would require that, prior to construction, the applicant submit an application for annexation of the proposed site boundary to JCFD1; Public Services Condition 4 would require that, prior to construction, the applicant develop with JCFD1, and submit for

Department review and approval, an Emergency Contingency Plan. The Emergency Contingency Plan would include emergency response procedures, personnel and contractor training requirements, fire protection equipment information and would apply during construction and operation of the facility.

In ASC Exhibit G, the applicant states that the proposed battery storage system would be constructed and operated to comply with the requirements of the Department of Transportation Pipeline and Hazardous Material Administration's 49 Code of Federal Regulations (CFR) 173.185.[41] These regulations provide requirements for the prevention of dangerous evolution of heat; prevention of short circuits; prevention of damage to terminals; and, prevention of contact with other batteries or conductive materials. To minimize potential health and safety impacts during onsite handling and transport of battery and battery waste during proposed battery storage system construction and operation, the Council imposes the following condition:

> **Organizational Expertise Condition 7:** The certificate holder shall contractually require its third-party contractor used to transport and dispose battery and battery waste to comply with all applicable federal regulations and manufacturer recommendations related to the transport and handling of battery related waste.
> [GEN-OE-06]

In addition, as presented in Section IV.C *Structural Standard* of this order, the Council finds that the applicant has adequately characterized the seismic and non-seismic hazards within the facility site and demonstrates an ability to design, construct and operate the facility in a manner that would avoid dangers to human safety and the environment.

Based upon the evidence provided in the ASC and reasoning and analysis provided above and in this order, and compliance with recommended conditions, the Council finds that the applicant provides reasonable assurance that it can design, construct, operate, and retire the facility in a manner that would protect public health and safety in accordance with the Organizational Expertise standard.

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

The applicant's ability to restore the facility site to a useful, non-hazardous condition is evaluated in Section III.G *Retirement and Financial Assurance* of this order, in which the Council

[41] MSEFAPP ASCDoc1-2 Exhibit B Facility Description 2020-11-09, Section B.1.5.

finds that the applicant has demonstrated an ability to comply with the Retirement and Financial Assurance standard.

*ISO 900 or ISO 14000 Certified Program*

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

*Third-Party Permits*

OAR 345-022-0010(3) addresses requirements for potential third-party permits. The standard requires that prior to issuing a site certificate, the Council must find that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with any third parties it is relying on for access to resources or services secured by a permit or approval.

The applicant states in ASC Exhibit E that it may rely on its construction contractors to obtain the following third-party permits: Oversize Load Movement Permit/Load Registration, General Water Pollution Control Facilities (WPCF) Permit, WPCF-1000/Gravel Mining and Batch Plant, Jefferson County Right-of-Way Permit and Building and Utility Permits. In accordance with the standard, to ensure that the applicant secures third-party permits prior to construction, the Council imposes the following condition:

**Organizational Expertise Condition 8:**

a. The certificate holder shall provide to the Department a list of federal, state and local permits, including any third-party permits related to facility siting; and a schedule for obtaining identified permits.
b. Once obtained, certificate holder shall provide copies of all permits, including third-party permits, required for facility siting to the Department. [GEN-OE-07]

**Conclusions of Law**

Based on the evidence in the record, and subject to compliance with the recommended conditions of approval, the that the Council finds that the applicant would satisfy 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 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.*

***[42]

**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 facility site boundary, and whether the applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment from these hazards. Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a solar energy facility without making findings regarding compliance with the Structural Standard; however, the Council may apply the requirements of the standard to impose site certificate conditions.

The analysis area for review of geologic and soil stability, as evaluated under the Council's Structural Standard, is the area within the site boundary. The analysis area for historic seismic and potentially active faults, as defined by the applicant, extends 50-miles from the proposed site boundary.

*DOGAMI Consultation*

Council rules at OAR Chapter 345 Division 21 require the applicant to consult with the Oregon Department of Geology and Mineral Industries (DOGAMI) on the appropriate methodology and

[42] OAR 345-022-0020(3) does not apply to this ASC because the facility would not meet the criteria for a special criteria facility as defined in ORS 469.373(1).

scope of the seismic hazards, and geology and soil-related hazards assessments, and the appropriate site-specific geotechnical work to be completed to demonstrate compliance with the Council's Structural Standard. The applicant consulted with DOGAMI and the Department during a conference call in August and November 2019. The applicant provides notes from the DOGAMI consultation, as reviewed and concurred by DOGAMI and Department staff, in ASC Exhibit H Attachment H-1.[43] ASC Exhibit H was prepared by geotechnical engineers, John Butler, P.E. and Greg Warren, P.G, of Jacobs Engineering Group.

*Earthquake and Seismic Hazards; Design Measures to Avoid Seismic Hazards*

OAR 345-022-0020(1)(a) and (b) require that the applicant adequately characterize the seismic hazards of the proposed site; and, that the applicant demonstrate an ability to design, engineer and construct the facility to avoid dangers to human safety and the environment from the identified hazards. To evaluate potential earthquake sources and seismic hazards within the surrounding area, the applicant conducted a literature review that included topographic and geologic maps, aerial photographs, existing geologic reports and geologic hazard studies, data provided by DOGAMI, and the United States Geological Survey (USGS). A field reconnaissance was conducted in 2018, and observations of terrain and soil classification within the site boundary were recorded. Based on the literature review, and confirmed by the field reconnaissance, three seismic sources potentially exist within the vicinity of the facility site: Cascadia Subduction Zone (CSZ) interpolate events, CSZ intraslab events, and crustal events. In ASC Exhibit H, the applicant states that two (interpolate and intraslab events) of the three potential seismic sources are related to the subduction of the Juan de Fuca plate and the North American plate. The combination of intraslab events and interpolate events are often referred to as the CSZ source mechanism. The two source mechanisms associated with the CSZ are currently thought to be capable of producing maximum earthquakes with moment magnitudes of approximately 9.0 and 7.2 for the interplate and intraslab events, respectively.

Based on the literature review, and consultation with DOGAMI geologists, the applicant asserts that there are no potentially active faults within the proposed site boundary. ASC Exhibit H Figure H-2 identifies historic earthquakes and quaternary faults within the vicinity (50 miles) of the proposed site boundary. ASC Exhibit H Table H-2 identifies and summarizes three potentially active faults within 50 miles of the proposed site boundary, and identifies the Warm Springs fault zone as the closest (at 20 kilometers [km] west of the proposed site boundary), and is a middle and late quaternary fault (<750,000 years old). The other two identified faults are the Metolius fault and the Sisters Fault, both of which are at least 30 km from the proposed site boundary. Based on this information, the applicant represents that the risk of seismic hazards to human safety and environment at the proposed site is considered low. Based on the location and history of seismic sources and activity within the area, the Council concurs with the applicant's assessment of low potential seismic hazard risk at the facility site.

[43] MSEFAPP ASCDoc1-8 Exhibit H Geology 2020-11-09.

To evaluate maximum considered earthquake ground motion at the proposed site, the applicant relies upon the probabilistic seismic hazard analysis modeling results from a 2019 USGS National Seismic Hazard Mapping project, which is described as having covered the analysis area. Based on the 2019 USGS data, the 500-year and 5,000-year earthquakes have bedrock peak ground accelerations of 0.08g and 0.24g, respectively, where "g" is the acceleration of gravity. The State of Oregon has adopted International Building Codes (IBC 2012) for structural design. Specifically, IBC Chapter 16 Section 1613 (Earthquake Loads) and the Oregon Specialty Structural Codes (OSSC 2019) establish codes for structural design based on a probabilistic seismic risk assessment. In Exhibit H, the applicant commits to designing the facility according to IBC requirements for Site Class B soil conditions, unless informed otherwise through the preconstruction, site-specific geotechnical investigation. The Council imposes, as a condition, the applicant's representations for facility design (see recommended Structural Standard Condition 2 below).[44]

In ASC Exhibit H, the applicant indicates that additional subsurface explorations must be completed to confirm the anticipated soil and rock conditions and provide final design recommendations. Completion of a site-specific geotechnical analysis prior to construction would be used to calculate bearing capacity of the soils, conduct stability analyses, evaluate corrosion potential and provide engineering recommendations for earthwork and construction of facility structures. In addition, because the applicant relied on the USGS's regional assessment to inform site class design, the Council will require that the geotechnical investigation include a site-specific probabilistic seismic hazards assessment, unless otherwise approved by the Department in consultation with DOGAMI, to appropriately inform site class design requirements. The Council imposes the following conditions to ensure compliance with the applicants' commitment to conduct additional Geotechnical analysis:

**Structural Standard Condition 1:** Before beginning construction, the certificate holder shall submit a protocol for the site-specific geotechnical investigation to the Department, for review in consultation with DOGAMI. At least 60-days prior to the commencement of construction, unless otherwise approved by the Department, the certificate holder shall utilize a certified Professional Engineer or Geologist to conduct a site-specific geotechnical investigation consistent with ASC Exhibit H Section H.4.1 and prepare a report consistent with the Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports, or newer guidelines if available to be submitted to the Department, for review in consultation with DOGAMI. The site-specific geotechnical investigation shall include a site-specific probabilistic seismic hazards assessment to inform Site Class design (see Structural Standard Condition 2).
[PRE-SS-01]

[44] MSEFAPP DPO comments (DOGAMI) 2021-04-19. In comments on the record of the draft proposed order, the Oregon Department of Geology and Mineral Industries (DOGAMI) recommended that facility design/applicable building code be based on site class as determined through the site-specific geotechnical investigation, and recommended that the Department remove reference to "site class B" in Structural Standard Condition 2. Based on evaluation of DOGAMI comments, the Department incorporated the recommended change.

**Structural Standard Condition 2:** The certificate holder shall design, engineer and construct facility components based on Site Class (soils-related category) determined through the site-specific geotechnical investigation (Structural Standard Condition 1), as reviewed and approved by the Department in consultation with DOGAMI.
[GEN-SS-01]

Potential seismic hazards from seismic events within the analysis area include fault displacement, ground shaking, liquefaction, behavior of subsurface materials, and adverse effects from groundwater or surface water. Based on the evaluation presented above of potential seismic events within the analysis area, the applicant asserts that the seismic hazards are low. Based on review of ASC Exhibit H and consultation with DOGAMI, the Council concurs with the applicant and find that risks of seismic hazards within the analysis area from a potential seismic event would be low. Nonetheless, the Council's Mandatory Conditions at OAR 345-025-0006(12) – (14) provide structural related design requirements, which the Council finds sufficient to address the applicant's ability to design the facility to minimize risks to public health and safety and the environment from a seismic or non-seismic related event, as represented below:

**Structural Standard Condition 3:** 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.
[GEN-SS-02; Mandatory Condition OAR 345-025-0006(12)]

**Structural Standard Condition 4:** The certificate holder shall notify the Department, the State Building Codes Division and the DOGAMI promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the DOGAMI and the Building Codes Division to propose and implement corrective or mitigation actions.
[GEN-SS-03; Mandatory Condition OAR 345-025-0006(13)]

**Structural Standard Condition 5:** The certificate holder shall notify the Department, the State Building Codes Division and the DOGAMI 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 DOGAMI and the Building Codes Division to propose and implement corrective or mitigation actions.
[GEN-SS-04; Mandatory Condition OAR 345-025-0006(14)]

*Non-Seismic Geologic Hazards and Design Measures to Avoid Non-Seismic Hazards*

OAR 345-022-0020(1)(c) and (d) require that the applicant adequately characterize the nonseismic hazards of the proposed site; and, that the applicant demonstrate an ability to design, engineer and construct the facility to avoid dangers to human safety and the environment from the identified hazards.

Potential non-seismic geologic hazards within the analysis area include landslides, volcanic eruptions, erosion and collapsing soils. To evaluate the presence of non-seismic geologic hazards, the applicant conducted a literature review and field reconnaissance. The literature review evaluated various sources including DOGAMI's Statewide Landslide Information Database for Oregon, Release 2 (SLIDO-2) database, topographic maps, geologic maps and aerial photographs.[45] The field reconnaissance of the facility site was used to evaluate erosion potential and collapsing soils.

*Landslides*

Potential nonseismic hazards within the proposed site boundary include landslides. Based on both the literature review and the field reconnaissance, the applicant confirms that there are no morphologically young landslides or slumps, or instability within the proposed site boundary. Based on the Department's review of ASC Exhibit H Figure H-1, the facility site is nearly flat, with slopes on the plateau surface that range between zero and eight percent, with limited drainage that generally appears to drain towards the incised canyons bordering the proposed sites North and West, and East sides. Based on the flat topography of the proposed site and the underlying, stable bedrock, risks of landslides or seismically induced landslides within the facility site boundary are considered low. The Department notes, however, that Hurbers Canyon, which is located to the northwest of the proposed site boundary has a moderate to high potential for landslides. [46] To ensure that the facility is designed to minimize risks to public health and safety and the environment from landslides hazards, the Council will require that the applicant demonstrate facility components have been setback a minimum of 30-feet from basalt rim rock areas to lesson landslide hazards at the site, as presented in recommended Structural Standard Condition 6(1)(a) below.[47]

*Volcanic Eruptions*

Potential nonseismic hazards within the proposed site boundary include volcanic eruptions. The applicant utilized the USGS Volcano Hazards Program to evaluate potentially active volcanos in the analysis area. The nearest active volcano is Mount Jefferson at 28 miles away. As explained in ASC Exhibit H, Mount Jefferson erupted for hundreds of thousands of years, with its last major eruptive episode culminating 15,000 years ago. Based on the USGS Volcano Hazards

[45] MSEFAPP ASCDoc1-8 Exhibit H Geology 2020-11-09. Section H.11 References.
[46] MSEFAPP Reviewing Agency Comment DOGAMI McLaughry 2021-01-05.
[47] Setback distances are proposed by applicant. MSEFAPP ASCDoc1-8 Exhibit H Geology 2020-11-09. Section H.9.1 P. H-13.

Program, the Cascade Range volcanoes (including Mount Jefferson) were shown to be at a "normal" alert level, and at normal levels of background levels of activity. If Mount Jefferson were to erupt again, areas close to the eruptive vent would be severely affected, and areas tens of miles downstream, along river valleys or hundreds of miles downwind may be at risk.

The applicant proposes to minimize risks during a volcanic eruption event through facility shutdown. The applicant refers to the USGS's Volcano Hazards Program Notification Service, which provides advisories, watches and warnings related to volcanic activity within the region. The applicant also explains that it would sign-up for receipt of advisories and notices from USGS's program to ensure that any potential public health and safety risks at the facility during a potential volcanic eruption event are minimized. To ensure the facility is constructed and operated to minimize potential impacts from nonseismic (e.g., landslides, volcanic eruptions) hazards within the region, the Council imposes the following condition, which would require that the applicant design the facility with a 30-foot setback from basalt rim rock areas, develop a geologic hazards maps to aid in facility layout, register for the USGS's Volcano Hazards Program Notification Service, and develop shut down procedures:[48]

**Structural Standard Condition 6:** The certificate holder shall:

a. Before beginning construction:
    i. Demonstrate that facility components have been setback a minimum of 30-feet from basalt rim rock areas (Hurbers Canyon) to lesson landslide hazards at the site, unless otherwise informed by the Site-Specific Geotechnical Investigation Report, as reviewed by DOGAMI.
    ii. Create detailed geologic hazards maps to aid in facility layout. The geologic hazard maps shall be informed by the Site-Specific Geotechnical Investigation Report, as reviewed by the Department and DOGAMI, in accordance with Structural Standard Condition 1. A copy of the map shall be provided to the Department and DOGAMI.
b. During facility operation:
    i. Register for the United States Geologic Service Volcano Hazards Program Notification Service.
    ii. Develop emergency response and shut down procedures for seismic or nonseismic hazards or events and submit to the Department.

[GEN-SS-05]

Based on the above-reasoning and analysis and compliance with the recommended condition, the Council finds that the applicant has adequately and accurately characterized the nonseismic hazards of volcanic eruptions within the proposed site boundary, and conclude that the applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by volcanic eruptions.

[48] In ASC Exhibit H, the applicant represented a nonseismic risk minimization measure as consideration of "force majeure" provisions in design-build contracts, which the Council understands to be a contract provision addressing potential unforeseen circumstances that would prevent the contractor from fulfilling their contract. Because this contract provision does not appear to be related to facility design/minimization measures related to nonseismic hazards, the Department removed the referenced from recommended Structural Standard Condition 6.

*Soil Erosion Potential*

Nonseismic hazards at the facility site include soils with moderate to high potential for wind and water erosion due to construction related disturbance. To evaluate these potential nonseismic hazards, the applicant reviewed the 2019 Natural Resources Conservation Service (NRCS) web-based soil survey and a 2002 *Soil Survey of Upper Deschutes River Area, Oregon, including part of Deschutes, Jefferson, and Klamath Counties* published by Myrum and Ferry to identify soil types within the proposed site boundary. Wind and water erosion potential are both issues evaluated by NRCS, with data available through the referenced web-based soil survey.

Water erosion potential is evaluated based on Factor K, a factor that ranges from 0.02 to 0.69, and is one of six factors used in the Universal Soil Loss Equation and the Revised Universal Soil Loss Equation to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. Wind erodibility is evaluated based on textural classes that affect a soil types resistance to soil blowing, once disturbed. Soils are described in Wind Erodibility Groups (WEGs). The wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. As presented in ASC Exhibit I, the proposed site boundary includes Madras loam soils. Based on NRCS data, soil erosion potential at the site is 0.37 (soil erodibility factor), which because it is on the higher end of the range, represents a moderate potential for water related soil erosion. Based on NRCS data, Madras soils at within the proposed site boundary are assigned to a WEG of 6, which also represents a moderate to high wind erosion potential.

The applicant describes that the environmental conditions within the proposed site boundary include steady, relatively high wind speeds, and brief but intense rainfall events, which could result in accelerated water and wind erosion during construction until the site is stabilized. Excavation for roads or other facility structures could also temporarily expose the excavated spoils to wind and water erosion during construction.

Based on the Department's review of ASC Exhibit I and H and the NRCS web-based soil survey data for the proposed site boundary, the Council finds that the applicant has adequately and accurately characterized the nonseismic hazards of wind and water related soil erosion within the proposed site boundary.

The applicant proposes to minimize and mitigate potential water and wind erosion impacts through compliance with erosion and sediment control measures, as required under a DEQ-issued NPDES 1200-C General Stormwater Permit (see recommended Soil Protection Condition 1). As presented in ASC Exhibit I Attachment I-1 and Attachment E of this order, required erosion control measures would include, but are not limited to, use of erosion control blankets and mats, hydroseeding, mulching, fencing, temporary seeding and use of straw waddles. As presented in Section IV.D *Soil Protection* of this order, the Council will require the applicant obtain and comply with all requirements of the NPDES 1200-C General Stormwater Permit.

Based on compliance with the NPDES 1200-C General Stormwater Permit requirements, the Council finds that the applicant has demonstrated an ability to design, construct and operate the facility in a manner that would avoid nonseismic hazards of wind and water erosion potential within the proposed site boundary.

*Collapsing Soils/Piping*

Nonseismic hazards within the proposed site boundary include collapsing soils and soil piping, which occurs in certain soils that are silty or have no plasticity. In ASC Exhibit I and H, the applicant describes a 2018 site-specific soil survey conducted by Cascade Earth Sciences (CES), a specialized science and engineering company, which identified soils within the site as 25 percent clay, generally less than 40 inches deep, with thin and shallow rock exposed over much of the site boundary. Based on the qualifications of CES and concurrence by Department of Land Conservation and Development on the results of the site-specific soil survey, the Council finds that the applicant adequately evaluated the nonseismic hazards of collapsing soils and soil piping within the proposed site boundary.

The applicant describes that solar panel posts would be driven into bedrock 8-feet belowground and therefore, while collapsing soil and soil piping risk within the site boundary is described as low, the depth of posts at 8-feet belowground would avoid any risks. Based on the analysis and reasoning provided above, the Council finds that the applicant has demonstrated an ability to design, construct and operate the facility to avoid risks to public health and safety and the environment from collapsing soils and soil piping risks.

*Disaster Resilience and Climate Change Adaption*

Applicants are required to address disaster resiliency of a facility and future climatic conditions that could impact the facility, in accordance with the Council's Exhibit H information requirement at OAR 345-021-0010(1)(h)(F)(i) and (ii). The applicant states that future climate conditions including greater-intensity rainfall events or an overall reduction in annual precipitation coupled with warmer average annual temperatures could result in some negligible increase in the potential for geologic hazards. Specifically, increased deviation from climatic norms (including either wetter or drier conditions) could impact erosion and affect the overall stability of the steep rim slopes adjacent to the proposed site boundary.

In ASC Exhibit H, the applicant explains that nonseismic geologic hazards and impacts (including future climatic conditions) are anticipated to be minimal, potential risks at the site would be mitigated by: avoiding potential hazards, conducting subsurface investigations to characterize the soils to adequately plan and design appropriate mitigation measures, creating detailed geologic hazard maps to aid in laying out facilities, providing warnings in the event of hazards, and ensuring that nonseismic geologic events are contemplated under force majeure provisions in any relevant facility contracts. The applicant asserts that the facility would be designed to avoid or minimize hazards resulting from landslides, rockfall, soil erosion, volcanic eruptions, and an emergency contingency plan would be developed in conjunction with the Jefferson

County Fire District #1 (JCFD1). The emergency contingency plan, and potential risks associated with fire are discussed further in this order in section IV.M *Public Services*. The JCFD1 indicates that it is available to respond and provide fire and emergency services to the facility, if the facility is annexed into the fire district.[49] The applicant commits to submitting an application for annexation to JCFD1 (see Public Services Condition 3).

**Conclusions of Law**

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

## 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 facility's potential effects to soils and proposed mitigation measures are provided in ASC Exhibit G (Materials Analysis) and ASC Exhibit K (Land Use).

The analysis area for the Soil Protection standard is the area within the site boundary, as established in the project order. The applicant describes in ASC Exhibit P that facility construction would result in approximately 270.18 acres of permanent disturbance and approximately 6.68 of temporary disturbance.[50]

*Existing Soil Conditions and Land Use*

Existing soil conditions within the analysis area are shown in ASC Exhibit I. The applicant classifies soil types using NRCS Soil Survey Geographic Database. In addition, the applicant enlisted a consultant, CES, in the preparation of a site-specific soil survey with the goal of refining and revising the NRCS soil classifications at the site, which is included in ASC Exhibit I, Attachment I-3. The CES (2018) report focused on the Land Capability Classification, and

[49] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Attachment U-1
[50] MSEFAPP ASCDoc1-16 Exhibit P Fish and Wildlife 2020-11-09, Section P.4.2.1.

whether the soils within the proposed site boundary are predominantly arable versus nonarable. Based on this evaluation, as concurred by the Department of Land Conservation and Development, the soils within the proposed site boundary are predominately nonarable.

As represented in ASC Exhibit I, Figure I-1, there are two major soil types within the analysis area, Madras and Cullius. A description of the soil types, including information regarding erodibility and other technical information, can be found in ASC Exhibit I, Table I-1. There is no current or historic agricultural use of the site, other than a onetime attempt for cultivation of dryland winter wheat more than 30 years ago. All lands within the analysis area are within Exclusive Farm Use (A-1) zoned land within Jefferson County.

*Potential Adverse Impacts to Soil*

ASC Exhibit I includes the applicant's assessment of how the facility may impact soils. Additional information related to the facility's potential impacts to soils, as described by the applicant, and proposed mitigation measures can be found in ASC Exhibit G and Exhibit K.

*Construction*

Facility construction may adversely impact soils. Potential soil-impacting construction activities include: clearing and grubbing of vegetation in temporary construction areas, construction of new access roads, heavy equipment and haul truck traffic for the delivery of aggregates, concrete, water, drill rigs, and similar construction supplies, and fueling or maintenance of construction equipment or vehicles. These activities can lead to wind or water erosion, compaction, changes in drainage patterns, or spills or releases of chemicals or other liquid materials used during construction.[51] Based on the soil types within the proposed site boundary, predominate soils have an erodibility rating of 0.37, which indicates a moderate water erosion potential. Similarly, predominate soils have been assigned a Wind Erodibility Group of 6, which means soils are expected to have a moderate to high wind erosion potential.

To address these potential impacts, the applicant proposes a number of management and mitigation measures. The mitigation measures and best management practices (BMPs) specific to soils are included in the applicant's NPDES 1200-C permit application, specifically the Erosion and Sediment Control Plan (ESCP). The NPDES and ESCP are included in ASC Exhibit I, Attachment I-1. NPDES 1200-C permits are federally delegated from EPA to DEQ, and are therefore not included in or governed by the site certificate (draft ESCP is provided as Attachment E of this order). The NPDES 1200-C permit applies during construction, and is intended to regulate and manage stormwater, as well as reduce erosion and sedimentation. To ensure compliance with the NPDES 1200-C permit and the ESCP, and based on BMPs and minimization measures proposed by the applicant, the Council adopts the following condition, requiring that, prior to construction, the applicant obtain a NPDES 1200-C permit form DEQ and

[51] MSEFAPP ASCDoc1-9 Exhibit I Soils 2002-11-09.

then, during construction, implement all provisions of the NPDES 1200-C permit and the final ESCP:

**Soil Protection Condition 1:**

a. Prior to construction, the certificate holder shall provide a copy to the Department of its DEQ-issued NPDES 1200-C permit, including final Erosion Sediment Control Plan and associated drawings (as provided in Attachment E of the Final Order on the ASC).
b. During construction, the certificate holder shall:
    i. Conduct all work in compliance with a final Erosion and Sediment Control Plan as required under the NPDES 1200-C.
    ii. The certificate holder must provide copies of completed Erosion and Sediment Control Inspection Forms (forms) and identify any corrective actions upon request by the Department during construction inspections.
c. Following completion of construction, the certificate holder shall provide to the Department DEQ verification that the NPDES 1200-C permit has been terminated, demonstrating that site stabilization has been achieved.

[GEN-SP-01]

A monitoring program is required as part of the ESCP and NPDES 1200-C permit, and the monitoring schedule is described in the ESCP submitted as Exhibit I, Attachment I-1. The ESCP, including the monitoring component, would be required to be implemented in accordance with DEQ requirements and Soil Protection Condition 1. In addition, General Standard Condition 6 and recommended Fish and Wildlife Habitat Condition 1 would require revegetation and monitoring of all disturbed areas. Additional discussion of the Revegetation Plan and associated measures is included in Section IV.H *Fish and Wildlife Habitat* of this order.

*Operation*

During facility operation, small amounts of paint, lubrication oils, transformer oil, and aqueous nonpetroleum-based solvents would be used. Aqueous nonpetroleum-based solvents are water-based cleaners that have less than 5 percent volatile organic compounds, they clean by heat, agitation, or soap action rather than by dissolution. For additional information about the types of waste, including small amounts and proposed handling of hazardous waste, that would be addressed in the Waste Management Plan (see Section IV.N *Waste Minimization* of this order). Hazardous materials would be properly stored inside the O&M enclosure and hazardous material containment and cleanup kits would be maintained and available onsite to minimize the impact resulting from a spill. Oils, lubricants, paint, and solvents would be stored within covered containers such as work trailers and Conex boxes to prevent incidental spills or drips from reaching the environment.

As discussed in Section III.A *Facility Components*, the applicant requests Council to approve the option to construct and operate either Lithium-ion battery or flow battery storage technologies. ASC Exhibit G explains that if the applicant decides to include battery storage in the final design of the facility, the type of battery storage technology, chemistry, and quantities would be

determined prior to construction, and the applicant would provide material estimates to the Department in coordination with relevant authorities, including the Jefferson County Fire District. Further, the applicant represents that it would develop and implement an Spill Prevention Control and Countermeasure Plan (SPCC) and Hazardous Materials Business Plan (HMBP) for the battery storage system, which would include an inventory of both hazardous and nonhazardous materials.[52] The Council adopts the following condition, requiring the applicant to finalize and implement the SPCC and HMBP prior to facility operation, as follows:

> **Soil Protection Condition 2:** If the final facility design includes battery storage, the certificate holder shall:
> a. Before beginning operation, prepare and submit to the Department a Spill Prevention Control and Countermeasure Plan (SPCC), developed in compliance with 40 CFR 112, based on the template provided in Attachment D of the Final Order on the ASC, and a Hazardous Materials Business Plan.
> b. During operations, adhere to the requirements of the SPCC and Hazardous Materials Business Plan, as finalized under sub(a) of this condition.
> [PRO-SP-02]

Operations would include solar panel washing twice a year, where the washwater would be discharged by evaporation and seepage into the ground. In ASC Exhibit I, the applicant represents that it would obtain a General Water Pollution Control Facilities (WPCF) Permit, 1700-B for washwater discharge from equipment cleaning. The Department received confirmation from DEQ that WPCF 1700-B permits are no longer being issued because solar panel washing is considered a *de minimis* wastewater.[53] In ASC Exhibit G, the applicant affirms that solar panel and equipment washwater would not contain any added cleaning solutions. If, during facility operation, the applicant identifies a need to use cleaning solutions, the Council considers low volatile organic compound (VOC), biodegradable cleaning solutions to be acceptable because they would result in minimal soil impacts given the low VOC/chemical content. Therefore, based on the applicant's representations and to ensure that there are no soil related impacts from solar panel washing and washwater discharge at the site, in lieu of the WPCF 1700-permit, the Council imposes the following condition:

> **Soil Protection Condition 3:** During facility operation, the certificate holder may discharge solar panel wash water through evaporation or infiltration into the ground at the point of application. The use of chemicals, soaps, detergents and heated water is prohibited, unless Chemical Safety Data Sheets for low volatile organic compound/biodegradable cleaning chemicals and solvents are submitted to the Department for review and approval. Pressure washing is allowed, so long as it does not remove paint or other finishes.
> [OPR-SP-02]

**Conclusions of Law**

[52] MSEFAPP ASCDoc1-2 Exhibit B Facility Description 2020-11-09. Section B.2.2.3
[53] MSEFAPP 1700-B WPCF Permits Clarification (ODEQ) 2020-12-10

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Council finds that the 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 facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.*

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

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

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

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

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

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

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

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

*(c) The following standards are met:*

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

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

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

**Findings of Fact**

The Land Use standard requires the Council to find that a facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC). The applicant has elected to obtain a Council determination of compliance under ORS 469.504(1)(b). Under ORS 469.504(1)(b)(A), the Council may find compliance with statewide planning goals if the Council finds that a 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 "date the application is submitted" is interpreted as the date the preliminary ASC was received by the Department, which was December 6, 2019.

The analysis area for potential land use impacts, as defined in the project order, is the area within and extending ½-mile from the proposed site boundary. As confirmed by Jefferson

County, the proposed site boundary and analysis area are located entirely within Jefferson's County Exclusive Farm Use A-1 (EFU A-1) zone.[54]

Sections IV.E.1, *Local Applicable Substantive Criteria* and IV.E.2, *Directly Applicable State Statutes and Rules* below present an evaluation of the facts and evidence provided in the ASC to demonstrate whether the facility would have the ability to comply with the applicable zoning ordinance provisions and comprehensive plan goals and policies, directly applicable state statutes (ORS 215.283 and 215.274) and LCDC administrative rules (OAR 660-033-0330(38).

IV.E.1 Local Applicable Substantive Criteria

The facility would be located within Jefferson County. Therefore, the governing body within Jefferson County is a Special Advisory Group (SAG).[55] Prior to receipt of the pASC, the Council appointed the Jefferson County Board of Commissioners as a SAG.[56] Under OAR 345-022-0030(3), the Council must apply the applicable substantive criteria recommended by the SAG, as long as those criteria are required by the statewide planning goals and in effect on the date the pASC is submitted. The SAG identified Jefferson County Zoning Ordinance (JCZO) Sections 301.4, 301.5, 401, 405 and 602 as potentially applicable local ordinance requirements.[57] In ASC Exhibit K, the applicant included an evaluation of the JCZO Sections identified by the SAG as well as numerous other provisions, as presented in Table 1: *Jefferson County Applicable Substantive Criteria*.

[54] MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co._Stenbeck 2019-12-18.
[55] Under ORS 469.480(1), the Council must designate as a Special Advisory Group the governing body of any local government within whose jurisdiction the facility is proposed or proposed changes of a facility would be located.
[56] MSEFAPP SAG Appointment 2019-05-16.
[57] MSEFNOI NOI Comment Special Advisory Group Rasmussen 2019-08-23.

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

| Jefferson County Zoning Ordinance (JCZO) | |
|---|---|
| *Chapter 3 Land Use Zones*[1] | |
| Section 301 | Exclusive Farm Use Zones |
| Section 316 | Flood Plain Overlay Zone |
| Section 322 | Sensitive Bird Habitat Overlay Zone |
| *Chapter 4 Supplementary Provisions* | |
| Section 401 | Access |
| Section 402 | Transportation Improvements |
| Section 403 | Clear-Vision Areas |
| Section 404 | Fences |
| Section 405 | Outdoor Lighting |
| Section 406 | Sign Regulations |
| Section 414 | Site Plan Review |
| Section 415 | Soil or Rapid Moving Landslide Hazard Procedures |
| Section 416 | Grading, Fill and Removal |
| Section 417 | Historic Resource Protection |
| Section 418 | Airport Protection |
| Section 419 | Riparian Protection |
| Section 420 | Endangered Species |
| Section 421 | Traffic Impact Studies |
| Section 422 | Temporary Uses |
| Section 423 | Off-Street Parking Requirements |
| Section 426 | Fire Safety Standards |
| Section 429 | Archeological Preservation |
| Section 433 | Photovoltaic Facilities |
| *Chapter 6 Conditional Uses* | |
| Section 601 | Authorization to Grant or Deny Conditional Uses |
| Section 602 | Approval Criteria |
| Section 603 | Conditions of Approval |
| *Comprehensive Plan* | |
| Goal 3: Agricultural Lands<br>Goal 5: Natural Resources, Scenic and Historic Area, and Open Spaces<br>Goal 6: Air, Water, and Land Resources Quality<br>Goal 7: Areas Subject to Natural Hazards<br>Goal 8: Recreational Needs<br>Goal 9: Economic Development<br>Goal 11: Public Facilities and Services<br>Goal 12: Transportation<br>Goal 13: Energy Conservation | |

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

Notes:

1. ASC Exhibit K identifies JCZO Section 316 requirements for flood hazard areas. As presented in ASC Exhibit K Figure 3, the facility site boundary is not within a flood hazard area, however, because the land use analysis area extends 0.5-mile from the site boundary, the analysis area includes a flood hazard area. The flood hazard area requirements would not apply to the facility because the proposed site boundary is not within a flood hazard area and are therefore not included in the Land Use evaluation of this order. Jefferson County comments on the pASC also confirmed that the facility site is not within the NWI or FEMA NFIP 100 year floodplain.
2. ASC Exhibit K provides an analysis for JCZO Section 412, but provides the analysis while acknowledging that the setbacks would not apply because the facility is not located near the top or toe of the rim. The analysis is not provided in this order because the Department concurs with the applicant and recommends Council find that the setbacks would not apply.
3. ASC Exhibit K provides an analysis for JCZO Section 413, which allows applicants to enter into an agreement with the county to complete required road improvements, as an alternative to the improvements being completed by the applicant. This provision is not included in this order because applicant has not requested Council consideration of a bonding agreement as an alternative to applicant completing required road improvements and therefore would not apply.
4. ASC Exhibit K provides an analysis for JCZO Section 505, which is the Goal Exception process, if the facility were local, rather than state jurisdictional. The Council's Goal Exception process is evaluated in Section IV.E.3 of this order.

MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co. Stenbeck 2019-12-18.

In ASC Exhibit K, the applicant assesses the facility under the JCZO as a "commercial utility facility for the purpose of generating power for public use by sale." The proposed temporary batch plant is evaluated as a "temporary use."

The proposed transmission line segment, extending from the point of interconnect switching station to the existing Portland General Electric Pelton Dam to Round Butte 230-kV transmission line, is evaluated as an "associated transmission line" under ORS 215.274 in Section IV.E.2. *Directly Applicable Status Statutes and Administrative Rules* of this order.

**Jefferson County Zoning Ordinance (JCZO)**

***JCZO Chapter 3 Land Use Zones, Exclusive Farm Use Zones***

***301.4 Conditional Uses***

*The following uses may be approved in the EFU A-1, EFU A-2 and RL zones unless specifically stated otherwise. Applications will be reviewed at a public hearing before the Planning Commission in accordance with the procedures in Section 903.5. In order to be approved, the use must comply with the criteria in Section 301.5, Section 602, any standards and criteria listed under the specific use and any other applicable requirements of this ordinance.*

*H. Commercial utility facilities for the purpose of generating power for public use by sale. A power generation facility shall not preclude more than 20 acres from farm use as a commercial agricultural enterprise unless an exception is taken pursuant to ORS 197.732 and OAR 660, Division 4, or more than 12 acres if the land is high-value farmland.*

*****

JCZO Section 301.4(H) establishes "commercial utility facilities for the purpose of generating power for public use by sale" (commercial utility facility) as a permitted conditional use within EFU A-1 zoned land and, unless a goal exception is otherwise taken, establishes acreage limits on high-value farmland (12 acres) and farm use as a commercial agricultural enterprise (20 acres).[58] In addition to the acreage thresholds, JCZO Section 301.4 requires that a commercial utility facility in the EFU A-1 zone comply with "Section 301.5, Section 602, any standards and criteria listed under the specific use and any other applicable requirements of this ordinance."

The JCZO does not explicitly define a commercial utility facility; however, the land use category uses the phrase "for the purpose of generating power" and also refers to "a power generation facility," both of which are descriptions consistent with the purpose and function of the facility. The Council finds that a commercial utility facility includes a photovoltaic solar power generation facility, which includes solar modules and other accessory components (including "storage devices" as defined in OAR 660-033-130(38)(f)) and therefore determine that it is appropriate to assess the facility and associated related or supporting facilities under JCZO Section 301.4(H).

The facility is proposed to occupy up to 277 acres within a defined site boundary located entirely within the North Unit Irrigation District (NUID), on EFU-zoned land. Pursuant to statutory definitions of high-value farmland under ORS 195.300(10)(c)(B), the land within the facility site boundary is high-value farmland because it is within the boundaries of an irrigation district. The facility would then preclude more than 12 acres of high-value farmland from farm use as a commercial agricultural enterprise, which would not comply with JCZO Section 301.4(H), unless Council takes an exception to the Statewide Planning Goal for Agricultural Lands (Goal 3).

As presented in Section IV.E.3 *Goal 3 Exception*, the Council approves an exception to Statewide Planning Goal 3 based on the applicant's reasons exception request. Based on the approval of a Goal 3 exception, the facility satisfies JCZO Section 301.4(H), which then requires that the applicant submit an application for and obtain a Conditional Use Permit from Jefferson County

[58] JCZO Section 105.B defines "high-value farmland" as "land in a tract composed predominately of soils that are irrigated and classified prime, unique, Class I or II or not irrigated and classified prime, unique, Class I or II." This definition mirrors the statutory definition of high-value farmland under ORS 195.300(10)(a) but omits high-value farmland as defined under ORS 195.300(10)(b)-(f). LCDC's minimum conditional use requirements for photovoltaic solar power generation facilities are established under OAR 660-033-0330(38), which rely on ORS 195.300(10)(a)-(f) to define high-value farmland. Therefore, because JCZO Section 105.B definition of "high-value farmland" is not consistent with ORS 195.300(10) and local ordinances must be consistent with applicable administrative rules and state law, the statutory definition applies directly to JCZO Section 301.4(H) (ORS 469.504(1)(b)(B).

Planning Department. Because the local land use review is incorporated into the ASC review process, the site certificate, if approved, would function as the conditional use permit; therefore, the applicant would not be required to separately submit for County review a Conditional Use Permit application, as that review occurs through the EFSC process and this order.

As evaluated below under JCZO Section 414, conditionally permitted uses are also required to obtain building permits from the county, following review of a Site Plan. For this facility, Jefferson County will maintain its ministerial review of the Site Plan, without procedure, and issuance of development permits (Driveway Connection permit, grading permit, etc.). To ensure that the final design of the facility satisfies all applicable Site Plan requirements and that the applicant obtains all applicable local permits prior to facility construction consistent with JCZO Section 301.4(H) and 414, the Council imposes the following condition:[59]

> **Land Use Condition 1:** Before beginning construction of the facility or facility component, as applicable, the certificate holder shall submit a Site Plan to the Department and Jefferson County for review; and shall obtain a site address and all other necessary local development permits (e.g. Driveway Connection Permit, to be followed by building permits, grading permit, and any others as applicable) from the Jefferson County Community Development Department.
> [PRE-LU-01]

An evaluation of the applicant's ability to satisfy the applicable requirements under JCZO Section 301.5, Section 602 and other applicable requirements is presented below.

> ***301.5 Approval Criteria***
> *Uses listed in Section 301.4 and specified uses in Section 301.3 may be approved only where the use:*
> *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.*
>
> *The applicant may demonstrate that these criteria will be satisfied through the imposition of conditions. Any conditions so imposed must be clear and objective.*

JCZO Section 301.5(A) and (B) establish review criteria for all conditional uses within EFU-zoned land. The review criteria include a demonstration that the proposed use would not force a

[59] The findings and recommended condition are, in part, intended to address comments on the ASC received from Jefferson County. MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co. Stenbeck 2019-12-18.

significant change or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.[60]

*Accepted Farm Practices on Surrounding Lands*

In ASC Exhibit K, the applicant defines surrounding lands as the area extending ½-mile from the proposed site boundary, consistent with the Land Use standard analysis area. The Department notes that, typically, Council applies the review criteria under JCZO Section 301.5(A) and (B), which mirrors LCDC OAR 660-033-0130(5), to farm practices outside of the site boundary (i.e. on *surrounding lands*) as the impacts to farm practices within the site boundary are evaluated under JCZO Section 301.4.

As presented in ASC Exhibit K Figure K-2, lands within ½-mile of the proposed site boundary are entirely with Jefferson County's EFU A-1 zone. Based on review of Jefferson County's zoning map, the Department verified that ASC Figure K-2 is accurate and there are no forest zoned lands within the analysis area.[61] Therefore, the evaluation of JCZO Section 301.5(A) and (B) applies to farm practices on EFU A-1 zoned lands.

The applicant evaluates accepted farm practices on surrounding lands within the analysis area based on the current and historic land use, which is represented predominately to include livestock grazing and historically (over 35 years ago) included dryland wheat cultivation. The applicant attests to a review of water rights within the analysis area using Oregon Water Resources Department (OWRD) data and, based on this review, affirms that none of the surrounding lands have a water right and that none of those lands have ever been used for irrigated agriculture.

*Potential Impacts to Accepted Farm Practices on Surrounding Lands*

Potential impacts to accepted farm practices on surrounding lands, including grazing and dryland winter wheat cultivation, could include creating small or isolated pieces of property that are more difficult to farm or access or placing facility components in an manner that could disrupt farm practices.[62] In ASC Exhibit K, the applicant addresses potential access impacts and affirms that the facility would not result in access impacts to owners/operators of accepted farm practices. As evidence, the applicant provides a letter dated February 25, 2020 from Binder, LLC, the underlying landowner of the facility site, that states, "we have worked with Madras PV1, LLC, to identify a Facility site that will not preclude or impair access to farm operations associated with adjacent landowners."

[60] JCZO Section 301.5 review criteria are taken directly from ORS 215.296. Pursuant to ORS 215.203(2)(a) "farm use" means "the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops.."

[61] Jefferson County Zoning Map, August 2015. https://www.jeffco.net/sites/default/files/fileattachments/gis/page/2991/county_zoning.pdf. Accessed February 28, 2021.

[62] OAR 660-033-0130(38)(h)(A)

In ASC Exhibit K, the applicant asserts that the facility would not increase the cost of accepted farm practices because it would not change existing land use practices and would not relocate any access routes or farm infrastructure. The Council concurs that based on the limited use of surrounding lands for grazing, that the potential impacts of the facility on the cost of grazing practices would be relatively limited to temporary traffic impacts during facility construction. Based on the reasoning and analysis presented above, the Council finds that the facility would not force a significant change or significantly increase the cost of accepted farm practices on surrounding lands devoted to farm use.

***301.10 Setback Requirements***
*(minimum): Front – 30 feet, Side – 30 feet, Rear – 30 feet.*

JCZO Section 301.10 establishes minimum 30-foot front, side and rear setbacks for permissible uses within EFU A-1 zoned land, measured horizontally from, and running parallel to, a property line, rim, water bond or other feature.[63] The applicant asserts that setback distances from solar modules to adjacent property lines would be approximately 55 feet and refers to ASC Exhibit C Figures C-2A and C-2B. As represented in ASC Exhibit C Figures C-2A and C-2B, the proposed site boundary includes three properties/taxlots (10-13-30-600, 10-13-31-100, and 10-13-31-0-200), where structures/facility layout would not meet the setback requirement for properties/taxlots 10-13-30-600 and 10-13-31-100. To ensure that final facility design adheres to the applicable minimum setback distances, the Department recommends Council impose Land Use Condition 1, requiring that, prior to construction, the applicant submit a final Site Plan to the Department and Jefferson County which would provide a final evaluation of compliance with site plan requirements (final site plan must demonstrate that setbacks meet applicable requirement per JCZO Section 414.3(E)). Based on compliance with the recommended condition, the Council finds that the facility would satisfy the setback requirements under JCZO Section 301.10.

***Section 322 Sensitive Bird Habitat Overlay Zone (BH)***

***322.2 Location of Sensitive Bird Habitat Overlay Zone***
*The BH Zone consists of all land within a 1320 foot (1/4 mile) radius of a golden eagle, bald eagle or prairie falcon nest listed in the Comprehensive Plan Goal 5 inventory adopted by Ordinance 49-97, as shown on the Jefferson County Zoning Map.*

JCZO Section 322.2 establishes that the Sensitive Bird Habitat Overlay BH Zone includes land within a 1,320-foot (1/4-mile) radius of mapped golden eagle, bald eagle and prairie falcon nest locations included in Jefferson County's Goal 5 Inventory adopted by Ordinance 49-97. Jefferson County's Goal 5 Inventory includes 24 inventoried sensitive bird habitat sites. As identified by Jefferson County during their review of the pASC, the northeast side of the facility site boundary would overlap the BH zone based on the location of one sensitive bird habitat

[63] JCZO Section 105 definition of setback.

inventoried site within the analysis area (County Site No. 26).[64] The applicant identifies that there are four golden eagle nests inventoried under County Site No. 26; as presented in ASC Exhibit K Figure K-3, the 1,320-foot BH zone would extend within the proposed site boundary for 3 nest sites. Therefore, because portions of the proposed site boundary would be located within the BH Zone, JCZO Section 322 provisions apply to the facility.

> ***322.4 Regulation of Uses***
> *A. Development within a BH Zone shall follow the Program to Meet Goal 5 specified in the ESEE Findings and Decision adopted for each nesting site identified in the Comprehensive Plan inventory.*
> *B. For certain bird sites, the Program to Meet Goal 5 does not refer to tax lots within the BH Zone that were already developed at the time the ESEE analysis was done. Any proposal for new construction on these lots shall be subject to the same requirements as the nearest tax lot to the proposed development that is regulated through the Program to Meet Goal 5.*

JCZO Section 322.4 requires that development within a BH Zone follow the Program to Meet Goal 5 specified in the ESEE Findings and Decision adopted for nesting site identified in the Comprehensive Plan Inventory. Jefferson County's Ordinance O-49-97 and ESEE Findings and Decision for County Site No. 26 establish the following which apply to the following properties/tax lots within the analysis area:[65]

> *[Properties/Tax Lots within analysis area]*
> *10-13-30-200*
> *10-13-30-500*
> *10-13-30-600*
>
> *In order to protect both the nest site and sensitive habitat area and allow limited conflicting uses, the following requirements shall apply to specific properties within the sensitive habitat area, for the following properties (as mapped on Exhibit "B"), the conditions below shall apply:*
>
> *1. Development, including conditional uses, within the restricted area is prohibited.*
> *2. New structural development outside the restricted area shall be setback at least 30 feet from the rim.*
> *3. Construction activities for expansion, maintenance, replacement of existing structures or construction of new structures requiring a building permit from the Jefferson County Community Development Department or septic installation requiring a permit from the Jefferson County Environmental Services or the Department of Environmental Quality (DEQ) shall be prohibited during the nesting season from January 15 through August 31. Maintenance and repair of existing*

[64] MSEFAPP pASC Reviewing Agency SAG Comment Jefferson County Stenbeck 2019-12-18.
[65] MSEFAPP Jefferson County Ordinance O-49-97. MSEFAPP Jefferson County Ordinance O-49-97 Site 26.

*structures not requiring a construction permit, permitted work conducted within a closed structure, or repair of a failing septic system are exempt from this requirement. Construction activity subject to a construction permit from the Community Development Department or a septic installation permit from the Jefferson County Environmental Services or the Department of Environmental Quality (DEQ) may occur after May 1, if ODFW determines in writing that the nest site is not active or that the young birds have fledged.*

The applicant describes that the facility would not be located in a "restricted area," which while not defined in Jefferson County's Ordinance O-49-97 or ESEE Findings and Decision for County Site No. 26, is interpreted as applying to areas within ¼-mile of a canyon wall. Based on the Department's review of Jefferson County's Ordinance O-49-97 or ESEE Findings and Decision for County Site No. 26 and comments received from Jefferson County during review of the pASC, the Council concurs with the applicant's assessment and finds that the applicant would be required to adhere to the development timeframes as established in the Jefferson County Comprehensive Plan Policy 5.2 for Goal 5 – Bird Site #26 (Condition 3 above).[66] In addition, Jefferson County's Comprehensive Plan Policy 5, 5.2 states:

*The following guidelines should be used to regulate when construction and other development activities may occur without disturbance to nesting birds. The protected period is when no construction activity should occur. The early release date is when construction may start if ODFW verifies that the nest is not currently being used:*

| *Species* | *Protected Period* | *Early Release* |
|---|---|---|
| *Bald Eagle* | *Jan 15 - Aug. 31* | *May 1* |
| *Golden Eagle* | *Feb. 1 - Aug.31* | *May I* |
| *Prairie Falcon* | *March 1 - Aug. 30* | *June 1* |

The Department notes that Jefferson County's Comprehensive Plan Policy 5.2 for Goal 5 provides more specificity for individual species than the above-referenced ESEE Findings and Decision for County Site No. 26, where the ESEE Findings and Decision for County Site No. 26 identified one restricted development timeframe, January 15 through August 31, and the comprehensive plan provides three restricted development timeframes specific to individual avian species. As described above, portions of the site boundary/micrositing corridor overlap with the BH zone based on the presence of 4 inventoried golden eagle nests. Therefore, the applicant would be required to adhere to the restricted development timeframes of February 1 through August 31, where work restrictions may be lifted if the nest sites are not occupied by May 15.[67] To ensure compliance with the BH zone development timeframe restrictions, the Council imposes the following condition:

[66] MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co. Stenbeck 2019-12-18.

[67] The Department notes that JCZO Section 322.4's incorporation of Jefferson County's Ordinance O-49-97 and ESEE Findings refers to an early release date of May 1 for bald and golden eagles. However, based on current available data from ODFW, the early release date has been conservatively modified to May 15.

**Land Use Condition 2**: The certificate holder shall:

a. Prior to construction, provide to the Department and Jefferson County a facility construction schedule and facility layout map, with Jefferson County's Sensitive Bird Habitat (BH) Overlay Zone for County Site 26. The schedule and map shall identify whether any facility structures, which require a building permit, are located within Jefferson County's Sensitive Bird Habitat (BH) Overlay Zone for County Site 26. If there are such structures to be located within the BH zone, activities associated with the structures must be scheduled to occur outside of the protected periods listed below:

| Species | Protected Period | Early Release |
|---|---|---|
| Bald Eagle | Jan 15 - Aug. 31 | May 15 |
| Golden Eagle | Feb. 1 - Aug. 31 | May 15 |
| Prairie Falcon | March 1 - Aug. 30 | June 1 |

b. During construction of structures identified per sub(a) within the BH Zone, the certificate holder may commence activities by the early release date if, based on the certificate holder's construction monitoring logs of County Site 26 conducted during the protected period, the nest sites are deemed by the Department, in consultation with ODFW, unoccupied or have been fledged. County Site 26 monitoring conducted in order to commence work within the BH Zone shall be based on a protocol approved by the Department, in consultation with ODFW.

[GEN-LU-01]

Based on the compliance with the above-recommended condition, the Council finds that the facility would satisfy the regulation of uses under JCZO Section 322.4.

***322.5 Variance to Regulations***

*Regulations specified in the Program to Meet Goal 5 may be modified if approved by the Planning Director under the Administrative Review procedures of Section 903.4 if an applicant demonstrates the following:*

*A. The regulations specified in the Program to Meet Goal 5 render the parcel unable to be developed for a dwelling that would otherwise be allowed; and*

*B. The Oregon Department of Fish and Wildlife (ODFW) has specified in writing that either the proposed location of the dwelling will adequately protect the nest site, or the nest site is no longer in use. Any measures designed to mitigate adverse impacts recommended by ODFW shall be included as conditions of approval.*

JCZO Section 322.5 establishes criteria for requesting a variance to the regulation of uses under JCZO Section 322.4. As presented in ASC Exhibit K, the applicant has not requested a variance under JCZO Section 322.5 and therefore these provisions are not applicable.

***322.6 Additional Regulations***

*The following standards apply to all lands within a BH Zone:*

*A. New roads, driveways or public trails shall be located at the greatest distance possible from the nest site unless topography, vegetation or structural features will provide greater visual protection and noise buffer from the nest site.*

*B. Existing vegetation or other landscape features which obscure the view of the nest from development shall be preserved and maintained.*

*C. Partitions, subdivisions and property line adjustments that would result in a lot or parcel configuration that would force the location of a dwelling or other structure within the designated sensitive habitat area shall not be approved.*

*D. All exterior lighting, including security lighting, shall be sited and shielded so that the light is directed so that it does not shine on or towards the nest site.*

JCZO Section 322.6 establishes additional regulations applicable to development within a BH zone. In ASC Exhibit K, the applicant explains that the facility would not include new roads, driveways or public trails; would not remove or alter existing vegetation or other landscape that would otherwise obscure nest views; and would not include exterior lighting within the BH zone. Based on the facility description and facility layout provided in ASC Exhibit B and C, the Department confirms the applicant's representations. Therefore, the Council finds that the facility design, as presented in ASC Exhibits B and C, would satisfy the additional regulations under JCZO Section 322.6.

***JCZO Chapter 4 Supplementary Provisions***

***Section 401 Access***

***Section 401.3 Access from an Undeveloped Right-of-Way, Public Access Easement or Private Access Easement.***

*Prior to issuance of building permits for a lot or parcel that will obtain access from an undeveloped dedicated or platted public right-of-way, public access easement or private access easement, the road(s) that will be used to access the lot or parcel shall be improved to applicable city, county or state standards, unless the County Public Works Director approves a deferral of improvements or a local improvement district is formed. The Public Works Director may authorize incremental improvements so that the first property owner who will use the road(s) only needs to improve it to the emergency vehicle access standards of Section 426.2(E) or other appropriate standard, and subsequent owners proposing to use the road(s) will each be responsible for additional improvements.*

JCZO Section 401.3 establishes access requirements to the facility including road improvements if access points are proposed from an undeveloped Right-of-way, or from either a public access easement or private access easement. As presented in ASC Exhibit C and further discussed in ASC Exhibit K, the applicant proposes three facility access points, all of which would extend from SW Elk Drive (an existing county road). Therefore, because the facility would be accessed from a developed, existing county road, and not from an undeveloped Right-of-way or a public

or private access easement, the Council finds that the criteria of JCZO Section 401.3 are not applicable.

***Section 401.4 Access Standards***

*Access shall comply with the emergency vehicle access standards of Section 426.2(E), the clear vision area standards of Section 403, and the requirements of Section 12.18 of the Jefferson County Code.*

JCZO Section 401.4 requires a demonstration that access to the facility would comply with the emergency vehicle access standards of JCZO Section 426.2(E), the clear vision area standards of JCZO Section 403, and the road design standards of Section 12.18. In ASC Exhibit U, and discussed further in Section IV.M., *Public Services* of this order, the applicant explains that two conceptual facility site plans (included as Attachments C2a and C2b of ASC Exhibit C) were provided to the Jefferson County Fire District #1 (JCFD#1) for review, and that the fire district did not express any concerns with the conceptual site plans. However, as explained in his letter included in ASC Exhibit U as Attachment U-1, Brian Huff, the Fire Chief/Fire Marshal with the JCFD#1 confirmed the ability of JCFD#1 to provide services to the facility as long as the facility site is annexed into the fire district, and acknowledging that additional consultation between the fire district and the applicant is needed prior to construction, concurrent with the development of the emergency contingency plan.

The applicant explains that the road design requirements of Section 12.18 would be addressed and satisfied upon submittal of the Driveway Connection Permit to Jefferson County, prior to construction. To ensure compliance with the requirements provided in Section 12.18 of the Jefferson County Plan, and ensure all necessary permits are obtained prior to construction, the Council imposes Land Use Condition 1, as presented under JCZO Section 301.4 above.

Based on the applicant's representation that the Driveway Connection Permit would be submitted to the County prior to construction, compliance with the referenced recommended condition, and the evaluation provided and compliance to recommended conditions of Section IV.M., *Public Services* of this order, the Council finds that the facility would satisfy the provisions under JCZO Section 401.4.

***Section 401.5 Driveway Connection Permits***

*A. A Driveway Connection permit shall be obtained prior to the construction of any new driveway that accesses a county or local access road.*

*B. A Driveway Connection permit shall be obtained prior to issuance of a building permit for any new, remodeled or replacement building that will obtain access via an existing driveway that does not meet current driveway connection standards of Section 12.18 of the Jefferson County Code, unless the Public Works Director has authorized a variation of those standards.*

*C. Evidence that the Oregon Department of Transportation has approved the access shall be submitted prior to issuance of a building permit for any new, remodeled or replacement building that will obtain access from a state highway.*

JCZO Section 401.5 establishes requirements for Driveway Connection Permits. Based on review of JCZO Section 401.5(A)-(C) and the facility description and layout presented in ASC Exhibits B and C, the Department recommends Council find that JCZO Section 401.5(A) is applicable because the facility would result in construction of three gravel roads that would connect to a county or local access road.

As presented above, the Department recommends Council impose Land Use Condition 1 requiring the applicant to obtain a Driveway connection permit prior to construction, and prior to receipt of a building permit. Based on compliance with the recommended condition, the Council finds that the facility would satisfy the provisions under JCZO Section 401.5.

***Section 402 Transportation Improvements***

***Section 402.4*** *Transportation Improvements Subject to Administrative Review*

*The following transportation improvements may be approved by the Planning Director in all zones under the Administrative Review procedures in Section 903.4, subject to compliance with the criteria in Section 402.7 and other requirements of this Section:*

*D. Accessory transportation improvements that are incidental to a use allowed or conditionally approved in the zone that will provide safe and efficient access to the use.*

JCZO Section 402.4(D) establishes that accessory transportation improvements incidental to an allowed or conditionally allowed use within an applicable zone are allowable subject to compliance with JCZO Section 402.4 and 402.7. Section 402.4(D) requires that accessory transportation improvements provide safe and efficient access to the facility. Section 402.7 establishes 8 approval standards. As evaluated under JCZO Section 301.4 above, the facility is considered a "commercial utility facilities for the purpose of generating power for public use by sale" and is a conditional use permissible in Jefferson County's EFU A-1 zoning. Therefore, JCZO Section 402.4(D) and 402.7 would apply to the facility.

The facility would include three main points of access from the existing SW Elk Drive, as presented in ASC Exhibit C Figures C-2A and C-2B. The applicant represents that the access points would be constructed in accordance with Jefferson County Code 12.18 road design standards under a Driveway Connection Permit. To ensure that the proposed access points provide safe and efficient access to the use, consistent with JCZO Section 402.4(D), the Council imposes Land Use Condition 1 requiring that, prior construction, the applicant submit a Driveway Connection Permit to the County and demonstrate to the Department that the permit has been obtained.

Based on compliance with the approval standards under JCZO Section 402.7 below and the referenced condition, the Council finds that the facility would comply with JCZO Section 402.4(D).

***Section 402.6 Application Requirements***

*The following information must be submitted as part of an application for a transportation improvement:*

*A. A tentative map showing the proposed location, width, and length of the improvement.*

*B. Construction drawings showing the grade, typical cross section(s), any cut or fill and methods to accommodate stormwater runoff and drainage.*

*C. A Title Report showing all existing easements of record within the proposed improvement area. The report shall be based on research going back in time without limitation, and must indicate all easements and encumbrances that affect the property.*

*D. If the proposed improvement is a new local access or private road, an engineer's design report identifying the construction standards necessary for the road to 151 provide a minimum life of at least 25 years, necessary maintenance measures, recommended type of maintenance work to be done annually, estimated minimum annual maintenance cost, and location of road signs in accordance with Manual of Uniform Traffic Control (MUTC) standards. The design report shall take into consideration the terrain, soil, slope, runoff, drainage, and potential amount and type of traffic that will use the road. The design report shall indicate that the road will comply with the standards in Section 12.18 of the Jefferson County Code, or applicable city standards if located within an urban growth boundary, unless the applicant's engineer or geologist determines that alternative specifications proposed in the design report are equivalent or superior to the standards. [O-065-19]*

*E. Written authorization and consent for the improvement by all owners of property the improvement will cross, or other evidence of legal authority for the improvement.*

*F. Written authorization from any city, county, state or federal agency with jurisdiction over any existing transportation facility that will be part of the proposed improvement(s). For instance, approval from the Oregon Department of Transportation is required for a proposed new road that will connect to a state highway. The authorization shall include a statement of any requirements or conditions that agency will impose as part of the improvement.*

*G. If the proposal is for a new road, the application shall include a proposed road name, with two alternative names, in accordance with the specifications in Section 12.06 of the Jefferson County Code.*

*H. A professionally prepared storm drainage plan showing the methods that will be used to accommodate runoff from the transportation improvement. The location of drainage swales, retention ponds, and all other parts of the proposed drainage system shall be shown on a site plan included in the drainage plan. Drainage facilities shall be designed to accommodate runoff from at least a fifty-year storm, taking into*

*consideration frozen ground conditions, without overloading existing drainage facilities or adversely affecting adjacent properties, streams, water bodies, irrigation ditches or other transportation facilities.*

JCZO Section 402.6 are application requirements that would apply once the applicant seeks a Driveway Connection Permit from Jefferson County for the facility. The Department reviewed the information provided in ASC Exhibit K to address the JCZO Section 402.6 application requirements and concurs that the information addresses the criteria. However, application requirements are not considered "applicable substantive criteria" under OAR 345-022-0030(3) and therefore recommended findings of fact and conclusions of law are not provided.

As previously discussed, the Council imposes Land Use Condition 1 requiring that the applicant, prior to construction, obtain all necessary local permits from Jefferson County, including the Driveway Connection Permit. The County, upon submission by the applicant of the proper application and payment of the proper fees, but without hearing or other proceeding, must promptly issue any necessary Driveway Connection Permits.[68]

***Section 402.7 Approval Standards***

*A. The improvement(s) will be consistent with any adopted Transportation System Plan for the area.*
*B. Any road improvement(s) will comply with all applicable requirements of Title 12 of the Jefferson County Code.*
*C. Dead-end roads shall serve a maximum of 19 lots or parcels. Dead-end roads shall terminate in a cul-de-sac, hammerhead or other turnaround that complies with the emergency vehicle access standards of Section 426.2(E).*
*D. Private roads shall meet the following standards:*
    *1. Private roads are allowed only in destination resorts.*
    *2. A private road shall not be approved if a public road is needed, or is likely to be needed, for development of adjacent or nearby lands or for the extension of an existing public road.*
    *3. A private road shall not be approved in a location planned for a public road in an adopted Transportation System Plan.*
    *4. The travel surface of a private road shall be constructed so as to ensure egress and ingress for the parcels served during normal climatic conditions, in accordance with the standards in Section 12.18 of the Jefferson County Code.*
*E. If the transportation improvement will be in an Exclusive Farm Use A-1, Exclusive Farm Use A-2, Range Land or Forest Management zone, the project will not force a significant change in, or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use, and is subject to the requirements of OAR 660-012-0065(5).*

[68] ORS 469.401(3).

*F. Transportation improvements listed in Sections 402.4(J) through (N) shall only be approved in an Exclusive Farm Use A-1, Exclusive Farm Use A-2, Range Land or Forest Management zone if found to comply with the requirements of OAR 660- 012-0065(5).*

*G. The project will comply with all other applicable standards of Chapter 4, such as flood plain or riparian protection provisions.*

*H. The transportation improvement will not result in increased runoff that would adversely affect adjacent properties, streams, water bodies, irrigation ditches or other transportation facilities, or overload existing drainage facilities.*

JCZO Section 402.7 establishes approval standards for transportation improvements. As previously discussed, the facility would include three main points of access from the existing SW Elk Drive, as presented in ASC Exhibit C Figures C-2A and C-2B. The applicant represents that the access points would be constructed in accordance with Jefferson County Code 12.18 road design standards under a Driveway Connection Permit. To ensure that the proposed access points provide safe and efficient access to the use, consistent with JCZO Section 402.4(D), the Council imposes Land Use Condition 1 requiring that, prior construction, the applicant submit a Driveway Connection Permit to the County and demonstrate to the Department that the permit has been obtained. The Council finds that based on compliance with the Driveway Connection Permit under Land Use Condition 1, the facility would comply with all applicable provisions under JCZO Section 402.7.

***Section 402.8 Conditions of Approval***

*A. Additional or higher standards than required by Section 402.7 may be imposed if deemed necessary by the County to protect public safety, to ensure that the transportation improvement is constructed to provide a minimum service life of at least 25 years, to facilitate development in the area, or to improve the interconnectivity of the existing transportation system.*

JCZO Section 402.8 authorizes the governing body, Council, to impose additional or higher standards for transportation improvements if deemed necessary to protect public health and safety. Because the applicant would obtain a Driveway Connection Permit from the county, the Council finds that the local permit would ensure that the three proposed access road segments would ensure the roads are designed in manner that would protect public health and safety. Therefore, the Council does not impose any additional conditions of approval under JCZO Section 402.8.

***Section 403 Clear-Vision Areas***

*A. In all zones, a clear-vision area shall be maintained on the corners of all property at the intersection of two roads, a road and a driveway, or a road and a railroad. A clear-vision area shall contain no planting, fence, wall, structure, or temporary or permanent obstruction exceeding three and one-half feet (3½) in height, measured from the*

*established road center line grade, except for authorized road signs and cyclone or other open construction fences which permit clear vision through the triangular area. Trees may be located in this area as long as all branches and foliage are removed to a height of eight (8) feet above the grade.*

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

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

JCZO Section 403 establishes clear vision area requirements for corner properties, and height restrictions for vegetation, fencing, walls, and other structures (both temporary and permanent) of three and one half (3 ½) feet, when measured from the established road centerline grade. The triangular clear-vision area, as described in JCZO Section 403 consists of a triangular area in which the two lot lines intersecting at the corner of a property represent two sides of the triangular clear-vision area. The third side of the clear vision area is created by connecting the two non-intersection sides of the first two lot lines. The third side would cross the corner of the corner property lot, for which the clear vision area is to be imposed. For the purposes of this standard, corner properties should be identified along the outside property lines of the applicant's lease boundary, rather than the internal property lines within the proposed site boundary. Furthermore, JCZO Section 403(c) establishes a minimum 30 foot vision clearance requirement for any side of the clear-vision area adjacent to a road, railroad, or access drive to a parking area. Similarly, a 15 foot vision clearance requirement would be applied to any side of the clear vision area adjacent to a residential driveway.

Based on review of ASC Exhibit C Figures C-2A and C-2B, the facility would not include structures located on or near the corners of the property at the intersection of two roads, a road and a driveway, or a road and a railroad. Therefore, because there are no clear vision areas that could be impacted by the facility, the Council finds that the facility would satisfy the requirements of JCZO Section 403.

***Section 404 Fences***

*Fences in all zones shall comply with the following standards:*

*A. Fences located on or directly adjacent to any property line shall not exceed a vertical height of six feet above the existing natural grade at time of erection or construction unless they are made of wire or other material that is not sight-obscuring. Sight-obscuring fences that will exceed six feet in height shall meet setbacks from property lines required by the zone where the fence will be located.*

*B. Any fence that will exceed six vertical feet in height above the existing natural grade requires a building permit.*
*C. Any fence located within the clear vision area described in Section 403 shall be of open type construction to permit clear vision at the intersection. D. Fences in a Wildlife Overlay Zone shall comply with the fencing standards in Section 321.4.*

JCZO Section 404 establishes fencing requirements for all zones, including height restrictions based on material composition of fences on or directly adjacent to any property line, building permit obligations for fences exceeding 6' in height, and vision clearance requirements if located in a clear vision area. The applicant proposes two options, both in height and type, for the security fence around the perimeter of the facility. As discussed in ASC Exhibit B, the applicant would either utilize chain-link or notch-style fencing, and would either be 6' tall with two strands of barbed wire, or 8' tall without any barbed wire.

The security fence is proposed to be setback from property lines by 30-feet, which the Department recommends Council find that the proposed security fence would not be "directly adjacent" or on any property lines, and therefore find that the vertical height restrictions of JCZO Section 404(a) would not apply. However, given that both proposed fencing options would exceed 6' in height (6' with 2 strands of barbed wire, or 8' with no barbed wire), the applicant would be required to obtain a building permit for the security fence. To ensure that applicable local permits are obtained (including building permits) prior to construction, the Council imposes Land Use Condition 1. Compliance with recommended Land Use Condition 1 would illustrate compliance with JCZO Section 404(B). Because the fence would either be constructed as chain-link or notch-style, the applicant concludes, and the Council concurs that either style of fencing would not obscure visibility or sight. Based on the above analysis and compliance with recommended conditions, the Council finds that the facility would comply with JCZO Section 404.

***Section 405 Outdoor Lighting***

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

JCZO Section 405 establishes requirements and restrictions for all outdoor lighting. In ASC Exhibit K, the applicant explains that to the extent outdoor lighting is installed at the facility, or associated with the facility, the lighting would be shielded to both illuminate downward and to

limit visibility from occurring at or beyond the property line. To ensure compliance with JCZO Section 405, the Council imposes the following condition:

**Land Use Condition 3:** The certificate holder shall design the facility in a manner that meets the following requirements:

a. Any outdoor lights shall be shielded to illuminate downward.
b. The outdoor light source (bulb or element) shall not be visible at or beyond the property line.

[GEN-LU-02]

Based on compliance with the above recommended condition, the Council finds that the facility would satisfy the outdoor lighting standards of JCZO Section 405.

***Section 406 Sign Regulations***

***Section 406.1 Regulations for all Signs***

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

*A. All outdoor advertising signs shall be in compliance with the provision of ORS Chapter 377 when applicable.*
*B. No outdoor advertising sign permitted by ORS 377 shall be erected within 100 feet of a residential dwelling without written consent of the owner and/or occupant of said dwelling.*

JCZO Section 406.1(A) and (B) provide requirements for outdoor advertising signs, which are not proposed. Therefore, the Council concludes that JCZO Section 406.1(A) and (B) would not apply.

*C. No sign shall be placed in a manner that will interfere with visibility or effectiveness of any official traffic sign or signal, or with driver vision at any access point or intersection.*
*D. No sign shall cause glare, distraction or other driving hazards, or by position, shape, color or other characteristic be similar to any traffic signal.*
*E. Light from a sign shall be directed away from roads and adjacent parcels. The light source shall be shielded to illuminate downward and the light source shall not be visible beyond the property line or parcel on which the sign is located. No sign may incorporate a bare incandescent bulb with wattage exceeding 20 watts, except as a shielded indirect light source. Illuminated signs require an electrical permit.*
*F. Sign structures may be placed within the required setbacks from property lines provided they comply with the vision clearance standards of Section 403, but may not be placed within or overhang a dedicated right-of-way unless a permit approving*

*the location has been issued by the Oregon Department of Transportation or County Public Works Department.*

*G. No sign may be situated in a manner that results in the blanketing of an existing sign.*

*H. A public agency, department, or entity with a significant public safety mission may be relieved of any sign regulation upon written application, a finding of how the relief enhances the public safety mission, and a finding that the relief poses no harm to the public within viewing distance. Under no circumstances will such a sign exceed 300 square feet.*

JCZO Section 406.1(C)-(H) provides general requirements applicable to all signs. The applicant represents that the minimum amount of signage necessary to identify the facility would be used, in accordance with the requirements of JCZO Section 406.1(C) through (H). To ensure compliance with the general signage regulations, the Council imposes the following condition:

**Land Use Condition 4:** The certificate holder shall design, and construct signage necessary for the facility or facility components in accordance with the requirements of JCZO Section 406.1(C) through (H) and 406.3.
[GEN-LU-03]

Based on the applicant's representations of the facility signage, and compliance with the above-described condition, the Council finds that the facility would satisfy the requirements of JCZO Section 406.1 (C) through (H).

***Section 406.2 Prohibited Signs***

*Prohibited Signs The following types of signs are allowed in commercial, industrial and service community zones, but are prohibited in all other zones:*

*A. Moving or flashing signs or signs which incorporate video or fiber optic displays or other mediums that display changing or moving text or images.*

*B. Anchored balloon or other inflatable signs.*

*C. Roof-mounted signs.*

JCZO Section 406.2 prohibits moving or flashing signs that incorporate video or fiber optic displays, and other mediums that display changing or moving text or images. Also prohibited are anchored balloon or other inflatable signs, and roof mounted signs. The applicant represents that none of the aforementioned prohibited signs would be used at the facility, and as such the that Council finds that JCZO Section 406.2 would not apply.

***Section 406.3 Sign Size Standards***

*Sign area shall be calculated based on the overall dimensions of all panels that display messages. When the sign message is not mounted on a panel, the sign area shall be calculated by drawing a regular geometric shape around the message area. For signs that are incorporated into murals, awnings and similar architectural features, only the*

*portion of the sign considered to contain a message will be calculated as sign area. Signs shall meet the following size standards:*

*A. Free-standing signs shall not exceed 35 feet or the height limit of the zone, whichever is less.*

*B. Signs mounted above an entrance to a building shall have a minimum ground clearance of eight feet.*

*C. Building-mounted signs shall not extend more than one foot above the exterior wall of the building.*

*D. Temporary signs that are 32 square feet or smaller are permitted in any zone.*

*E. In the Exclusive Farm Use A-1, Exclusive Farm Use A-2, Range Land, Forest Management, Park Management, Blue Lake, and Three Rivers Recreation Area Waterfront zones, one or more signs with a combined total area not exceeding 32 square feet are permitted on any tract. No more than one free-standing sign is permitted per parcel.*

*F. In the County Commercial, County Industrial, Airport Management (except for Madras Municipal Airport), and Crooked River Ranch Commercial zones, one or more signs with a combined total area not exceeding 300 square feet are permitted on any parcel. No individual sign shall exceed 150 square feet in area. No more than one free-standing sign is permitted per parcel.*

*G. In all other zones not specified in (E) and (F) except the Camp Sherman Rural Center and Camp Sherman Vacation Rental zones, one or more signs with a combined total area not exceeding eight square feet are permitted on any parcel.*

JCZO Section 406.3 provides sign size standards applicable to all signs, both temporary and permanent. Because the facility would be located within an area zoned as EFU A-1, the sign standards of JCZO Section 406.3(F) and (G) would not apply. The applicant anticipates using the minimum signage necessary to identify the facility and facility components. Signage at the facility, both temporary and permanent, would not exceed a combined 32 square feet in total. To ensure compliance with the size standards for signs, the Council imposes Land Use Condition 5, referenced above.

Based on the applicant's representations of the facility signs, and compliance with the above-described condition, the Council finds that the facility would satisfy the requirements of JCZO Section 406.3.

***Section 414 Site Plan Review***

***Section 414.3 Application Requirements***

*An application for site plan review must include 8 copies of a tentative plan that includes the information listed below. Additional information may be required if requested by the Site Plan Review Committee. The tentative plan must be clearly and legibly drawn on white paper to a standard engineer's scale (i.e., 1" = 100', 1" = 400' etc.). The scale used shall be large enough so that all required information is clearly legible. Separate sheets*

*may be submitted showing different facets of the site plan, such as landscaping, parking, drainage, etc. The tentative plan must contain the following:*

*A. The words "Tentative Site Plan", the property owner's name, the township, range, section, and tax lot number of the property, the date, a north point, and the scale of the plan.*

*B. Lot dimensions and orientation.*

*C. The location, size and purpose of all existing and proposed easements.*

*D. The location of any proposed fire protection system, hydrants or water supply available for fighting fire.*

*E. Location and dimensions of all existing and proposed buildings and structures, with distances between buildings and setbacks from property lines clearly shown.*

*F. The location of all buildings and other development on abutting parcels that is within ten feet of the subject property.*

*G. Existing and proposed walls and fences; location, height and materials.*

*H. Off street parking and loading facilities, in accordance with Sections 423 and 424, including:*

*1. Location, dimensions and methods of improvement of all driveways and parking areas.*

*2. Number of spaces and internal circulation pattern.*

*3. Access: Pedestrian, vehicular, service; and the location of all points of ingress and egress.*

*4. Loading: Location, dimensions, number of spaces, internal circulation and access from public right of way.*

*I. The location, size, and height of all proposed signs, and information on whether each sign will be lighted. Signs must comply with the sign standards in Section 406.*

*J. Lighting: General nature, location and hooding devices (not including interior building lighting). All exterior lighting sources are to be shielded to illuminate downward and the light source shall not be visible beyond the property boundary in accordance with the standards in Section 405.*

*K. The location, dimensions and methods of improvement for all property to be dedicated to general public purposes or to public utilities.*

*L. A detailed plan for any required or proposed landscaping that shall clearly illustrate:*

*1. Plants and tree species, their initial sizes and other proposed landscaping materials.*

*2. The location and dimensions of all areas to be devoted to landscaping, and location of any automatic sprinkler systems.*

*M. Outdoor storage and activities, if permitted in the zone: Type, location and height of screening devices.*

*N. Topographic information for any area with slopes exceeding 10 percent. Contour intervals shall be ten feet or smaller.*

*O. Drainage plan, in accordance with the requirements of Sections 414.4, or evidence that stormwater runoff will be accommodated by an existing storm drainage system.*

*P. Identification of proposed trash storage locations, including proposed enclosure design construction and access for pickup purposes.*

*Q. Location of all existing and proposed utilities and septic systems on or abutting the property.*
*R. Elevation drawings showing the exterior appearance of all proposed buildings.*

JCZO Section 414.3 establishes the application requirements for Site Plan Review. The Department reviewed the applicant's materials and information provided in ASC Exhibit K to demonstrate completeness of the Site Plan application. The Department disagreed that sufficient information has been provided to evaluate JCZO Section 414.3 (B, D and G). Because JCZO Section 414.3 establishes information requirements, which would be evaluated by Jefferson County prior to issuance of ministerial buildings permits needed for the facility (Land Use Condition 1), it is not necessary for Council to make findings of compliance.

***Section 414.4 Drainage***

*A. Applications for site plan review shall include a drainage plan prepared by a registered professional engineer or other expert that contains the following information:*
*1. The methods to be used to minimize the amount of runoff, siltation and pollution created during construction.*
*2. The methods that will be used to prevent runoff from the completed development onto adjoining properties, streams or rights-of-way.*
*3. Evidence that the drainage system will be adequate to handle runoff from a five year frequency storm.*
*B. All runoff shall be retained on site unless easements are obtained to allow a detentions pond, bioswale or other method of stormwater retention to be located on another property.*
*C. Drainage shall be designed to prevent water ponding unless a permanent retention or detention pond will be used. Drainage retention or detention ponds shall have slope edges not exceeding 1:3. Adequate security measures must be provided to prevent a safety hazard if ponds are used.*
*D. The drainage system shall incorporate methods to filter runoff from parking areas and access roads to prevent pollution of surface or subsurface waters.*

JCZO Section 414.4 establishes additional application requirements for Site Plan Review, specifically a Drainage Plan prepared by a professional engineer or other expert. The applicant describes that it would obtain a National Pollutant Discharge Elimination Permit (NPDES) 1200-C permit from DEQ-prior to construction (Soil Protection Condition 1). The NPDES 1200-C permit would include site plans developed by an engineer that demonstrates drainage through onsite stormwater management. The applicant submitted an application to DEQ for the NPDES 1200-C permit in November 2020, as confirmed by DEQ in February 2021.

While the applicant is still obligated to provide the Department and Jefferson County a drainage plan as part of the Site Plan, prior to obtaining its buildings permits, the Council considers that the draft plan provided in ASC Exhibit I Attachment I-1 meets the informational requirements of JCZO Section 414.4 for purposes of this review. Because JCZO Section 414.4 establishes

information requirements, which would be evaluated by Jefferson County prior to issuance of ministerial buildings permits needed for the facility, it is not necessary for Council to make findings of compliance.

***Section 414.5 Traffic Impact***

*A Traffic Impact Study in accordance with Section 421 may be required if, in the opinion of the Planning Director, the proposed development may result in traffic levels that are inconsistent with the functional classification of a road or would reduce the performance standard of a road or intersection below acceptable performance levels (LOS C), or if access to the property may cause a safety hazard.*

JCZO Section 414.5 authorizes the Jefferson County Planning Director the ability to require a traffic impact study should, in their opinion, the facility result in traffic levels inconsistent with the functional classification of a road or would reduce the performance standard of a road or intersection below acceptable performance level, or if access to the property may cause a safety hazard.

As presented in the evaluation of JCZO Section 421 below, the facility would result in a short-term, temporary increase in traffic impacts to NW Elk Drive, NW Pelton Dam Road and Willow Creek Road, which would be mitigated through compliance with the requirements of a Construction Traffic Management Plan, as recommended in Public Services Condition 1. Facility operations would not include full-time employees, and would be limited to a maximum of up to 4 workers per day, each with two round trip vehicle trips (or 16 one way trips) into and out of the facility for infrequent operations and maintenance activities. Therefore, the Council finds that the facility would not result in traffic levels inconsistent with the functional classification of a road, reduce the performance standard of a road or intersection below acceptable performance level, or result in access that would cause a safety hazard. For these reasons, the Council finds that a traffic impact study under JCZO Section 414.5 is unnecessary.

***Section 414.6 Approval Standards***

*The Site Plan Review Committee shall review the tentative site plan for compliance with the following standards:*

*A. All provisions of this zoning ordinance and other applicable regulations are compiled with.*

*B. Elements of the site plan are arranged so that:*

*1. Traffic congestion is avoided.*

*2. Pedestrian and vehicular safety and welfare are protected.*

*3. Significant features and public amenities are preserved and maintained.*

*4. Surface drainage systems are designed so as not to adversely affect neighboring properties, roads, or surface and subsurface water quality, in accordance with the requirements of Section 414.4.*

*5. Structures and facilities for storage, machinery and equipment, services (mail, refuse, utility wires, etc.), loading and parking and similar accessory areas shall be buffered or screened to minimize adverse impact on neighboring properties.*

*C. The development will not result in traffic volumes that will reduce the performance standard of a transportation facility below the minimum acceptable level identified in the applicable Transportation System Plan, and will comply with all applicable standards in Section 12.18 of the Jefferson County Code or applicable city standards if located within an urban growth boundary. This standard may be met through a condition of approval requiring improvements to the transportation facility. [O-065-19]*

*D. The site plan application shall demonstrate how the proposal will avoid or mitigate adverse impacts to agricultural or forestry uses on adjacent property.*

JCZO Section 414.6 establish approval standards for Jefferson County's Site Plan Review Committee. Based on the information provided in ASC Exhibit K to address applicable JCZO Chapter 3 and 4 provisions, and the analysis of that information and proposed conditions in this section of the order, the Council finds that the Site Plan would satisfy the approval standards under JCZO Section 414.6. Nonetheless, because Jefferson County's process for issuing building permits first requires review of the Site Plan, the applicant, prior to construction, would still be required to submit a final Site Plan for Department and Jefferson County review (Land Use Condition 1). Therefore, the Council finds that the facility would satisfy JCZO Section 414.6.

***Section 414.7 Conditions of Approval***

*A. In granting approval of a site plan, the County may impose conditions of approval deemed necessary to comply with the requirements of this Ordinance.*

*B. Installation of sprinklers or fire-fighting water supplies may be required when recommended by the appropriate fire protection agency.*

*C. A survey may be required if there is a question about the location of a property line, easement or other feature.*

*D. A bonding agreement in accordance with the provisions of Section 413 may be required to assure that conditions attached in granting approval of a site plan are met.*

JCZO Section 414.7 establishes conditions of approval that may be imposed by Jefferson County, following review of the Site Plan. Conditions of approval may include: any conditions deemed necessary to ensure compliance with zoning ordinance provisions; and, requirements for: installation of sprinklers or fire-fighting water supplies; a property survey; and, execution of a bonding agreement with the county for road improvements, if requested by a developer to assure that road improvements necessary for development are completed. In this instance, because the applicant requests Council review of local applicable substantive criteria, as is allowed under ORS 469.504(1)(b), Jefferson County may not impose any additional conditions following Site Plan Review because pursuant to OAR 469.401(3), the county is obligated to issue any necessary permits, following proper submission of application and fees, without hearing or other proceeding, and subject only to the conditions set forth in the site certificate. As presented throughout Section IV.E. *Land Use* of this order, the Council imposes numerous conditions to ensure compliance with applicable JCZO Chapter 3 and 4 provisions.

To address JCZO Section 414.7(B), the Department recommends Council rely on Public Services Conditions 2 and 3 which would require that, prior to construction, the applicant apply for and receive annexation of the facility property, resulting in fire response coverage by JCFD1 at the site and development and implementation of an Emergency Contingency Plan, coordinated with JCFD1, which would include an evaluation of all necessary fire-fighting equipment and water supply at the site, as presented in Section IV.M. *Public Services* of this order. These conditions are recommended, in part, to be consistent with comments obtained by the applicant from JCFD1 Fire Chief Brian Huff (ASC Exhibit U Attachment U-1), confirming JCFD1's interest in providing input on fire suppression mechanisms and water supply for the facility, if final facility design includes battery storage. Based on the scope of Public Services Conditions 2 and 3, the Council finds that these conditions would satisfy the intent of JCZO Section 414.7(B) and that it is unnecessary to impose other conditions.

To address JCZO Section 414.7(C), ASC Exhibit K Attachment K-6 provides title reports obtained on September 7, 2017 through American Land Title Association to determine property boundaries. Based on review of the title reports, the Council finds that there are no questions about the property line, easement or other feature within the proposed site boundary. Therefore, the Council finds it unnecessary to impose other conditions under JCZO Section 414.7(C).

To address JCZO Section 414.7(D), the applicant suggests that the bond or letter of credit needed for facility decommissioning, as evaluated in Section IV.G. *Retirement and Financial Assurance* of this order, would address JCZO Section 413 bonding agreement requirements. The Council disagrees that the facility decommissioning bond or letter of credit issued to the State of Oregon through the Department is intended to provide assurance that road improvements necessary for development of the facility site, or road improvements needed based on construction related damage, would be completed. Nonetheless, zoning ordinance language implementing the bonding requirements under JCZO Section 413.1(A) states, "As an alternative to completing required improvements, such as construction of roads, paving of parking areas, or installation of landscaping, prior to beginning development of a property, the Planning Director, Planning Commission or Board of Commissioners, after consultation with affected agencies, may allow the developer to enter into a bonding agreement." Therefore, the Council finds that JCZO Section 413 does not require that the applicant execute a bonding agreement with the county, but rather provides an option for the applicant to request county consideration of a bonding agreement to cover road improvements, if applicant were unable to complete. Because the applicant has not requested Council consideration of a bonding agreement, the Council finds that additional conditions under JCZO Section 414.7(D) are unnecessary.

***Section 415 Soil or Rapid Moving Landslide Hazard Procedures***

*A. If during the planning, sanitation, or building permit process, unusual soil or geologic conditions that may present a hazard to the structure are discovered, such conditions*

*shall be noted by the department. These conditions include but are not limited to slope, soil instability, shrink-swell, and high water table.*

*B. The Planning Department shall inform the applicant, and direct the applicant to the area Natural Resource Conservation Service (NRCS) or the State Department of Geology and Mineral Industries (DOGAMI) for further review of the soils and/or landslide area. If the NRCS or DOGAMI determines that a hazard is present, they may suggest certain mitigation measures, or recommend to the Planning Department that more extensive hazard mitigation work be done. Upon such a recommendation the county may require certification by a soils engineer, geologist or other appropriate professional that the structure is adequately protected from the hazard, or does not disrupt the natural setting so that it creates a hazard. If the area contains a DOGAMI designated rapid landslide area, development may not be permitted.*

*C. If required, the above certification shall be accepted by the county before permits are issued. If construction has begun, construction shall not proceed until certification is received.*

*D. Requirements made pursuant to this section may be appealed in conformance with Chapter 9 of this Ordinance.*

JCZO Section 415 establishes requirements to address potentially hazardous soil or geological conditions at the site of proposed development, identified during planning, sanitation or the building permit process. ASC Exhibit H provides an evaluation of seismic and non-seismic hazards within the facility site. Based on the evaluation of ASC Exhibit H, as presented in Section IV.C. *Structural Standard* of this order, the Council finds that there are not likely to be landslide hazards, but there could be a moderate risk level of wind and soil erosion at the facility site. The Council imposes Structural Standard Condition 1 requiring that the applicant, prior to construction, complete a site-specific geotechnical investigation of the site. Based on compliance with recommended Structural Condition 1, the Council finds that potential non-seismic hazards at the site would be appropriately evaluated and coordinated with DOGAMI. Therefore, the Council finds that the facility would satisfy the requirements of JCZO Section 415.

***Section 416 Grading, Fill and Removal***

***Section 416.2 Grading Permits Required***

*A grading permit shall be obtained prior to filling, excavation, drilling or dredging operations involving more than 50 cubic yards of material, except for the following:*

*A. Grading in an isolated, self-contained area, provided there is no danger to the public and the grading will not adversely affect adjoining properties.*

*B. An excavation below finished grade for basements and footings of a building authorized by a valid building permit. This exemption does not apply to fill using the material that was excavated.*

*C. Cemetery graves.*

*D. Solid waste disposal sites approved by DEQ.*

*E. Excavations for wells or trenches for utilities.*

*F. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay, provided such activities have been approved under other sections of this Ordinance.*
*G. Exploratory excavations performed under the direction of a registered design professional.*
*H. Grading, fill or removal done as part of a transportation improvement approved by the County Public Works Director.*

JCZO Section 416.2 requires grading permits for filling, excavation, drilling or dredging involving more than 50 cubic yards of material. ASC Exhibit K identifies that a grading permit would be required for the facility, as represented in Land Use Condition 1. Based on compliance with Land Use Condition 1, which would require that, prior to construction, the applicant obtain a grading permit from Jefferson County, the Council finds that the facility would satisfy the requirements of JCZO Section 416.2.

***Section 417 Historic Resource Protection***

***Section 417.1 Applicability***
*The provisions of this section apply to buildings, structures, objects or sites that have been designated as significant historic resources in the Comprehensive Plan Goal 5 inventory, or that are listed in the National Register of Historic Places.*

JCZO Section 417 establishes requirements applicable to significant historic resources included on the County's Goal 5 inventory or listed on the National Register of Historic Places. In ASC Exhibit K, the applicant asserts there are no such significant historic resources within the analysis area. Based on review of Jefferson County's Comprehensive Plan, Inventory of Historic Resources, and SHPO's concurrence with ASC Exhibit S, where no NRHP-listed resources were identified, the Council agrees and finds that JCZO Section 417 would not apply.

***Section 418 Airport Protection***

***Section 418.2 Applicability***
*The requirements of this section apply to proposed uses and structures within the protection zone areas shown in Sections 418.6, 418.7, 418.8 and 418.9, as follows:*
*A. The protection zone for the Madras City – County airport and Lake Billy Chinook airport shall be as shown and described in Sections 418.6 and 418.9.*
*B. The protection zone for the Ochs private airport shall be as shown and described in Sections 418.7 and 418.9;*
*C. The protection zone for heliports shall be as shown and described in Section 418.8.*

JCZO Section 418.2 establishes requirements for the protection of airports. ASC Exhibit E includes determinations issues by the Federal Aviation Administration (FAA) confirming that the facility would not result in any hazards to air navigation, and issued No Hazard Determinations for the facility. The FAA hazard determinations were issued in September 2019 and are valid for

18 months. As presented in Section IV.M. *Public Services*, the Department recommends Council impose Public Services Condition 2, requiring that the applicant demonstrate it has renewed and obtained a new FAA determination, prior to construction. Based on compliance with Public Services Condition 2, the Council finds that the facility would satisfy the applicable requirements of JCZO Section 418.

***Section 419 Riparian Protection***[69]

***Section 419.7 State Scenic Waterways***

*A. The following river segments are designated State Scenic Waterways:*
*1. The Metolius River from Metolius Springs to Candle Creek.*
*2. The Deschutes River from the south county line to Lake Billy Chinook.*
*3. The Deschutes River from Pelton Dam to the north county line.*
*4. The John Day River.*

*B. The County will notify the Oregon Parks and Recreation Department upon receiving an application for a land division, building permit, development or other change in land use involving land within one-fourth mile of the bank of a state Scenic Waterway.*

*C. All new development within one-fourth mile of the bank of a state Scenic Waterway shall be in compliance with any management plan adopted by the Oregon Parks and Recreation Department for the waterway. Pursuant to ORS 390.845(3), the property owner is required to provide a written notice to the Parks and Recreation Department, including a detailed description of any proposed use involving land within one-fourth mile of the bank of a state Scenic Waterway, prior to placing any building or structure, modifying an existing building or structure, clearing, leveling, filling or excavating, engaging in the cutting of trees, mining, prospecting, constructing roads, railroads, utilities, or putting the land to a use to which the land was not being put before December 3, 1970. The proposed improvement or change in land use shall not be made or work started sooner than one year after such notice unless the Parks and Recreation Department has given its written approval of the proposal.*

*D. Buildings proposed within one-half mile of the top of bank of a state scenic waterway shall be finished in natural wood or earth tone colors if the building will be visible from the waterway. The finish shall be chosen to enable the structure to blend with the surrounding landscape and to be as unobtrusive as possible.*

JCZO Section 419.7 establishes requirements applicable to State wild and scenic rivers included on the County's Goal 5 inventory. As presented in ASC Exhibit K, the facility is approximately 4.2 miles from the nearest State wild and scenic waterway. Therefore, no proposed building would be within one-half mile from the top bank of a federal wild and scenic river, and the design requirements of JCZO 419.7(D) would not apply. Based on review of Jefferson County's

[69] JCZO 419.1 and 419.6 included in ASC Exhibit K but omitted from this order because the provisions are not applicable to the facility.

Comprehensive Plan, and of ASC Exhibits L, R, and T, the Council agrees finds that JCZO Section 419.7 would not apply.

***Section 419.8 Federal Wild and Scenic Rivers***

*A. The following river segments are designated Federal Wild and Scenic Rivers:*
*1. The Metolius River from Metolius Springs to Lake Billy Chinook.*
*2. The Deschutes River from the south county line to Lake Billy Chinook.*
*3. The Deschutes River from Pelton Dam to the north county line.*
*4. The John Day River.*
*5. The Crooked River from the south county line to Dry Creek.*

*B. Upon receiving an application for a land division, building permit, development or other change in land use involving land within one-fourth mile of the bank of a Federal Wild and Scenic River, the County will notify the Bureau of Land Management in the case of the Deschutes, John Day or Crooked Rivers, or the US Forest Service in the case of the Metolius River. Comments and recommendations from those agencies will be considered in the review of the application.*

*C. Buildings proposed within one-half mile of the top of bank of a federal wild and scenic river shall be finished in natural wood or earth tone colors if the building will be visible from the river. The finish shall be chosen to enable the structure to blend with the surrounding landscape and to be as unobtrusive as possible.*

JCZO Section 419.8 establishes requirements applicable to Federal wild and scenic rivers included on the County's Goal 5 inventory. As presented in ASC Exhibit K, the facility is approximately 4.2 miles from the nearest federal wild and scenic waterway. Therefore, no proposed building would be within one-half mile from the top bank of a federal wild and scenic river, and the design requirements of JCZO 419.8(C) would not apply. Based on review of Jefferson County's Comprehensive Plan, and of ASC Exhibits L, R, and T, the Council agrees and finds that JCZO Section 419.8 would not apply.

***Section 420 Endangered Species***

*Upon receipt of an application for an action or development that will disrupt habitat or the breeding site of a species listed as endangered by the U.S. Fish & Wildlife Service, the County will place a hold on the Permit until the applicant develops a program to protect the site or habitat or both. The Oregon Department of Fish & Wildlife will be consulted in the development and approval of the plan.*

JCZO Section 420 requires development of a program to protect habitat or breeding sites of federally listed endangered species, if a proposed action would impact such areas. Based on review of ASC Exhibit Q, which includes an evaluation of the potential presence of both federal and state listed endangered species, the Council finds that the facility would not be likely to impact habitat or breeding sites of federally listed endangered species. Therefore, the Council finds that JCZO Section 420 would not apply.

***Section 421 Traffic Impact Studies***

*A traffic impact study may be required as part of an application for Site Plan Review, a conditional use permit, a land division, or a zoning map amendment. The study shall be prepared by a licensed professional engineer with expertise in traffic engineering. The study shall address the following:*

*A. The projected traffic volume in Average Daily Trips (ADT) that will be generated by the proposed development, based on the current edition of the Institute of Transportation Engineers Trip Generation manual or similar authority, including a breakdown of the projected ADT of vehicles entering the site from different directions and the direction vehicles will go when exiting the site.*

*B. The existing traffic volumes and level of service of the transportation facility, and how these will change if the proposed development is approved.*

*C. The existing roadway and intersection conditions, and the future conditions if the proposed development is approved, taking into consideration both the traffic volume and the weight of vehicles associated with the proposed use.*

*D. Recommended mitigation measures if the proposed development will adversely affect a transportation facility.*

JCZO Section 421 establishes that a Traffic Impact Study may be required as part of an application for Site Plan Review, Conditional Use Permit, land division or zoning map amendment. As described in this section, the applicant would be required to both submit an application for Site Plan Review and obtain a Condition Use Permit for the facility.

As presented in Section IV.M. *Public Services* of this order, facility construction would result in short-term, temporary increases in traffic levels on SW Belmont Lane to SW Elk Drive. Construction related traffic impacts may result in an up to 49 percent increase in daily traffic levels SW Elk Drive and SW Belmont Lane. However, the Council imposes Public Services Condition 1 requiring that, during construction, the applicant implement and adhere to the requirements of a Construction Traffic Management Plan. Facility operation would not include permanent, full-time employees, and at most would include up to 4 worker vehicles per day travelling to the site for routine operations and maintenance. Based on compliance with Public Service Condition 1 and the minimal amount of operational traffic, the Council finds that a Traffic Impact Study would not be necessary for the facility. Therefore, the provisions of JCZO Section 421 would not apply.

***Section 422 Temporary Uses***

*Temporary uses may be allowed in any zone subject to the provisions of this section. The temporary use shall be discontinued upon expiration of the time period allowed for the use, and the site returned to its previous condition. Permanent buildings or structures shall not be constructed as part of a temporary use.*

***Section 422.10 Other Temporary Uses***

*Other temporary uses may be approved by the Planning Director under the Administrative Review procedures in Section 903.4 if the proposed use will have a minimal adverse impact*

*on surrounding properties and roads, taking into consideration the location, proposed duration and operating characteristics of the use.*

JCZO Section 422.10 establishes that "other" temporary uses are allowed in any zone if the proposed use would have a minimal adverse impact on surrounding properties and roads, taking into consideration the location, proposed duration and operating characteristics of the use.[70] In ASC Exhibit B, the applicant identifies that the facility may include a temporary concrete batch plant. The Council evaluated the temporary concrete batch plant under JCZO Section 422.10; the temporary concrete batch plant would not require permanent facilities or structures, and would be located at the site for less than 6-months in duration to support concrete production for facility structures requiring a concrete foundation.

If a temporary concrete batch plant is needed to support facility construction, the applicant would be required to obtain a DEQ-issued Air Contaminant Discharge Permit (ACDP), which would establish throughput and emission limits. Based on compliance with the restrictions imposed in DEQ's ACDP, which would regulate and control visible fugitive dust emissions, the Council finds that the proposed temporary concrete batch plant would have a minimum adverse impact on surrounding properties and roads and would therefore be consistent with JCZO Section 422.10.

***Section 423 Off-Street Parking Requirements***

***Section 423.1 Applicability***

*At the time of erection of a new structure or at the time of enlargement or change in use of an existing structure, off-street parking spaces shall be provided in accordance with this Section.*

JCZO Section 423.1 establishes off-street parking requirements based on proposed use. The facility is considered an industrial use under JCZO Section 423.2 and therefore requires a minimum of 1 space per employee on the largest working shift. The applicant provides that because the facility would not have full-time, onsite workers, that JCZO Section 423.1 would therefore not apply. However, because operations could include up to 4 part-time technicians, the parking requirements of JCZO Section 423.1 requiring at least 1 space per employee would be met by maintaining the gravel parking area within the .56 acre staging and laydown area. During construction, the gravel parking area would be located adjacent to the construction trailer, and then would be maintained throughout operations. For these reasons, the Council finds that the facility would satisfy JCZO Section 423.1.

***Section 426 Fire Safety Standards***

***Section 426.2 Mandatory Standards***

[70] JCZO Chapter 1 Section 105 Definitions defines "temporary" as a "time period of 6 months or less in any 12-month period, unless otherwise specified in this Ordinance.

*The following fire safety standards are mandatory for all new construction in the unincorporated areas of Jefferson County, unless a variance has been granted in accordance with Section 426.5. New construction includes additions to existing buildings and replacement buildings.*

*A. Roof Coverings New buildings, reroofing of existing buildings, and additions to buildings that will have a roof area more than 50 percent of the existing roof area, shall have Underwriter's Laboratory rated Class A or B roofing or equivalent, or tile or metal roofing. Wood roofing of any type, including pressure treated wood shingles or shakes, is prohibited.*

*B. Chimneys and Stovepipes The openings of all chimneys and stovepipes shall be completely covered with a spark arrester which is constructed of 12 USA standard gauge wire which has openings no larger than ½ inch in size.*

*C. Slope New dwellings shall be located on a slope of less than 40 percent, based on the natural grade.*

*D. Fire Fighting Protection Where possible, dwellings shall be located within a fire district that provides structural fire protection. If the property is not in a fire district, the following standards shall be met:*

*1. The property owner shall provide evidence that they have requested that the nearest fire district either annex the property, or provide fire protection by contract if annexation is not possible. If the fire district will not provide protection, the County may require alternative fire protection measures, including one or more of the recommended standards in Section 426.3.*

*2. The property owner shall sign and record in the deed records for the County a Waiver of Remonstrance and Agreement binding the landowner, and the landowner's successors in interest, acknowledging that the property is in an area where no fire protection will be provided and 224 agreeing to hold Jefferson County harmless for any damage to life or property caused by fire.*

*E. Emergency Vehicle Access to within 50 feet of all buildings shall be constructed to the following standards unless a variance has been granted in accordance with Section 426.5. However, existing access to a lawfully established building that does not meet these standards need not be upgraded to comply with the standards when an improvement to the building or a proposed accessory building is valued at less than $10,000, provided that the existing access is adequate to provide ingress and egress by fire protection vehicles.*

*1. Access roads and driveways serving a single residence shall have a surface width of at least 12 feet. The width shall be increased to a minimum of 14 feet in curves with a centerline radius of less than 150 feet to ensure emergency vehicles remain on an all-weather surface. The area extending at least 10 feet from each side of the driveway's centerline shall be kept clear of obstructions and shall be maintained as a fuel break. Driveways more than 250 feet in length shall include turnouts at 150 foot intervals or lesser distance as needed to allow visibility. Turnouts shall be at least 10 feet in width and 50 feet in length, and shall meet the same load requirements as required by subsection (4).*

2. *Access roads and driveways serving more than one residence shall have a surface width of at least 20 feet.*
3. *Commercial or industrial buildings that will have any portion of an exterior wall more than 150 feet from an existing road shall have an emergency vehicle access drive with a surface width of at least 20 feet.*
4. *A minimum clear height of at least 14½ feet shall be maintained for the entire width of the driveway.*
5. *Access shall be designed and constructed to maintain a minimum 75,000 pound load carrying capacity. If not designed by an engineer, driveways shall be constructed of a minimum of 5 compacted inches of crushed rock meeting ODOT material standards. The road shall be compacted until a loaded 10 cubic yard dump truck ceases to deflect the road.*
6. *Maximum finished grade shall be no greater than 10 percent unless approved by the fire chief. Grade shall not exceed 4 percent in turnarounds. Any portion of the access with a grade greater than 8 percent shall be surfaced with 1.5 inch class C asphalt mix, 0-11 oil mat, or four inch fiber mesh reinforced Portland cement concrete.*
7. *Curves shall have a minimum centerline radius of 55 feet, including the intersection of a driveway with a public road.*
8. *Gates shall be a minimum of 20 feet wide, and shall be of a swinging or sliding type constructed of materials that allow manual operation by one person. Electric gates shall be equipped with a Knox box purchased from the fire district.*
9. *Dead-end access roads and driveways more than 150 feet in length shall terminate in a 120-foot hammerhead, 60-foot "Y" or 96-foot diameter culde-sac or alternative turnaround arrangement as shown in the following diagrams. Turnarounds shall also be provided every ½ mile on dead-end access roads and driveways exceeding one mile in length. The turnaround area shall meet the same load requirements as required by subsection (4).*

F. *Address Signs An address sign shall be posted at the point where a driveway leaves a road, in such a manner as to be visible to vehicles approaching from both directions. A directional address sign must also be posted at the junction where an individual driveway leaves a shared driveway. Address signs shall contain white, reflective numbers at least 3 inches in height on a green background.*

G. *Fuel Breaks Irrigated agricultural land and properties that are inside an Urban Growth Boundary are exempt from the fuel break requirements, but must comply with all other fire safety standards. Fuel breaks shall not be developed within riparian protection areas required by Section 419.1. In all other areas, fuel breaks are required that meet the following standards, unless a variance has been granted in accordance with Section 426.5:*

1. *A primary fuel break shall be developed and maintained around all buildings. The fuel break shall be at least 30 feet wide, or to the property 226 line, whichever is the shortest distance. The fuel break shall be measured from the furthest extension of the structure, including attached carports, the outside edge of a deck, and the edge of roof eaves. The goal within the primary fuel break is to*

*remove fuels that will produce flame lengths in excess of one foot. Brush, downed limbs and other dead plant material must be removed. The primary fuel break should contain primarily nonflammable ground cover such as asphalt, concrete, rock, brick, bare soil, green grass, or succulent ground cover. Combustible ground cover or plant materials, such as bark mulch or accumulated leaves and needles, are prohibited within twelve inches of buildings. Herbaceous plants such as groundcovers, bedding plants, bulbs and perennial flowers are permitted provided they are kept green during the fire season. Dry grass is allowed if kept less than four inches in height. Isolated groupings of deciduous ornamental shrubbery and trees, native trees or other low plants (less than 24 inches) are allowed when maintained in a green condition free of dead plant material and ladder fuels, and provided they are arranged and maintained in such a way that minimizes the possibility a fire can spread to adjacent vegetation. Healthy trees are permitted, provided they are pruned to remove branches that are dead or that are less than 10 vertical feet above the ground. A 15-foot clearance between tree limbs and stovepipes or chimney outlets must be maintained. No branches may overhang within 25 vertical feet of a roof. Areas under decks shall be kept free of firewood, stored flammable materials, leaves and needles.*

2. *A fuel break shall be developed and maintained immediately adjacent to any driveway that is more than 150 feet in length. The fuel break shall extend at least ten feet from each side of the centerline of the driveway, or to the property line, whichever is the shortest distance. A minimum clear height of at least 14½ feet shall be maintained for the entire width of the driveway and fuel break. The driveway fuel break shall meet the same requirements as outlined in subsection (1) for ground cover and limbing of trees.*

H. *Storage of Flammable Materials The area under decks and stairways shall be kept free of flammable material, including leaves and needles. Firewood and lumber piles shall be kept at least 20 feet away from buildings from April 1 through November 1, unless kept within a fully enclosed building.*

JCZO Section 426 establishes mandatory fire safety standards for the protection of buildings from fire hazard. JCZO Section 105 defines buildings as, "a structure built, use or intended for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind, and consisting of a floor, roof, and at least three walls. In response to JCZO Section 426, the applicant refers to the proposed O&M enclosure as the only building that JCZO Section 426 would apply. However, if the proposed substation, switching substation and battery storage systems meet the above definition, JCZO Section 426 would also apply. Consistent with the established mandatory fire safety standards, as applicable, the Council imposes the following condition:

**Land Use Condition 5:** In order to obtain building permits from Jefferson County (Land Use Condition 1), the certificate holder shall demonstrate to the Department and Jefferson County Planning Department that the final facility design adheres to the following requirements for any onsite buildings which have a floor, roof and at least three walls:

a. All buildings shall have Underwriter's Laboratory rated Class A or B roofing or equivalent, or tile or metal roofing.
b. Facility access roads shall have a surface width of at least 20 feet, with minimum carrying capacity of 75,000 pounds. If not designed by an engineer, access roads shall be constructed of a minimum of 5 compacted inches of crushed rock meeting ODOT material standards. The access roads shall be compacted until a loaded 10 cubic yard dump truck ceases to deflect the road.
c. Facility access roads shall have a finished grade no greater than 10 percent unless approved by the fire chief. Grade shall not exceed 4 percent in turnarounds. Any portion of the access with a grade greater than 8 percent shall be surfaced with 1.5 inch class C asphalt mix, 0-11 oil mat, or four inch fiber mesh reinforced Portland cement concrete.
d. Curves shall have a minimum centerline radius of 55 feet, including the intersection of a driveway with a public road.
e. Gates shall be a minimum of 20 feet wide, and shall be of a swinging or sliding type constructed of materials that allow manual operation by one person. Electric gates shall be equipped with a Knox box purchased from the fire district.
f. An address sign shall be posted at the point where a driveway leaves a road, in such a manner as to be visible to vehicles approaching from both directions. A directional address sign must also be posted at the junction where an individual driveway leaves a shared driveway. Address signs shall contain white, reflective numbers at least 3 inches in height on a green background.
g. A primary fuel break shall be developed and maintained around all buildings. The fuel break shall be at least 30 feet wide, or to the property 226 line, whichever is the shortest distance. The fuel break shall be measured from the furthest extension of the structure, including attached carports, the outside edge of a deck, and the edge of roof eaves. The goal within the primary fuel break is to remove fuels that will produce flame lengths in excess of one foot. Brush, downed limbs and other dead plant material must be removed. The primary fuel break should contain primarily nonflammable ground cover such as asphalt, concrete, rock, brick, bare soil, green grass, or succulent ground cover. Combustible ground cover or plant materials, such as bark mulch or accumulated leaves and needles, are prohibited within twelve inches of buildings. Herbaceous plants such as groundcovers, bedding plants, bulbs and perennial flowers are permitted provided they are kept green during the fire season. Dry grass is allowed if kept less than four inches in height. Isolated groupings of deciduous ornamental shrubbery and trees, native trees or other low plants (less than 24 inches) are allowed when maintained in a green condition free of dead plant material and ladder fuels, and provided they are arranged and maintained in such a way that minimizes the possibility a fire can spread to adjacent vegetation. Healthy trees are permitted, provided they are pruned to remove branches that are dead or that are less than 10 vertical feet above the ground. A 15-foot clearance between tree limbs and stovepipes or chimney outlets must be maintained. No branches may

overhang within 25 vertical feet of a roof. Areas under decks shall be kept free of firewood, stored flammable materials, leaves and needles.

h. A fuel break shall be developed and maintained immediately adjacent to any driveway that is more than 150 feet in length. The fuel break shall extend at least ten feet from each side of the centerline of the driveway, or to the property line, whichever is the shortest distance. A minimum clear height of at least 14½ feet shall be maintained for the entire width of the driveway and fuel break. The driveway fuel break shall meet the same requirements as outlined in subsection (1) for ground cover and limbing of trees.

[GEN-LU-04]

In ASC Exhibit K, the applicant commits to adhering the all of the above referenced mandatory standards, as applicable. Based on the applicant's representations and compliance with the above-recommended condition, the Council finds that the facility would satisfy the requirements of JCZO Section 426.2

***Section 426.3 Recommended Standards***

*The following fire safety standards are recommended in all areas that are susceptible to a wildfire, and one or more of the standards may be required in areas with a high wildfire hazard when a fire district will not provide structural fire protection:*

*A. All permanent openings into and under the structure, including the area under decks, shall be completely covered with noncombustible, corrosion-resistant, mesh screening material which has openings no greater than ¼ inch in size.*

*B. Eaves shall be boxed in.*

*C. Fire resistant building materials such as stucco or fiber-cement siding shall be used.*

*D. An automatic fire sprinkler system shall be installed.*

*E. Onsite firefighting equipment and water storage shall be provided. The water supply shall contain at least 4,000 gallons at all times. Road access to within 15 feet of the water source shall be provided for fire apparatus, with a turnaround adequate to accommodate the firefighting equipment. Permanent signs shall be posted along the access route to show the location of the emergency water source. If providing road access to the water source is not feasible, the water source shall be equipped with a minimum 2 ½ inch dry standpipe assembly equipped with NST (National Standard Thread) fittings to enable fire equipment to draught water.*

*F. A minimum 20 foot secondary fuel break shall be created around buildings. The secondary fuel break shall extend in all directions around the primary fuel break required by Section 426.2(G). An additional 50 feet, for a total of 100 feet of fuel break, shall be created when the slope around a dwelling exceeds 20 percent. This additional 50 feet is required downhill and to each side of the dwelling, but is not required uphill of the dwelling. The goal of the secondary fuel break is to reduce fuels so that the overall intensity of a wildfire will be lessened and the likelihood of crown fires and crowning is reduced. Healthy trees are permitted, provided they are pruned to remove branches that are dead or that are less than 10 vertical feet above the ground. Small trees and shrubs growing underneath larger trees must be removed or*

*pruned to less than 1/3 the height of the lowest branch of the larger trees. Understory vegetation may include lawns or groundcover maintained at less than 12 inches in height, and low shrubs arranged in a manner so that fire cannot spread between plantings or into trees. Brush and dead plant material must be removed.*

*G. Open fires and use of burn barrels shall not occur unless in compliance with Jefferson County fire District standards.*

*H. LPG tanks shall be placed according to state Fire Marshall standards.*

JCZO Section 426.3 establishes additional fire safety standards which would be recommended in areas susceptible to wildfires, specifically when a fire district would not provide structural fire protection. In ASC Exhibit U, the applicant commits to submitting an application for annexation of the proposed site boundary into Jefferson County Fire District #1 (see recommended Public Services Condition 3).

ASC Exhibit U Attachment U-1 provides a letter dated March 2020 from Jefferson County Fire Chief/Fire Marshal Brian Huff which affirms that the facility would not result in significant impacts to fire risk within the area and does not request any additional standards be applied, which the exception of the fire prevention measures proposed by the applicant and recommended in Public Services Condition 4. The Council finds that, based on compliance with Public Services 3, there are no reasons to impose additional fire safety conditions.

***Section 426.4 Timing of Compliance with Standards***

*A. Compliance with the standards in subsections 426.2 (A) through (D) will be verified at the time of application for a building permit. Building permits will not be issued unless the building plans clearly show that the standards will be met.*

*B. The standards in subsections 426.2 (E) through (G) must be met at or prior to beginning framing of the building, or prior to placement of a manufactured home. 228 No building inspections other than for the forms and foundation will be approved until the standards are met.*

*C. If the proposal is for an agricultural building or equine facility that is exempt from obtaining building permits, the applicant shall provide evidence that all standards are met at the time of application for the exemption. The exemption will not be approved until the standards are met.*

JCZO Section 426.4 establishes the applicable timing requirements for demonstrating compliance with fire safety standards. The applicant must demonstrate compliance with JCZO Section 426.2(A) through (D) prior to the issuance by Jefferson County of any building permits needed. The applicant must demonstrate compliance with JCZO Section 426.2(E) through (G) prior to commencing building construction.

***Section 429 Archeological Preservation***[71]

[71] JCZO 429.1, 429.2, and 429.3 were included in ASC Exhibit K but omitted from this order because the provisions are not applicable to the facility.

***Section 429.4 Notification Required***

*A. Any permitted person who conducts an archaeological excavation associated with a prehistoric or historic American Indian archaeological site shall notify the Confederated Tribes of the Warm Springs Reservation and follow the requirements of ORS 358.950.*

*B. If a person who is conducting an archaeological investigation finds a sacred object or object of cultural patrimony, the person shall notify in writing the State Historic Preservation Officer and the Confederated Tribes of the Warm Springs Reservation.*

*C. If an archeological site, native Indian sacred object, funerary object, or object of cultural patrimony is encountered during the process of development, including by construction, excavating, logging or agricultural activity, whether the site or object was previously known to exist or not, development shall immediately stop and the Confederated Tribes of the Warm Springs Reservation and the Commission on Indian Services shall be immediately notified.*

*D. If human remains are encountered during excavation of an archaeological site on privately owned property, or if development, including construction, excavating, logging or agricultural activity accidentally exposes human remains, all excavation and development shall cease and the Oregon State Police, the State Historic Preservation Office, the Confederated Tribes of the Warm Springs Reservation and the Commission on Indian Services shall be notified as required by ORS 97.740 to 97.990.*

JCZO Section 429.4 requires permitted uses to comply with notification requirements established for archeological preservation. In response to JCZO Section 429.4, the applicant explains that not only are archeological excavations not proposed during construction of the facility, but that the procedures outlined in the Inadvertent Discovery Plan (included as Attachment I of this order) would be followed in the event of an inadvertent discovery. In Section IV.K. Historic, *Cultural and Archeological Resources*, the Council imposes Historic, Cultural, and Archeological Condition 1 which requires construction activities be conducted in compliance with the Inadvertent Discovery Plan and its attachment. Based on the applicant's assertions that no construction excavation would occur, and compliance with Historic, Cultural, and Archeological Condition 1, the Council finds that the facility would satisfy the requirements of JCZO Section 429.4.

***Section 433 Photovoltaic Facilities***

*All photovoltaic facilities shall meet the requirements of OAR 660-033-130(38), are a conditional use subject to Chapter 6 Conditional Use, and all other applicable criteria for the development under the Jefferson County Zoning Ordinance.*

JCZO Section 433 establishes that photovoltaic facilities must comply with OAR 660-033-0130(38), Chapter 6 Conditional use requirement, and all other applicable JCZO criteria. This section presents an evaluation of compliance with OAR 660-033-0130(38) and all other

applicable JCZO criteria. Based on the evaluation presented in this section of the order, the Council finds that the facility would satisfy JCZO Section 433.

***JCZO Chapter 6 Conditional Uses***

***Section 601 Authorization to Grant or Deny Conditional Uses***

*A. Uses listed in this Ordinance as requiring conditional use approval are not outright permitted uses. They may be allowed only if found to comply with the approval criteria in Section 602. An application for a conditional use permit shall be reviewed by the Planning Commission at a public hearing, in accordance with the procedures in Section 903.5. The Planning Commission may approve, approve with conditions, or deny the application.*

*B. A use that was established prior to the effective date of this ordinance, but that is now classified as a conditional use in the zone, may continue without additional County approval.*

*C. Any proposal to change or expand a conditional use requires submittal of an application, which will be processed as if it were for a new conditional use. In the event the application is denied, the use may continue at its previous level and scope.*

JCZO Section 601 establishes provides criteria (A) – (C) applicable to the County's authorization to grant or deny a conditional use. As established in JCZO Section 601(A), a conditional use is allowed if found to comply with JCZO Section 602. As presented below, the Council finds that the facility would comply with all applicable approval criteria identified in JCZO Section 602.

***Section 602 Approval Criteria***

*Conditional use applications must show compliance with approval criteria of the underlying zone and this Section. The burden of proof is on the applicant to submit sufficient information to demonstrate that the application complies with the approval criteria. For instance, a traffic impact study in accordance with Section 421 may be needed to show compliance with criterion (D). An applicant may demonstrate that the approval criteria will be satisfied through the imposition of clear and objective conditions of approval, in accordance with Section 603. The following criteria must be met:*

JCZO Section 602 establishes approval criteria for conditional use permit applications, as evaluated below.

*A. The proposal is consistent with all applicable standards and criteria of the Zoning Ordinance;*

As presented in this section, the Council finds that the facility would satisfy all applicable standards and criteria of JCZO, except JCZO Section 301.4, which limits a "commercial utility facilities for the purpose of generating power for public use by sale" to using no more than 12 acres of high-value farmland, unless a goal exception is taken. As presented in Section IV.E.3

Goal 3 Exception, the Council finds that the applicant's reasons exception and ESEE analysis justify an exception to the Statewide Policy Goal 3 for Agricultural Lands.

*B. Taking into account location, size, design and operating characteristics, the proposal will have a minimal adverse impact on the (a) livability, (b) value, and (c) appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright. In cases where there is a finding of overriding public interest, this criterion may be deemed met when any adverse impact resulting from the use will be mitigated or offset to the maximum extent practicable;*

JCZO Section 602 requires a demonstration that the facility would have a minimal adverse impact on the livability, value and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright. The applicant identifies uses permitted outright as including: (H) operations for the exploration and production of geothermal resources and oil and gas, (I) operations for the exploration of minerals, (L) utility facility service lines and accessory facilities or structures, and (N) a site for the takeoff and landing of model aircraft and associated buildings and facilities.

To evaluate potential livability impacts from the facility, the applicant considered visual impacts, air emissions and hazardous waste. The facility would result in visual impacts to abutting properties, but that would be consistent with the type of visual impacts from other uses permitted outright, as described above. The facility would not result in air emissions or hazardous waste. Based on the identified impacts, as evaluated in the ASC, the Council finds that the facility would have a minimal impact on the livability of abutting properties and surrounding area.

To evaluate potential impacts from the facility to the value of adjacent properties, the applicant relies on the evaluation provided in response to JCZO Section 301.5, where the Council finds that the facility would not result in a significant impact to accepted farm practices, or the cost thereof. Compared to potential impacts from other uses permitted outright within EFU A-1 zoned land to the value of adjacent properties, and the findings that facility would not impact farming practices, the Council finds that the facility would have a minimal adverse impacts on the value of abutting properties and surrounding area.

To evaluate whether the facility would have more than a minimal adverse impact on potential future development on abutting properties, the applicant states: there are no properties/tax lots within the 0.5-mile land use analysis area zoned for residential use and the topography to the east, north, and west sides of the proposed site boundary, consists of canyon rims and steeps cliffs, which render these properties/tax lots unable to be developed which is documented in ASC Exhibit C Figure 2-CA and 2-CB. Based on this information, and the evaluation under JCZO Section 301.5 where the Council finds that the facility would not result in significant impacts to farming practices, or the cost thereof, to surrounding properties, the Council concludes that facility would not have more than a minimal adverse impact on potential future development on abutting properties and a. Based on the evaluation presented

in this order, the Council finds that the facility would have a minimal adverse impacts on the (a) livability, (b) value, and (c) appropriate development of abutting properties and surrounding area.

*C. Adequate facilities and services are available or can be made available to serve the proposed use, including, but not limited to, water supply, sewage disposal, electric power, law enforcement service and fire protection;*

*D. The development will not result in traffic volumes that will reduce the performance standard of a transportation facility below the minimum acceptable level identified in the applicable Transportation System Plan, and will comply with all applicable standards in Section 12.18 of the Jefferson County Code or applicable city standards if located within an urban growth boundary. This criterion may be met through a condition of approval requiring improvements to the transportation facility. [O-065-19]*

*E. The parcel where the use will be located is of sufficient size to accommodate buildings, required setbacks, off-street parking, and other features deemed necessary by the Planning Commission; and*

*F. The parcel where the use will be located is in appropriate geographic relationship to the area that will be served.*

The Council finds that the facility would satisfy the requirements under JCZO Section 602(C) – (E) based on the evaluation presented in this section and Section IV.M. *Public Services* of this order.

***Section 603 Conditions of Approval***

*A. As a condition of approving a conditional use permit, the property owner shall sign and record in the deed records for the county a "Waiver of Right to Remonstrate Against Accepted Farm Use Practices And the Maintenance or Construction of County Roads."*

B. *In permitting a new conditional use or the alteration of an existing conditional use, the Planning Commission may impose, in addition to those standards and requirements expressly specified by this ordinance, additional conditions which they consider necessary to protect the best interests of the surrounding area or the County as a whole. These conditions may include but are not limited to the following:*

1. *Increasing setbacks from adjoining properties.*
2. *Limiting the height, size, or location of buildings.*
3. *Controlling the location and number of vehicle access points.*
4. *Increasing the road width, requiring turn lanes, or other transportation improvements.*
5. *Increasing the number of required off-street parking spaces.*
6. *Limiting the number, size, location, and lighting of signs.*
7. *Requiring fencing, screening, landscaping, or other facilities to protect adjacent or nearby property.*

8. *Designating land for open space.*
9. *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, vibrations, air pollution, glare and odor.*
10. *Requiring the developer to enter into a bonding agreement to ensure completion of improvements, in accordance with Section 413.*
11. *Requiring the permit to be reviewed and renewed after a specified time period. If this condition is imposed, the Planning Commission shall hold a public hearing to review the permit. The review will take into consideration any complaints about the use that have been received and any adverse impacts caused by the use. The Planning Commission may revoke the permit in accordance with Section 909, modify any original conditions of approval, or impose additional conditions. The decision of the Planning Commission may be appealed to the Board of Commissioners in accordance with Section 907.3.*

JCZO Section 603 establishes additional conditions of approval that may be imposed for conditionally permitted uses. Based on the conditions of approval listed above, the Council imposes the following condition, consistent with JCZO Section 603(A):

**Land Use Condition 6**: Before beginning construction of the facility or a facility component, the certificate holder shall provide documentation that underlying property owners have signed and recorded in the deed records for the county:

a. a "Waiver of Right to Remonstrate Against Accepted Farm Use Practices and the Maintenance or Construction of County Roads."
b. Agreement by 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).

[GEN-LU-05]

Based on review of JCZO Section 603, the Council finds that other conditions of approval would be unnecessary and that based on recommended Land Use conditions included in this order, the facility would satisfy the requirements under JCZO Section 603.

**Jefferson County Comprehensive Plan**

*Goal 3: Agricultural Lands*

*Goal 5: Natural Resources, Scenic and Historic Area, and Open Spaces*

*Goal 6: Air, Water, and Land Resources Quality*

*Goal 7: Areas Subject to Natural Hazards*

*Goal 8: Recreational Needs*

*Goal 9: Economic Development*

*Goal 11: Public Facilities and Services*

*Goal 12: Transportation*

*Goal 13: Energy Conservation*

Based on the findings presented in this order related to compliance with the applicable substantive criteria, the Council finds that the facility would be consistent with the goals and policies of the Jefferson County Comprehensive Plan, particularly the sections related to the above referenced goals, as implemented by the JCZO sections described in this order.[72]

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

**Oregon Revised Statutes**

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

Transmission lines that meet the definition of an "associated transmission line" must consider the requirements of ORS 215.274. If a utility facility necessary for public service is an "associated transmission line" as defined in ORS 215.274 and ORS 469.300, the use may be established in EFU-zoned land pursuant to ORS 215.283(c). ORS 469.300(3) defines "associated transmission lines" as "new transmission lines constructed to connect an energy facility to the first point of junction of such transmission line or lines with either a power distribution system or an interconnected primary transmission system or both or to the Northwest Power Grid," and that definition is incorporated by reference in ORS 215.274. Associated transmission lines reviewed under ORS 215.274 are a subset of the transmission lines that could be evaluated as utility facilities necessary for public service under ORS 215.283(1)(c). In ASC Exhibit K, the applicant explains that the approximate 200 feet of overhead 230 kV cable, connecting the facility substation to the POI, meets the definition of "associated transmissions lines" because it would ultimately connect to the Northwest power grid. The Council concurs and evaluated the proposed transmission line segment is an "associated transmission line."

Jefferson County has not adopted local code provisions to implement ORS 215.274. Therefore, the requirements of the statute apply directly to the proposed 230 kV transmission line segment and the applicable requirements 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*

[72] Rather than make findings on the broad policies and goals articulated in the Comprehensive plan that are not specific to locations, activity or use, in this order the Department recommends Council make findings on compliance with the land use regulations that implement the relevant sections of the Comprehensive Plan. See ORS 197.175(2) and 197.015(11).

*counties that adopted marginal lands system prior to 1993) (1)(c)(B) or 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) (1)(c)(B) demonstrates to the governing body of a county or its designee that the associated transmission line meets:*

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

ORS 215.274 requires that the applicant demonstrate that the associated transmission line would meet the requirements of either ORS 215.274(3) or (4). In ASC Exhibit K, the applicant asserts that the associated transmission line would comply with the requirements of both subsection (3) and (4). However, the Council disagrees with the applicant's statement that the associated transmission line meets the requirements of subsection (3), and provides an evaluation of both subsections below.

*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;*
*(b) The associated transmission line is co-located with an existing transmission line;*
*(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or*
*(d) The associated transmission line is located within an existing right of way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground.*

ORS 215.274(3) requires an applicant to demonstrate that the *entire route* of an associated transmission line is: (a) not located on high-value farmland; (b) co-located with an existing transmission line; (c) parallels an existing transmission line corridor with the minimum separation necessary for safety; or (d) 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. The applicant explains in ASC Exhibit K that the proposed associated transmission line would not meet the requirements of ORS 215.274(3)(a) based on its location within the Northern Unit Irrigation District (NUID). However, the applicant indicates that the facility layout was specifically designed to allow for interconnection with the existing 230-kV PGE transmission line at the middle of the proposed site boundary, and that because of its location, half of the approximate 200 foot long associated transmission line would both be co-located and within or adjacent to the right-of-way of PGE's existing PGE 230 kV transmission line.

The Council recognizes that as proposed, half of the approximate 200 foot associated transmission line route (or 100') would be located within the existing PGE 230 kV transmission

line right of way; however, as noted above, the requirements of ORS 215.274(3) must be met for the entirety of the proposed route. As such, the Council finds that the proposed associated transmission line would not satisfy ORS 215.274(3).

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

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

In ASC Exhibit K, the applicant explains that the land within the proposed site boundary, and adjacent to the site boundary is zoned EFU by Jefferson County. Furthermore, because all land within the analysis area is within the NUID, all land within reasonable proximity of the facility site is high-value farmland under 195.300(10)(c)(B). Therefore, no alternative transmission line routes or alignments exist within the surrounding area that would avoid both EFU zoned land and high value farmland. As such, the Council finds that there are no reasonable alternatives for the facility site that would avoid EFU zoned land. However, the Council notes that ORS 215.274(4) requires both a demonstration that no reasonable alternatives that would avoid EFU land exist, and that two or more of the listed factors [ORS 215.274(a)(A) through (E)] be met, which is evaluated below.

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

ORS 215.274(4)(a)(A) provides that an applicant may demonstrate that the proposed transmission line must be sited in an EFU zone due to technical and engineering feasibility constraints. The Council interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through EFU-zoned land.

Rather than provide alternate routes for the associated transmission line, the applicant, in contrast, explains that the proposed siting of the substation, associated transmission line, and POI would allow for a direct interconnection with the existing PGE transmission line, without needing to extend the associated transmission line beyond the site boundary. As described above, any feasible associated transmission line route from the facility substation to the POI would be located within EFU zoned lands; and, as described under the evaluation of ORS 215.274(4)(a) above, non EFU zoned land does not exist within or surrounding the proposed site boundary. Therefore, the Council finds that technical or engineering constraints, such as

extreme topographic features, that could not be overcome but for siting the proposed 230 kV transmission line through EFU zoned land were not the primary drivers for siting the proposed transmission line on EFU zoned land. ORS 215.274(4)(a)(A) would not be satisfied.

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

ORS 215.274(4)(a)(B) provides that an applicant may demonstrate that the proposed transmission line must cross high value farmland or arable land to achieve a reasonably direct route and therefore is locationally dependent. As presented in ASC Exhibit K Attachment K-4, the entire facility is located within the NUID, which is an irrigation district as defined by ORS 540.505(1). The NUID generally extends from the Deschutes River east of the City of Madras and approximately 20 miles north and south of the facility site. Therefore, by law, the facility, including the associated transmission line, would be sited on high value farmland pursuant to ORS 195.300(10)(c)(B). Because the proposed associated transmission line route would be the most direct route from the proposed substation to the POI, and that all alternative routes would also traverse high value farmland, the Council finds that the proposed 230 kV must cross high value farmland to achieve a reasonably direct route, and that the associated transmission line is therefore "locationally dependent" and would satisfy ORS 215.274(4)(a)(B).

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

ORS 215.274(4)(a)(C) provides that an applicant may demonstrate a lack of available existing linear facility rights-of-way for which the proposed transmission line could be located. To inform this criterion, the applicant explains that the facility has been sited along PGE's existing 230-kV Pelton Dam to Round Butte transmission line, as shown on Figure K-2. This location was chosen because it allows the Facility to interconnect to the existing transmission line, which would connect the facility to the Northwest power grid. The Facility layout was specifically designed to allow the interconnection with the existing 230-kV transmission line to occur in the middle of the Facility site. The Facility substation is positioned in close proximity to the existing PGE transmission line right of way. As represented on Figures C-2a and C-2b of ASC Exhibit C, the POI would be located within the existing PGE Transmission line right of way. The associated transmission line connecting the facility substation to the POI would span no more than 200 feet. 100 feet of line would be located within the existing PGE transmission line right of way. However, even though the substation is proposed to be located in very close proximity to the existing right or way, there is still an approximate 100 foot gap between the proposed location of the substation and the existing right of way. There is therefore no available right of way for the approximate 100 feet (or half) of associated transmission line from the edge of the existing right of way to the proposed substation. Therefore, the Council finds that the 230 kV associated transmission line would satisfy ORS 215.274(4)(a)(C).

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

ORS 215.274(4)(a)(D) provides that the applicant may demonstrate that the proposed transmission line must be sited on EFU-zoned land to minimize potential impacts to public health and safety. As summarized in the ORS 215.274(4)(a) evaluation above, non EFU zoned land does not exist within or surrounding the proposed site boundary. While the applicant indicates that the substation, POI, and associated transmission line would be sited to make the most direct route from the proposed substation to the POI, and that perimeter fencing would exclude members of the public from gaining access to the facility components, the Council finds that the applicant does not provide sufficient information to demonstrate compliance with this criteria.

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

ORS 215.274(4)(a)(E) provides that the applicant may demonstrate that the proposed transmission line must be sited in an EFU zone due to other state or federal requirements. The applicant explains that the facility would comply with other requirements of state and federal agencies, and that the facility would meet the ORS 215.274(4)(a)(E) criteria. However, the Council finds that the applicant does not provide sufficient information to demonstrate compliance with ORS 215.274(4)(a).

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

ORS 215.274(4)(b) requires that the applicant demonstrate that the proposed transmission line would not result in a significant change in accepted farm practices or a significant increase in cost of farm practices on surrounding land. The applicant represents in ASC Exhibit K that the proposed siting of the facility substation, POI, and associated transmission line were designed to minimize, to the greatest degree practicable, impacts to EFU land on high value farmland. The associated transmission line would extend no more than 200 feet from the substation to the POI. Provided as Attachment K-1 of ASC Exhibit K, the underlying property owner for which the facility would be constructed upon, Darlene Binder, indicates that the facility site is not used for any type of agricultural enterprise or farming operation, including cattle grazing, and that it is not currently irrigated and has no history of being irrigated. Based on the minimal amount of permanent impacts resulting from the 200 feet of associated transmission line, and the explanation from the land owner that the site lacks agricultural activities, the Council finds that the proposed 230 kV associated transmission line would not result in a significant change in accepted farm practices or a significant increase in cost of farm practices on surrounding land. Therefore, the Council finds that the proposed associated transmission line would satisfy 215.274(4)(b).

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

ORS 215.274(4)(c) allows for consideration of costs in determining whether the associated transmission line is necessary for public service. The applicant explains that regardless of cost, no alternative route located on non-EFU land exists, and that the route location was dependent on providing a connection for the energy generated by the solar energy facility to the electrical energy grid interconnection point. Although this subsection does not require the consideration of costs, the Council acknowledges that costs were not a significant consideration in determining the location of the associated transmission line, as no alternative route that would interconnect with the existing PGE transmission line could be sited on non EFU zoned land.

For the above stated reasons, the Council finds that the applicant has provided sufficient analysis required under ORS 215.274(4)(a), that the associated transmission line is locationally dependent under ORS 215.274(4)(a)(B) and that there is a lack of available existing right of way for a linear facility under ORS 215.274(4)(a)(C). As such, the Council finds that the associated transmission line is "necessary for public service."

Oregon Administrative Rules

*OAR 660-033-0130 (38) – Standards for Approval for Photovoltaic Solar Power Generation Facility in Exclusive Farm Use Zones*[73]

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

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

*(B) A county adopts, and an applicant satisfies, land use provisions authorizing projects subject to a dual-use development plan. Land use provisions adopted by a county pursuant to this paragraph may not allow a project with a nominal electric generating capacity greater than 3 Mw or in excess of 20 acres. Land use provisions adopted by the county must require sufficient assurances that the farm use element of the dual-use development plan is established and maintained so long as the*

[73] ASC Exhibit K includes an assessment of OAR 660-033-0130(5) for the three proposed gravel access roads that would serve the facility. Because OAR 660-033-0130(38)(f) defines a photovoltaic solar power generation facility as inclusive of, but not limited to, "new or expanded private roads constructed to serve the photovoltaic solar power generation facility.". the Department recommends Council find that it is unnecessary to evaluate the proposed gravel roads separately under LDCD's OAR 660 rules.

*photovoltaic solar power generation facility is operational or components of the facility remain on site.*

OAR 660-033-0130(38)(g) restricts a photovoltaic solar power generation facility from using, occupying, or covering more than 12 acres of high value farmland unless the provisions of OAR 660-033-0130(38)(h)(H) are satisfied or the County adopts a dual-use development plan, which would then allow use, occupation or coverage on no more than 20 acres of high-value farmland. Because the facility is proposed to occupy up to 277 acres within a defined site boundary located entirely within the NUID, the facility would preclude more than 12 acres of high-value farmland and requires an exception to the Statewide Planning Goal 3. However, as evaluated JCZO Section 301.5, the facility would not force a significant change or significantly increase the cost of accepted farm practices on surrounding lands devoted to farm use.

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

*(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. 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;*

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

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

OAR 660-033-0130(38)(h)(A) requires a demonstration that the facility would not create unnecessary negative impacts to agricultural operations, such as dividing a field or multiple fields or placing facility components on lands in a manner that could disrupt accepted farming practices. In ASC Exhibit K, the applicant addresses potential access impacts and affirms that the facility would not result in access impacts to owners/operators of accepted farm practices. As evidence, the applicant provides a letter dated February 25, 2020 from Binder, LLC, the underlying landowner of the facility site, that states, "we have worked with Madras PV1, LLC, to identify a Facility site that will not preclude or impair access to farm operations associated with adjacent landowners."

The Council agrees that because the lands surrounding the facility site are not used for crop cultivation, potential impacts would be limited to travel impacts and land accessibility. It is not clear what public or private roads are used to access surrounding lands for grazing use; however, as represented in ASC Figure K-1, existing public roads that may provide access to surrounding uses would also be used by worker and haul vehicles during facility construction, and although quite limited, during operations and maintenance. These roads include NW Elk Drive, NW Pelton Dam Road and Willow Creek Road, with NW Elk Drive experiencing the greatest level of impact because it traverses through the facility site. To ensure that potential impacts from increased traffic generation on NW Elk Drive, NW Pelton Dam Road and Willow Creek Road during facility construction would not result in significant access or traffic delays to surrounding farm practices, the Council will require that the applicant, prior to construction, notify adjacent landowners of the facility, facility construction schedule and anticipated traffic generation (worker and haul truck vehicle miles travelled) to afford grazing operators an opportunity to plan for potential traffic delays which could temporarily impact farming operations (see recommended Land Use Condition 2 under the evaluation of JCZO Section 301.5). Based on the existing use of the facility site, letter from the Binder, LLC, and compliance with the recommended condition, the Council finds that the 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 would satisfy the requirements under OAR 660-033-0130(38)(h)(A).

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

OAR 660-033-0130(38)(h)(B) requires the applicant to demonstrate that the 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."

This provision is consistent with Council's Soil Protection standard, where the Council imposed a condition requiring that, during facility construction, the applicant be required to adhere to the requirements of a DEQ-approved Erosion and Sediment Control Plan during construction (see Soil Protection Condition 1) and implementation of a Revegetation and Noxious Control Plan during operation (see Fish and Wildlife Conditions 1 and 2). 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 facility site and on adjacent EFU zoned land.

Based upon compliance with the conditions, the Council concludes that the facility would satisfy the requirements under OAR 660-033-0130(38)(h)(B).

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

OAR 660-033-0130(38)(h)(C) requires the applicant to demonstrate that the 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 site boundary. The applicant represents that revegetation activities implemented during operation would include scarification of compacted soils, which the Council imposed as part of the Revegetation Plan in Fish and Wildlife Habitat Condition 1. Based upon the design of the facility and compliance with the condition, the Council concludes that the facility would not result in unnecessary soil compaction and would satisfy the requirements under OAR 660-033-0130(38)(h)(C).

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

OAR 660-033-0130(38)(h)(D) requires the applicant to demonstrate that the 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 Council imposes Fish and Wildlife Habitat Conditions 1 and 2, 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 condition, the Council concludes that the 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)(h)(D).

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

OAR 660-033-0130(38)(h)(E) requires that the applicant demonstrate that, with the exception of grid interconnection electrical collection systems, the facility would not be located on high-value farmland soils. As defined in OAR 660-033-0020(8)(a), high value soils are defined as land in a tract composed predominately of soils that are irrigated and classified prime, unique, Class I or II soils; or, not irrigated and classified prime, unique, Class I or Class II soils.

ASC Exhibit K Figure K-5 presents the tract for which the facility would be located and shows that approximately 31 percent of the soils within the tract are prime if irrigated. Because there are no current or historic water rights associated with the tract, the applicant evaluates the soils as not irrigated, where based on 2018 Natural Resource Conservation Service (NRCS) data, the soils are Class IV and VI. Based on review of OWRD database query presented in ASC Exhibit K Attachment K-2, Binder, LLC letter provided in ASC Exhibit K Attachment K-1, and NRCS data presented in ASC Exhibit K Figure K-7, the Council finds that the facility would not be located on high-value farmland soils listed in OAR 660-033-0020(8)(a) and therefore would satisfy the requirements under OAR 660-033-0130(38)(h)(E).

*(F) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:*
*(i) Non high-value farmland soils are not available on the subject tract;*
*(ii) Siting the project on non high-value farmland soils present on the subject tract would significantly reduce the project's ability to operate successfully; or*
*(iii) The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of non high value farmland soils; and*

OAR 660-033-0130(38)(h)(F) requires the applicant to demonstrate that the proposed solar facility could not be located on high-value farmland soils or arable soils unless: 1) non high-value farmland soils are not available on the subject tract; 2) siting the project on non high-value farmland soils, if present, would significantly impact the project's ability to operate; or 3) the site is better suited than other possible sites because it would allow continued operation of existing farmland.[74] While the facility would located on high-value farmland because it is within the NUID, based on the evaluation provided in ASC Exhibit K, Exhibit G, and the evaluation above, it would not be located on high-value farmland soils, as defined in OAR 660-033-

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

0020(8)(b)-(e); therefore, OAR 660-033-0130(38)(h)(F) does not apply, and instead, OAR 660-033-0130(38)(i) applies, as evaluated below.

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

OAR 660-033-0130(38)(h)(G) requires an evaluation of photovoltaic solar power generation facility development within 1-mile of the facility site. The applicant asserts that no other solar photovoltaic power generation facilities have been constructed, or are approved for construction within the one mile study area, and therefore under OAR 660-033-130(38)(h)(G)(i) does not require further action. ASC Exhibit C Figure C-3 illustrates other permitted Energy Generation facilities in proximity to the facility, and shows that the nearest solar facility, the Elbe Solar Center is located more than a mile from the facility. Based on this evaluation, the Council concurs with the applicant's representation, and finds that no further action is necessary.

*(i) For arable lands, a photovoltaic solar power generation facility shall not use, occupy, or cover more than 20 acres. The governing body or its designate must find that the*

*following criteria are satisfied in order to approve a photovoltaic solar power generation facility on arable land.*

*(A) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(a);*

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

*i. Nonarable soils are not available on the subject tract;*

*ii. (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;*

*(C) No more than 12 acres of the project will be sited on high-value farmland soils described at ORS 195.300(10);*

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

As described in ASC Exhibit K, the facility would permanently occupy more than 12 acres of high value farmland under the ORS 195.300(10)(c)(B) farmland definition (i.e. within the boundaries or a district, as defined in ORS 540.505). Based on the Cascade Earth Sciences (CES) site specific soil survey, included in ASC Exhibit I as Attachment I-3, there are no high-value soils present within the proposed site boundary. However, because of its location within the NUID and an exclusive farm use zone, the entirety of the facility would be considered high-value farmland, and would occupy more than 12 acres of high-value farmland. Therefore, the facility would require a Goal 3 exception.

ASC Exhibit K Figure K-6 represent the soil classification as identified in the CES report within the facility site boundary, and indicates that the non-arable soils and arable soils are interspersed throughout the site boundary. The applicant asserts that the quantity of nonarable soils are not available in a quantity or configuration that would allow for construction and operation of the facility in a manner that would avoid arable soils. A letter from the land owner, Darlene Binder, included as Attachment K-1 of ASC Exhibit K verifies that no commercial farming or ranching operations have occurred at the proposed site in approximately 25 years, has never been irrigated, and has no water right permits, certificates, points of diversion, or

places of use. Therefore, Ms. Binder concludes that for these reasons, and the fact that the facility site has poor rocky soils, "it is not desirable to use ever for cattle grazing."

Based on the representations of engineering and technical constraints associated with siting facility components on non-arable lands, as summarized above, the Council finds that the proposed solar facility would satisfy OAR 660-033-0130(38)(i)(A)-(C).

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

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

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

OAR 660-033-0130(38)(i)(D) requires an evaluation of photovoltaic solar power generation facility development within 1-mile of the proposed project site. The Council's evaluation of OAR 660-033-0130(38)(h)(G) above, found that no other solar photovoltaic power generation facilities have been constructed, or are approved for construction within the one mile study area. Therefore, no further action is necessary under 660-033-0130(38)(i)(D).

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

OAR 660-033-0130(38)(i)(E) requires Council to find that OAR 660-033-0130(38)(h)(A)-(D) are satisfied. As presented above, the Council finds that the facility satisfies the requirements of OAR 660-033-0130(38)(h)(A)-(D).

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

OAR 660-033-0130(38)(k) establishes that, for projects that would be sited on 12 acres or more of high-value farmland, an exception is required pursuant to ORS 197.732 and OAR Chapter 660, division 4. As discussed in the sections above, the proposed solar facility would use,

occupy or cover more than 12 acres of high-value farmland. The Council's evaluation of the applicant's Goal 3 exception request is provided below, in Section IV.E.3 *Goal 3 Exception* of this order, and finds that an exception to Goal 3 is justified.

> *(l) 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).*

OAR 660-033-0130(38)(l) 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 applicant and the applicant owner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming. In ASC Exhibit K, the applicant states that prior to beginning construction of the facility, the certificate holder must record such a document in the deed records of Jefferson county. Land Use Condition 9 would require the certificate holder to provide documentation that underlying property owners have signed and recorded in the deed records for the county an agreement by 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). Based on the applicant's representations, and compliance with Land Use Condition 9, the Council concludes that the facility would satisfy the requirements under OAR 660-033-0130(38)(l).

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

OAR 660-033-0130(38)(m) allows for the governing body to require a bond or letter of credit for the amount necessary to retire the facility during decommissioning. Retirement and Financial Assurance Condition 4 would require the applicant to obtain a bond or letter of credit, before beginning construction. Therefore, based upon compliance with these conditions, the Council concludes that the requirements under OAR 660-033-0130(38)(l) would be satisfied.

IV.E.3 Goal 3 Exception

The facility would use, occupy or cover more than 12 acres of high-value farmland. Therefore, the facility would not comply with OAR 660-033-0130(38)(g). Pursuant to OAR 345-022-0030(2)(b)(B), if a facility does not comply with an applicable substantive criteria, the facility must otherwise comply with the applicable statewide planning goal (Goal 3 Agricultural Lands) or seek an exception to the statewide planning goal. 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 660-004-0020(2)(a), 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 Council's Land Use standard at OAR 345-022-0030(4), mirrors the language of ORS 469.504(2), stating:

> *(4) The Council may find goal compliance for a facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process goal, the Council may take an exception to a goal if the Council finds:*
>
> *(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;*
> *(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or*
> *(c) The following standards are met:*
>
> *(A) Reasons justify why the state policy embodied in the applicable goal should not apply;*
>
> *(B) The significant environmental, economic, social and energy consequences anticipated as a result of the facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the facility; and*
>
> *(C) The 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 facility. In ASC Exhibit K, the applicant provides an assessment as to why a goal exception, under OAR 345-022-0030(4)(c), for the facility that would use, occupy or cover more than 12 acres of high value farmland land is appropriate. Based on the evaluation presented below, the Council agrees and finds that a goal exception under OAR 345-022-0030(4)(c) is appropriate.

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 arguments relating to "reasons supporting an exception" are discussed below.

*Facility Components are Locationally Dependent*

The applicant requests that Council consider that the facility is locationally dependent as a reason for granting an exception to the statewide policy embodied in Goal 3. The phrase "*locationally dependent*" is not defined in Council rules or statutes, however, consistent with use of the phrase under ORS 215.274 and ORS 215.275, the Department interprets locationally dependent to mean a location on high-value farmland that provides a reasonably direct route (for transmission lines) or that provides unique geographical needs that cannot be satisfied on other lands.

In ASC Exhibit K, the applicant explains that the facility is locationally dependent because the proposed site provides: 1) immediate onsite interconnection to Portland General Electric's (PGE) 230-kV Pelton to Round Butte transmission line, which then provides interconnection and delivery from the facility to the regional transmission system without the need to build a new transmission line; 2) unimpeded solar access; and 3) enough land to develop the facility to sufficient scale in order to be economically feasible at 230 kV voltage.

ASC Exhibit C Figure C-1 presents the facility layout, where PGE's existing 230-kV Pelton to Round Butte transmission line would bisect the proposed site boundary. ASC Exhibit B describes that facility interconnection to PGE's existing 230-kV Pelton to Round Butte transmission line would occur via a proposed Point of Interconnect (POI) switching station, to be located within the existing transmission line right of way, within the site boundary, and would allow for onsite interconnection to the grid necessitating only a short 200-foot segment of new transmission line. The Council agrees that the fact that there is an existing 230 kV transmission line within the site boundary, with interconnection capacity, where only a short transmission line segment within the proposed perimeter fenceline would be needed represents unique conditions that would allow for a nearly direct interconnection. The Council finds that, for these reasons, the facility is locationally dependent and would provide an acceptable reason to take an exception to Goal 3.

The Council finds that the other two factors identified by the applicant are not sufficient for demonstrating that the facility is locationally dependent. ASC Exhibit K Attachment K-7 provides solar resource maps of Oregon, obtained from the National Renewable Energy Laboratory as of April 2017. The applicant suggests that, based on ASC Exhibit K Attachment K-7, the proposed site provides, "an excellent solar resource." Based on review of ASC Exhibit K Attachment K-7, the data presents that the annual average daily total solar radiation at the proposed site is 6.5

kilowatt-hours per square meter per day (kWh/$m^2$/day), and that this level is nearly the maximum within Oregon (at 6.7 kWh/$m^2$/day); however, the data shows that more than half of the state of Oregon provides that same level of solar radiation as the proposed site. Therefore, the Council finds that, based on the data provided, the facility site does not provide a unique solar resource that is not available on other lands.

Similarly, applicant describes that the facility site provides, "enough land to develop a solar facility of sufficient size in order to be economically feasible at the 230-kV voltage." The Council disagrees that applicant has provided sufficient evidence to demonstrate that the facility site, or acres needed for the facility, is unique to other lands available within the area. Therefore, the Council finds that, based on the data provided, the facility site does not provide a unique geographical need, including overall size, that is not available on other lands.

*No Direct Impacts to Agriculture*

The applicant requests that Council consider the fact that the facility would not impact, or preclude, any onsite agricultural uses as a reason for granting an exception to the statewide policy embodied in Goal 3. The applicant describes that the facility site has not been used for any agricultural uses, including grazing, in 25 years. ASC Exhibit K Attachment K-1 provides a letter from the underlying landowner of the facility site, Binder, LLC which states,

> "We do not use the facility site for any type of agricultural enterprise or farming operation, including cattle grazing. The facility site is not currently, and has never been irrigated. No water right permits, certificates, points of diversion, or places of use are associated with the Facility site. Furthermore, no irrigation systems exist or are available to irrigate the land within the Facility site boundary so water would need to be hauled to the site. In addition, the site has poor rocky soils, which are not fit for effective agricultural use on non-irrigated land. Historically, the Facility site was used for dryland wheat prior to 1985. The site was under the U.S. Department of Agriculture's Conservation Reserve Program from approximately 1985 to 1995 and was seeded with crested wheat grass. Since 1995, the property has been used for pasture grazing only once and no cultivation or other farm practices have occurred on the tract within the past approximately 25 years. Because the facility site is not irrigated, has no easy connection to water, and has poor rocky soils, it has limited productivity and is not desirable to use even for cattle grazing."

ASC Exhibit K Figures K-4 and K-7 present the results of the applicant's search for water rights within the analysis area, where the results present one water right located at the mouth of Willow Creek where it meets Lake Simtustus. Attachment K-3 provides a copy of the relevant water right. This water right is not associated with agricultural use and would not be impacted in any way by the facility. Additionally, as discussed above in Section IV.D. *Soil Protection*, and as explained in ASC Exhibit I, the results of Cascade Earth Sciences (CES) site specific soil survey determined that the majority of the underlying soils of the facility site consist of nonarable

(Class VI) soils; nonarable soils are not suitable for cultivation, which is a unique characteristic for high-value farmland.

Based on applicant's water right database query of Oregon Department of Water Resources for the analysis area, the Binder, LLC letter affirming that the facility site has not been used and does not have sufficient soil quality or water rights for future agricultural use, and the CES survey confirming the facility site is predominantly comprised of nonarable soils, the Council finds that for these reasons, the facility would have no direct impacts to agricultural uses and would provide an acceptable reason to take an exception to Goal 3.

*No Impacts to Other Resources Protected by Council Standards*

The facility site provides unique characteristics from the perspective of minimal to no direct or indirect impact to other resources protected under Council standards, including Scenic Resources; Historic, Cultural, and Archeological Resources; and Removal-Fill Law. As described elsewhere in this order and in the ASC, the applicant and their consultants performed a multitude of surveying efforts and literature reviews at the facility site. Specifically, the pedestrian survey (which was conducted within the facility site boundary) did not identify any cultural resources, or special-status species. Furthermore, the wetland delineation did not identify any wetlands within the analysis area, and thus would not impact any waters of the state, would avoid all nonwetland water, and would not trigger the requirements for a removal-fill permit as part of construction or operation. The surveys and literature review (which include general field reconnaissance, a review of topographic and geologic maps, aerial photographs, existing reports and studies, soil surveying (both web based and site specific), habitat categorization and wildlife surveys, wetland delineation, raptor and eagle nest surveys, and a pedestrian survey) support Council's findings that the site's uniqueness should be considered an acceptable reason to take an exception to Goal 3.

*Reasons Recommended Not be Considered by Council for a Goal 3 Exception*

In addition to the reasons described above, the applicant requests Council consideration of reasons for which the Department, in the proposed order, recommended not be considered, as further described below.

The applicant requests that Council consider that the facility would further local and state policies for renewable energy as a reason for granting an exception to the statewide policy embodied in Goal 3. The Council agrees that energy generated by the facility could apply towards Oregon's Renewable Portfolio Standard (RPS), which requires 25 percent of Oregon's electric load come from new renewable energy by 2025, and increased to 50 percent by 2040, if Renewable Energy Credits are generated and purchased by in-state utilities. However, because there is no requirement in the state RPS requirements that renewable energy be procured from Oregon-based resources, nor direct facility development on agricultural lands, the Council does not consider abstract consistency with the State's RPS standard to be a sufficient "reason" justifying a Goal exception, specifically. Additionally, the applicant has not provided a power

purchase agreement or other documentation that would demonstrate that the facility would provide power to an Oregon utility in support of its RPS requirements. Therefore, the Council concludes that although the development of the facility as a renewable energy source would further and advance the State's renewable energy resources policy, this is not considered a sufficient reason supporting or justifying a Goal 3 exception for the facility.

The applicant requests that Council consider that the facility would further local and state policies for economic development as a reason for granting an exception to the statewide policy embodied in Goal 3. The applicant provides that the facility would: generate clean electric power for public use; benefit the local economy through employment opportunities including up to 200 jobs during construction and up to 4 jobs during operations, and provide contributions to the local tax base. The applicant affirms that the facility would provide additional tax revenue for Jefferson County, which would increase the County's ability to provide roadways, police and fire protection, and other services to its citizens. The Council agrees that the facility would be consistent with local and state policies for economic development; however, all projects are required to be consistent with state and local policies. Moreover, any development would result in some level of job creation and tax revenue. Therefore, the Council does not consider consistency with local and state policies for economic development to be a sufficient reason for justifying to Council that an exception to Goal 3 be taken.

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 facility have been identified and mitigated in accordance with Council standards.

*Environmental Consequences*

The 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. As presented in this order, the Council finds that the facility has been designed to avoid and where necessary, to mitigate impacts to soils, wetlands, fish and wildlife habitats, and threatened and endangered species through conditions of approval.

*Economic Consequences*

Economic consequences of a facility could include potential impacts to providers of public services, as well as benefits from local job creation, increased tax revenue from property taxes received from the facility site and from consumption of local goods and services from new or temporary residents associated with the facility, and supplemental income to property owners

through lease payments or other compensatory payments. The applicant affirms facility construction could result in up to 200 jobs, and up to 4 jobs during operations. The applicant affirms that the underlying landowner would receive supplemental income through lease payments. As presented in ASC Exhibit U and evaluated in Section IV.M. Public Services of this order, based upon compliance with imposed conditions, the Council finds that the facility would not have a significant impact on providers of public or private services. Because the facility would have minimal impacts on local public services, and would have economic benefits, the Council concludes that the facility represents a net benefit compared to the proposed site's existing uses and economic consequences.

*Social Consequences*

Social consequences of a facility could include impacts from facility visibility, noise, traffic or demand on providers of public services (health care, education, housing, water supply, waste disposal, transportation, fire and safety). As demonstrated in the applicable sections of this order, the Council finds that impacts to important or significant scenic resources, protected areas, and recreational opportunities would not result in significant adverse impacts and would comply with the appropriate Council standards. Based on Council's 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 Council concludes that the facility would not cause significant adverse social consequences.

*Energy Consequences*

Energy consequences of a facility could include the amount of energy a facility would require, the source of energy, and whether the facility is consistent with state and local energy policies. The applicant asserts that the energy consequences of the facility would be positive, as the facility would provide approximately 63 MW of renewable, emissions-free energy for sale to the public. Additionally, because the facility is a renewable energy source, it would not rely upon other energy generation sources, and if a 63 MW battery storage system is constructed, the facility would further provide benefits to renewable energy sources. Based upon the above analysis, the Council finds that the facility would have beneficial energy consequences.

*Compatibility of Adjacent 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 facility is compatible with other adjacent land uses or will be made compatible through mitigation measures. As explained in ASC Exhibit K, adjacent land uses are all within EFU A-1 zoned land and include undeveloped grass land and rangeland, rocky cliffs, steep slopes, and small canyons, and a private RV park. Based upon the evaluation of impacts under JCZO Section 301, the Council finds that the facility would not impact and would be compatible with other adjacent uses.

*Goal 3 Conclusion of Law*

Based on the foregoing findings and evidence in the record, the Council takes a Goal 3 exception for the 284 acres of nonarable land that could be occupied by facility components, subject to compliance with the recommended site certificate conditions. The Council also finds that the Goal 3 exception taken for this facility would expire and terminated at time of site certificate termination.

**Conclusions of Law**

Based on the foregoing recommended findings and the evidence in the record, and subject to compliance with the recommended site certificate conditions, the Council finds an exception to Goal 3 is justified under OAR 345-022-0030(4)(c) and ORS 469.504(2)(c); and that therefore finds that the facility would comply with the applicable statewide planning goal (Goal 3). As such, subject to the recommended conditions, the Council finds that the facility would comply 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 facility located in the areas listed below. To issue a site certificate for a 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.*

*****

*(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.[75] As required under OAR 345-021-0010(1)(L), the applicant identifies the protected areas within the analysis area and evaluates the following potential impacts during facility construction and operation: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures and construction-related dust-emissions.

As shown in Table 2: *Protected Areas within 20-mile Analysis Area*, the applicant identified twelve protected areas within the 20-mile analysis area surrounding the facility site boundary. This includes four designated scenic waterways, three state parks and waysides, and five areas protected under other designations. The protected area located nearest to the facility site boundary is Cove Palisades State Park, which is located approximately 3.1 miles to the South. The location of each protected area within the analysis area is presented in ASC Exhibit L Figure L-1 and is also presented in Figure 2 below.

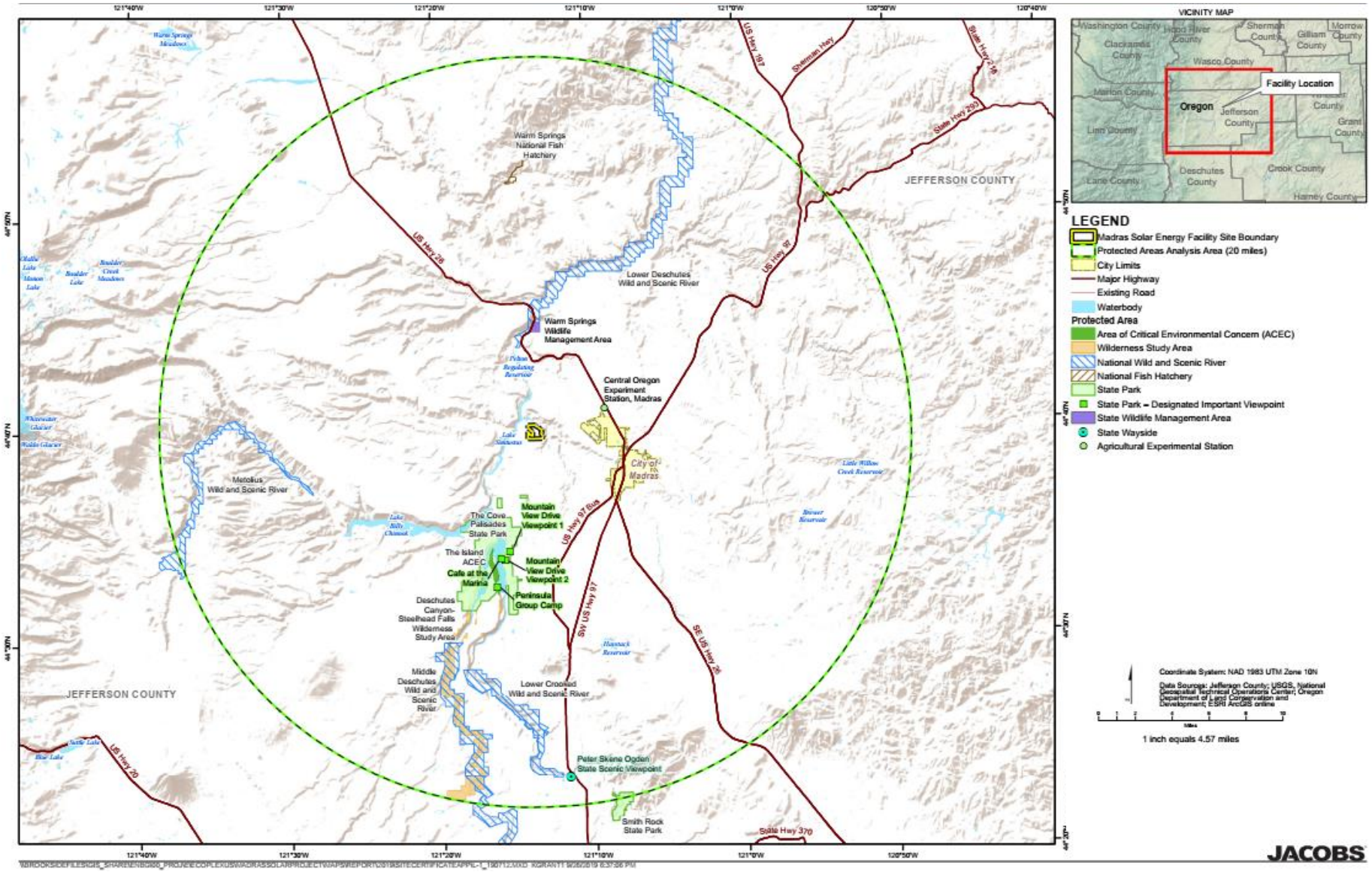
[75] OAR 345-001-0010(53) defines "Significant" as "…having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resource affected,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

**Table 2: Protected Areas within 20-mile Analysis Area**

| Protected Area | Approx. Distance from Proposed Site Boundary (miles) | Direction from Proposed Site Boundary | Basis for Protection (OAR 345-022-0040(1) |
|---|---|---|---|
| The Cove Palisades State Park | 3.1 | South | (h) State parks and waysides |
| Central Oregon Agriculture Research and Extension Center | 3.5 | East | (m) Agricultural experimental stations |
| Lower Deschutes Wild and Scenic River – from Pelton Dam downstream to the north county line | 4.2 | North | (k) Scenic waterways |
| Warm Springs State Wildlife Management Area | 5.1 | North | (p) State wildlife areas and management areas |
| The Island Area of Critical Environmental Concern | 6.3 | South | (o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas |
| Deschutes Canyon-Steelhead Falls Wilderness Study Area | 8.9 | South | (c) Wilderness areas |
| Middle Deschutes Wild and Scenic River – from Odin Falls to the upper end of Lake Billy Chinook | 11.7 | South | (k) Scenic waterways |
| Metolius Wild and Scenic River – from Deschutes National Forest boundary to Lake Billy Chinook | 12.1 | West | (k) Scenic waterways |
| Lower Crooked Wild and Scenic River – from the National Grasslands boundary to Dry Creek | 12.8 | South | (k) Scenic waterways |
| Warm Springs National Fish Hatchery | 13.5 | North | (f) National and state fish hatcheries |
| Peter Skene Ogden State Scenic Viewpoint | 18.2 | South | (h) State parks and waysides |
| Smith Rock State Park | 19.7 | South | (h) State parks and waysides |

1

**Figure 2: Protected Areas within 20-Mile Analysis Area**



*Potential Noise Impacts*

The significance of potential noise impacts to identified protected areas is based on the magnitude and likelihood of the impact on the affected human population or natural resources that uses the protected area. As discussed in Section IV.Q.1, *Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce*, the Council finds that the facility would comply with the DEQ's Noise Control Regulations under OAR 340-035-0035 which applies to Noise Sensitive Properties as defined in the Noise Rules.[76] The ODEQ noise regulations are used to inform the potential operational noise impacts from the facility at protected areas, however, compliance with the DEQ noise regulations is not decisive under the Council's Protected Areas standard.

*Construction*

Construction of the facility would result in short-term, temporary noise impacts. As presented in ASC Exhibit X, construction would generally occur in phases including: clearing, excavation, foundation, erection and finishing. During these phases, noise-generating equipment would be operated such as a temporary concrete batch plant, loader, pile driver and pneumatic tools. Based on an analysis of a 1971 study of noise from construction equipment, power plant construction sites, and other types of facilities from the U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control, the individual A-weighted decibel (dBA) noise level for this type of equipment, measured at a distance of 50 feet, ranges from 76 to 101 dBA. The combined, or composite, noise level of multiple equipment operating at the same time, for any individual construction phase would range between 84 to 90 dBA measured at a distance of 50 feet, and attenuates from geometric spreading (i.e. the decrease in sound intensity over distance) to 44 to 50 dBA at a distance of 1 mile.[77] Based on ASC Exhibit X Table X-2, sound levels of 40 dBA are quiet, and below 30 dBA are inaudible.

As presented in Table 2: *Protected Areas within 20-mile Analysis Area*, the nearest protected is area is 3.1 miles South of the facility site boundary. Given the maximum construction noise level of 50 dBA at 1 mile, and a noise attenuation rate of 6 dBA per doubling of distance, construction related noise impacts at The Cove Palisades State Park would not be expected to be audible.[78] Based on review of the applicant's noise analysis and distance of The Cove Palisades State Park from the proposed site boundary, and the fact that all other protected areas are located at greater distances from the facility, the Council finds that facility construction noise would not be likely to result in significant, adverse impacts at any protected area within the analysis area.

[76] 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."

[77] MSEFAPP ASCDoc1-24 Exhibit X Noise 2011-11-09 Table X-5, p. X-5.

[78] MSEFAPP ASCDoc1-24 Exhibit X Noise 2020-11-09, pg. X-4

*Operation*

Operation of the facility would result include noise generating sources, including:

- 19 inverters at 92 dBA, each
- 19 inverter transformers at 75 dBA, each
- 1 substation transformer at 86 dBA
- 120 battery storage containers at 87 dBA, each

In ASC Exhibit X, the applicant predicts that at the closest noise sensitive property, which is approximately 0.5 mile from the facility site boundary, full load sound levels attributable to facility operation would be 26 dBA without the battery storage units operating and 29 dBA with the battery storage units operating.[79] Applicant predicts at 3.1 mile distance to The Cove Palisades State Park, the protected area nearest to the facility site, attenuation related to geometric spreading, the presence of trees or vegetation, ground effects, atmospheric absorption, and intervening terrain would further reduce both operation-related noise to an undetectable level.

Based on review of the applicant's noise impact assessment, as described above, the Council finds that facility operational noise would not likely result in significant adverse noise impacts to The Cove Palisades State Park or other protected areas within the analysis area that are located at greater distances from the proposed site boundary.

*Traffic Impacts (Construction and Operation)*

Facility construction would result in short-term, temporary traffic impacts. The applicant estimates that during peak construction activities, there would be an estimated 45 truck deliveries and 100 workforce vehicle trips to and from the facility site, resulting in an increase of 290 total one-way vehicle trips along the route to the facility site.[80] Facility operation would result in minimal traffic impacts because the facility would be operated remotely without need any full-time, onsite employees. Operational traffic would then be limited to visits from offsite technicians in light-duty trucks deployed on an as-needed basis for maintenance and repairs.[81]

The primary transportation routes to and from the facility site would be US Highway 26 from the north and US 97 from the south. From US Highway 26, the primary transportation route would enter the City of Madras and continue south to the intersection with US 97. The route would continue due south on US 97 for approximately 0.95 mile to SW Belmont Lane, where it turns west and continues for approximately 5.7 miles to SW Elk Drive. From SW Belmont Lane,

[79] MSEFAPP ASCDoc1-24 Exhibit X Noise 2020-11-09, pg. X-6
[80] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, pg. X-12
[81] MSEFAPP ASCDoc1-12 Exhibit L Protected Areas 2020-11-09, pg. L-4

the route then turns north on SW Elk Drive and extends for approximately 2.5 miles to the facility site.[82]

As described in detail in Section IV.M., *Public Services* of this order, the Council reviewed the applicant's analysis of estimated traffic impacts and found that construction of the facility would not be likely to result in a significant adverse impact to traffic safety on routes serving the facility site. Backups and delays associated with construction traffic are likely to be limited to SW and NW Elk Drive and SW Belmont Lane which provide local access to the facility site. The applicant notes that some visitors to The Cove Palisades State Park may access northern portions of the facility from SW Belmont Lane, but the main park entrance and most park amenities are accessed from routes to the South that would not be affected. Highway 26 and Highway 97 are also the primary routes to the majority of other protected areas in the analysis area; however, peak construction traffic is only expected to result in a 1 to 2 percent increase in total traffic volume for these routes, and are not expected to significantly affect travel times or traffic safety for highway users.[83]

Because local roads along the primary access route to the facility site are not primary access routes to any protected areas in the analysis area, and because impacts from construction and limited operational traffic to highway routes are not expected to result in significant adverse impacts to travel or traffic safety, the Council finds that the construction and operation of the facility is not likely to result in significant adverse traffic impacts to protected areas.

*Water Use and Wastewater Disposal (Construction and Operation)*

Facility construction and operation would utilize water. As described in ASC Exhibit O and Section IV.M. *Public Services* of this order, the applicant estimates that facility construction would require up to approximately 12.8 million gallons of water. The water would be used during construction for a number of activities, including construction of concrete foundations and dust control. Once the facility is constructed, the applicant estimates that up to approximately 1.65 million gallons of water would be needed for periodic washing of solar modules and employee drinking and sanitation. The applicant states that the construction contractor would be responsible for arranging the delivery of water via water trucks from the Deschutes Valley Water District, and has provided a letter from the Deschutes Valley Water District stating that the water service provider is willing and able to provide the requested amounts.

The Lower and Middle Deschutes, Crooked, and Metolius Rivers are within the 20-mile analysis area for protected areas surrounding the facility site. The Deschutes Valley Water District's water source is the Opal Springs Aquifer,[84] which is located upstream from the Northern boundary of the Lower Crooked Wild and Scenic River. However, as described above, the

[82] MSEFAPP ASCDoc1-12 Exhibit L Protected Areas 2020-11-09, pg. L-3
[83] MSEFAPP ASCDoc1-21_Exhibit_U_Public-Services 2020-11-09, pg. U-12
[84] Deschutes Valley Water District. "*About Us.*" https://www.dvwd.org/aboutus.html, accessed 12/14/2020.

applicant intends to purchase all water needed for construction and operation of the facility from the Deschutes Valley Water District. The applicant does not propose or intent to withdraw water from any protected areas within the analysis area.[85] Water draws within the Deschutes Valley Water District's existing water rights are not likely to result in significant impacts to instream flows in protected river segments located downstream from the water source, as discussed further in Section IV.Q.3., *Water Rights*.

Facility construction would generate sources of wastewater for disposal. Construction-related wastewater sources would include up to 40 portable toilets, concrete washout, and while not considered wastewater, as identified by the applicant runoff water would also be generated at the site. Sanitary wastewater from portable toilets would be managed by a licensed contractor and disposed at an appropriate facility, in accordance with State law. Concrete washout would be managed under a General Water Pollution Control Facilities Permit, WPCF-1000, issued by the Oregon Department of Environmental Quality, to be obtained by the applicant's third party contractor. Onsite stormwater would be managed in accordance with the requirements of National Pollution Discharge Elimination System (NPDES) 1200-C Construction Stormwater Permit and associated Erosion and Sediment Control Plan, which establishes controls and best management practices (BMPs) to implement to minimize potential for runoff which could result in water quality impacts to downstream river segments.

Facility operations would generate minimal sources of wastewater for disposal, including approximately 10 gallons of sanitary waste per day from portable toilets at the O&M enclosure. Other sources of wash water include solar module surfaces washing, which would not include detergents.[86]

Based on the above-reasoning and analysis, the Council finds that facility construction and operational water use and wastewater disposal would be unlikely to result in a significant adverse impact to any protected areas, including protected waterways, within the analysis area.

*Potential Visual Impacts of Facility Structures*

Facility structures would have visual impacts. To evaluate potential visual impacts of facility structures to protected areas in the analysis area, the applicant conducted a zone of visual influence (ZVI) analysis to identify whether facility components would be potentially visible from the protected areas. The applicant notes that the ZVI analysis was conducted using the values for the tallest facility components, which are the 80-foot tall H-frame poles that hold the overhead cable connecting the facility substation to the Point of Interconnect (POI) at the center of the facility and the 10-foot pad-mounted inverters and transformers located throughout the area within the facility's security fence. The applicant notes that these

[85] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-5

[86] In ASC Exhibit E and L, applicant identifies that a 1700-B permit would be obtained from DEQ if solar panel washing is conducted onsite. DEQ no longer issues 1700-B permits and therefore the 1700-B permit would not be required for facility operations.

conservative values were likely to cause the model to overestimate potential visibility of facility components.[87]

The ZVI analysis shows that the facility is potentially visible from within the boundaries of Cove Palisades State Park, the Central Oregon Agricultural Experiment Station, and the segment of the Lower Deschutes Wild and Scenic River within the analysis area.

*The Cove Palisades State Park*

As described in Section IV.J. *Scenic Resources* of this order, the majority of The Cove Palisades State Park boundary is located around Lake Billy Chinook approximately 3.6 miles southwest from the proposed site boundary. The applicant's ZVI viewshed analysis shows that the facility would not be visible from areas within the park boundary surrounding Lake Billy Chinook. The ZVI analysis identifies an isolated 64-acre area of the park located on approximately 3.1 miles south where the facility would potentially be visible, however, because the area is not designated as an important viewpoint in the Cove Palisades State Park Master Plan, the applicant did not further analyze potential impacts in this area.[88] The applicant conducted a photo survey documenting existing views from three viewpoints identified as important or significant scenic resources in The Cove Palisades State Park Master Plan and one additional location along the Crest of Tam-A-Lau Trail that offers a view toward the facility from a higher elevation. The photographs demonstrate that views of the facility site from the selected locations would be precluded by existing elevation and topography.[89] Therefore, based review of the applicant's ZVI analysis, the Council finds that the facility would not result in significant adverse visual impacts to The Cove Palisades State Park.

*Central Oregon Agriculture Research and Extension Center*

The Central Oregon Agriculture Research and Extension Center (COAREC) is located approximately 3.5 miles east of the proposed site boundary. The applicant's ZVI viewshed analysis shows that the facility may be visible from the COAREC. The applicant conducted a photo survey documenting the existing view toward the facility location at a location directly south of and adjacent to COAREC. The photo shows that the facility would be potentially visible from and at a similar elevation as COREC. However, applicant suggests that at the approximately 3.5 mile distance from the facility site, the facility would appear obscured or undetectable in the background, and would be screened by existing vegetation and structures.

Because visibility of the facility would be obscured or precluded by distance and existing vegetation and structures on the landscape, the Council concurs with the applicant's assessment finds that the facility would not result in significant adverse visual impacts to the COAERC.

[87] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-6
[88] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-6
[89] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-7, Attachment L-1, Photograph L-1 to L-4.

*Lower Deschutes Wild and Scenic River*

The lower segment of the Deschutes River (from Pelton Dam to the north county line) is designated as an Oregon State Scenic Waterway and a as a National Wild and Scenic River. The boundary of the Deschutes River Scenic Waterway Recreation Area is located, at its nearest point, approximately 4.2 miles north of the facility site boundary.

The applicant's ZVI viewshed analysis shows that the majority of views from the Lower Deschutes Wild and Scenic River toward the facility would be precluded by the existing elevation and topography of the river canyon. The analysis shows that the facility could be visible to motorists and boaters from a small area within the Lower Deschutes Wild and Scenic River boundary, approximately 5 miles from the proposed site boundary along an approximately 0.2-mile-long section of BIA Road 24, and along an approximately 400-foot-section of the river at river level.[90]

The applicant documented the potential view of the facility from the northbound shoulder of BIA Road 24 with a photograph that shows a view with potential visibility of the facility from the mapped boundary of the Lower Deschutes Wild and Scenic River. The facility location is on the plateau that forms the horizon in the background of the viewshed.[91] The applicant states that at the distance represented in the photograph (approximately 4.2 miles), the facility would appear obscured or may be undetectable in the surrounding landscape. The applicant further notes that existing transmission lines that transect the proposed site boundary are not visible from the photo survey location, and that it is unlikely that facility components, which are proposed to be under the height of the transmission lines, would be visible.[92]

The applicant further represents that the facility would comply with Section 412 (Scenic and Natural Hazard Rim Set Back) of the Jefferson County Zoning Ordinance (JCZO) which requires a 30-foot setback from the rim edge of steep slopes such as the walls of Willow Creek Canyon located along the northern and eastern perimeter of the proposed site boundary which are visible from the photo survey location. The applicant states that compliance with this setback would further obscure views of the facility.[93] The applicant's compliance with the JCZO Section 412 is further evaluated in Section IV.E.1., *Local Applicable Substantive Criteria*.

Because views of the facility from the majority of the Lower Deschutes Wild and Scenic River management area would be precluded by the existing elevation and topography of the river canyon, and because distance, topography, and vegetation, are likely to preclude or obscure views from locations within the management area where the facility location may be potentially visible, for these reasons, the Council concurs with applicant's assessment finds that

[90] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-8
[91] MSEFAPP ASCDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, Attachment 1, Photograph L-6
[92] MSEFAPP ASCDoc1-12 Exhibit L Protected Areas 2020-11-09, pg. L-8
[93] MSEFAPP ASCDoc1-12 Exhibit L Scenic Aesthetic 2020-11-09, pg. R-14

the facility would not be likely to result in significant adverse visual impacts to the Lower Deschutes Wild and Scenic River.

*Other 9 Protected Areas*

The ZVI Analysis shows that elevation and topography would preclude views of the facility location from within the boundaries of the remaining 9 protected areas, each located at distances of 5 miles or greater from the facility site boundary. These protected areas include Warm Springs Wildlife Management Area, the Island Area of Critical Environmental Concern, the Deschutes Canyon-Steelhead Falls Wilderness Study Area, the Middle Deschutes Wild and Scenic River, the Metolius Wild and Scenic River, the Lower Crooked Wild and Scenic River, the Warm Springs National Fish Hatchery, Peter Skene Ogden State Scenic Viewpoint, or Smith Rock State Park. Therefore, based on the ZVI analysis, and distance, topography, and vegetation between the facility site and these 9 protected areas, the Council concurs with applicant's assessment finds that the facility would not be likely to result in significant adverse visual impacts to these protected areas.

*Potential Visual Impacts of Emissions*

Facility construction would result in sources of dust emissions, such as operation of a temporary concrete batch plant, if needed, and during grading and clearing. The applicant proposes to minimize and control these dust sources through compliance with the requirements of an Air Contaminant Discharge Permit (ACDP), to be issued by Oregon Department of Environmental Quality (DEQ), and use of an onsite water truck, respectively. Based on the applicant's obligation for it to obtain the federally-delegated ACDP from DEQ (addressed under General Standard Condition 3; Mandatory Condition OAR 345-025-0006(3)), and proposed measures for onsite dust control, the Council finds that potential visual impacts of emissions would be minimized and would not be likely to impact any protected areas, given the distance of 3 miles or greater from the nearest protected area to the facility.

**Conclusions of Law**

Based on the foregoing recommended findings, the Council concludes that the design, construction and operation of the facility would not be likely 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.*

### 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 applicant (certificate holder) stop construction or should the facility cease to operate. In addition, it requires a demonstration that the applicant can obtain a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

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

OAR 345-022-0050(1) requires the Council to find that the facility site can be restored to a useful non-hazardous condition at the end of the facility's useful life, or if construction of the facility were to be halted prior to completion. In ASC Exhibit W, the applicant estimates the facility's useful life as 40 years, but indicates that because the facility could be upgraded, operations could prolong beyond 40 years, as long as there is a market for the production of its electrical energy.[94]

The applicant is obligated to retire the facility upon permanent cessation of construction or operation (or upon retirement). As described in ASC Exhibit W, restoring the site to a useful, non-hazardous condition upon retirement would involve disassembling the solar modules and electrical equipment and wires, and related electrical equipment including large transformers and battery components. Disassembly would use conventional construction equipment with the objective of maximizing the recycling of materials and minimizing the amount of waste to be disposed of.

Disassembling the solar modules would involve removing the solar panels from their trackers, removing the steel trackers from their posts, and extracting the steel posts. The solar modules would be directly loaded onto recyclers trucks and hauled off site, while the steel trackers and posts would be stockpiled and staged onsite awaiting loading by a recycler. Concrete

[94] MSEFAPP ASCDoc1-23 Exhibit p. W-1 2020-11-09.

equipment foundations and underground cables would be removed to a minimum depth of 3 feet below grade, and then disposed of at the Jefferson County Transfer Station (JCTS). Both the perimeter fencing and gravel (placed on access road segments and in the substation and laydown areas) would be removed, but would also be kept onsite until the material could be loaded by a recycler.

As provided in ASC Exhibit B and I, and reflected in recommended Soil Protection Condition 2, the applicant commits to developing and implementing a Spill, Prevention, Control and Countermeasure Plan (SPCC) and Hazardous Materials Business Plan to manage, prevent, contain and control potential releases and provide provisions for quick and safe cleanup of hazardous materials related to O&M of battery storage systems.[95] The applicant also comments to developing a hazardous materials and spill prevention program for the facility.[96] These applicant proposed plans and programs, recommended by the Department as site certificate conditions, would also minimize impacts to the site and support the applicant's ability to restore the site to a useful, nonhazardous condition.

The Council's rules include several mandatory site certificate conditions, which are addressed below, relating to the obligation of a 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); GEN-RF-01]

**Retirement and Financial Assurance Condition 2:** The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, nonhazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.
[Mandatory Condition OAR 345-025-0006(9); RET-RF-01]

**Retirement and Financial Assurance Condition 3:** If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate

[95] MSEFAPP ASCDoc1-2 Exhibit B Facility Description 2020-11-09.
[96] MSEFAPP ASCDoc1-7 Exhibit G Materials 2020-11-09.

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(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 shall pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.
[Mandatory Condition OAR 345-025-0006(16); RET-RF-02]

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 facility, in compliance with the standard. In addition, the Council finds that the applicant would satisfy the requirements of the 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 describe conditions designed to minimize adverse impacts on the surrounding land from construction and operation of the facility.

Based on compliance with the above-referenced mandatory conditions and recommended conditions as presented in Section IV.D. *Soil Protection*, and the applicant's assessment of decommissioning tasks and actions, the Council finds that the site of the facility could be restored adequately to a useful, non- hazardous condition following permanent cessation of construction or operation.

*Estimated Cost of Site Restoration*

OAR 345-022-0050(2) requires the Council to find that the applicant has demonstrated a reasonable likelihood of obtaining a bond or letter of credit in a form and amount necessary to restore the site of the facility to a useful non-hazardous condition. A bond or letter of credit in a form and amount satisfactory to Council provides a site restoration remedy to protect the state of Oregon and its citizens if the applicant (certificate holder) fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the applicant (certificate holder) has fully restored the site. OAR 345-025-0006(8) establishes a mandatory condition, which ensures compliance with this requirement (see Retirement and Financial Assurance Condition 4 below).

In ASC Exhibit W, the applicant provides site restoration estimates for two design scenarios; the first (Attachment W-1) includes a facility layout without battery storage, and the second (Attachment W-2) includes a facility layout with battery storage. Attachments W-1 and W-2

were revised and provided to the Department as supplemental ASC information.[97] The site restoration cost estimate for the facility without battery storage totals approximately $3,982,596, whereas the cost estimate for the facility with maximum battery storage totals approximately $4,093,387. As presented in ASC Exhibit W, the total decommissioning costs for the facility without battery storage is approximately $110,791 less than the total decommissioning costs for the facility with battery storage. Additionally, the estimated quantities and total costs specific to the Solar PV Module and Tracker were greater for the facility without battery storage. Additionally, the unit costs of both the tracker and PCS – Battery location differed in each design scenario. The estimated unit costs for both the Tracker and PCS – battery location for the facility without battery storage were $2.09 and $6,981 respectively. The unit costs for the same tasks/actions for the facility with maximum battery storage were $2.11 for the Tracker and $11,959 for the PCS – battery location.

The Council notes that although the applicant's cost estimates (Attachment W-1 and Attachment W-2) includes estimated total costs and tonnage amounts of materials with known demand for scrap, these estimates were calculated separate from the cumulative estimate to retire the facility per layout scenario. However, the applicant clarifies that the total estimates provided in Attachments W-1 and W-2 assumes no salvage value recovery for the tonnage of material to be disposed of by way of recycling, and that the total estimated cost value for the decommissioning of the facility did not include the salvage value as an offset cost. The estimated value of the recycled material is approximately $4 to $10 million (Q4 2019 Dollars), depending on the final battery storage configuration.

The applicant's retirement cost estimate methodology utilizes labor rates, equipment estimates and duration for each of the tasks and actions identified for site restoration. The methods and assumptions used to estimate the site restoration costs area described in ASC Exhibit W Section W.3 and included the following methods and assumptions:

- Crew costs derived from burdened labor costs (wages, benefits, payroll taxes, insurances, and small tools) and equipment costs (derived from published hourly operating costs including rent, fuels, oil, maintenance, and wearable parts), which are also factored for additional rent based on percent of time idle;
- Component costs summarize the three major operational divisions: disassembly, loading, and trucking. Additional costs for disposal (also known as tipping) fees, permits, disconnects, mobilizations, site reclamation, regulations, management, site indirect costs, overhead, profit, and contingency were added before determining estimated costs per component;
- Labor wages and benefits based on prevailing wage determination in effect as of June 14, 2019, for Jefferson County, Oregon;
- Jefferson County Transfer Station disposal fee of $110 per ton of delivered and disposed materials;

[97] MSEFAPP ASC Clarification Request (Reclamation Estimate) 2021-01-13

- The operations and maintenance enclosure would be removed, and the surrounding graveled areas including service roads and access roads, would be regraded and reseeded;
- Internal service roads and access roads would be utilized when retiring the module blocks, and restoring the area;
- Underground material below 3 feet would be left in place. This includes underground cables, concrete foundations and solar module posts at or below 3 feet underground;
- Transformer insulating oils would be removed by a subcontractor, and disposed of legally;
- During facility retirement and restoration, care would be taken to minimize the disturbance to existing vegetation. To be conservative, this estimate assumes that the entire area occupied by the solar modules would be reseeded (or likely overseeded);
- Salvage value of recyclable materials is not included as an offset cost to the total estimate; and
- An applied 10 percent contingency.

As presented in Table 3: *Facility Decommissioning Cost Estimate and Sum Total Costs*, the decommissioning cost estimate totals $4.0 million (Q4 2019 dollars), prior to application of the Department's contingencies, as further described below.

**Table 3: Facility Decommissioning Cost Estimate and Sum Total Costs**

| Task or Action[1] | Quantity | Unit Cost ($) | Unit | Estimate ($) |
|---|---|---|---|---|
| *Solar Photovoltaic Energy Generation Components* | | | | |
| Solar PV Panel | 175,446 | $1.79 | Panel | $314,867 |
| Tracker | 569,980 | $2.11 | Linear Ft. | $1,204,374 |
| Power Conversion Station (PCS) | 19 | $6,981 | Location | $132,641 |
| Underground Cable | 56 | $241 | Tail | $13,492 |
| *Battery Storage* | | | | |
| PCS – (Battery) Location[2] | 19 | $4,978 | Location | $94,578 |
| *Substation, POI Station and Switching Station* | | | | |
| POI Station | 1 | $11,442 | Location | $11,442 |
| Switching Station | 1 | $5,762 | Location | $5,762 |
| Substation | 1 | $60,399 | Location | $60,399 |
| Substation Auxiliary Equipment | 1 | $23,469 | Location | $23,469 |
| *Other Structures* | | | | |
| O&M Enclosure[98] | 1 | $2,256 | Each | $2,256 |

[98] The unit cost and estimate for the O&M Enclosure was revised and included in both Revised Attachment W-1 and Revised Attachment W-2 provided to the Department as supplemental information on January 13, 2021.

**Table 3: Facility Decommissioning Cost Estimate and Sum Total Costs**

| Task or Action[1] | Quantity | Unit Cost ($) | Unit | Estimate ($) |
|---|---|---|---|---|
| Staging/Laydown | 1 | $4,704 | Location | $4,704 |
| Perimeter Fence | 28,681 | $3.86 | Linear Ft. | $110,719 |
| Roads | 3,564 | $4.72 | Sq. Yd. | $16,817 |
| *Other Tasks and Actions* | | | | |
| Stored Materials | 1 | $760 | Lump Sum | $760 |
| Tipping Fees | 5,050 | $110 | Tons | $555,930 |
| Site Reclamation | 400 | $200 | acre | $80,000 |
| Utility disconnect | 1 | $5,000 | Each | $5,000 |
| Surveys | 1 | $25,000 | Lump Sum | $25,000 |
| Environmental | 1 | $50,000 | Lump Sum | $50,000 |
| Safety | 1 | $25,000 | Lump Sum | $25,000 |
| OSHA sanitary | 1 | $50,000 | Lump Sum | $50,000 |
| Field Office | 10 | $1,250 | months | $12,500 |
| Proj Mgmt | 10 | $12,500 | months | $125,000 |
| Mobilization | 1 | $200,000 | Lump Sum | $200,000 |
| Demobilization | 1 | $150,000 | Lump Sum | $150,000 |
| | | | Subtotal = | $3,274,710 |
| General Costs | | | | |
| Contingency | 10 | | Percent | $327,471 |
| Overhead, Profit | 15 | | Percent | $491,206 |
| Subtotal = | $818,677 | | | |
| Subtotal, All Tasks or Actions and Applicant Contingencies | $4,093,387 | | | |
| Department Applied Contingencies | | | | |
| Performance Bond | 1 | | Percent | $40,933 |
| Department Administration and Project Management | 10 | | Percent | $409,338 |
| Future Development Contingency [3] | 10/20 | | Percent | $418,795 |
| Total Site Restoration Cost with Department Adjusted Contingencies (Q4 2019 Dollars) | | | | **$4,962,453** |

Notes:

1. See ASC Exhibit W Attachment W-1 and W-2 for detailed breakdown of tasks, actions and units costs for the sum total costs presented in Table 3.
2. Both the "Unit Cost" and "Estimate" of the PCS –(Battery) Location was derived by deducting the unit cost and Estimate of the "PCS location" values from Attachment W-1 (the retirement

**Table 3: Facility Decommissioning Cost Estimate and Sum Total Costs**

| Task or Action[1] | Quantity | Unit Cost ($) | Unit | Estimate ($) |
|---|---|---|---|---|
| and restoration cost estimate without battery storage), from the unit cost and total costs for the PCS Battery Storage Location from Attachment W-2.<br>3. A 10% future development contingency is applied to all tasks, actions and applicant contingencies, with the exception of the cost of the PCS Battery Location ($3,998,809 x 10% = $399,880); A 20% future development contingency is applied to the BCS Battery Location ($94,578 X 20% = $18,915). The sum of the future development contingency for the PCS Location ($399,880) and the future development contingency of the PCS Battery Location ($18,915) is $418,795. | | | | |

As presented in Table 3: *Facility Decommissioning Cost Estimate and Sum Total Costs*, the Council added contingency costs for future development, administration and project management cost, and cost for maintaining a performance bond.

The 10 percent contingency for administrative and management expenses are the anticipated direct costs borne by the State in the course of managing site restoration and would include the preparation and approval of a final retirement plan, obtaining legal permission to proceed with demolition of the facility, legal expenses for protecting the State's interest, preparing specification bid documents and contracts for demolition work, managing the bidding process, negotiations of contracts, and other tasks.

The Council concludes a 20 percent future development contingent is necessary to be applied to account for uncertainty in the decommissioning estimate because, if site restoration becomes necessary, it might be many years in the future where there is uncertainty of continued adequacy of the retirement cost estimate.

The Council reviewed the applicant's methods, assumptions and data sources (e.g., transfer station disposal fee, prevailing labor rates) and found that the information is reasonably accurate and consistent with decommissioning estimates approved by Council for other energy facilities. Therefore, the Council finds that $4.9 million (Q4 2019 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*

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 satisfactory to Council to restore the 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 applicant (certificate holder) fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the applicant (certificate holder) has fully restored the site. OAR 345-025-

0006(8) establishes a mandatory condition which ensures compliance with this requirement, incorporated into the recommended site certificate condition below:

**Retirement and Financial Assurance Condition 4:** Before beginning construction of the facility or a facility component, 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 total bond or letter of credit amount for the facility is $4.9 million dollars (Q4 2019 dollars), to be adjusted to the effective date, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:

a. The certificate holder may adjust the amount of the bond or letter of credit based on the design configuration of the facility, or any phase of the facility, by applying the unit costs presented in Table 3 of the Final Order on the ASC, and the contingencies illustrated in Table 3 of the Final Order on the ASC, and may further make adjustments based on unit costs for task and actions presented in ASC Exhibit W Attachment W-1 and W-2. Any revision to the restoration costs should be adjusted to the effective date as described in (b). Any modification to the unit costs presented in Table 3 of the Final Order on the ASC are subject to review and approval by the Council.
b. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:
    i. Adjust the amount of the bond or letter of credit (expressed in Q4 2019 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 2019 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 2019 dollars to present value.
    ii. 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 and a bond or letter of credit form approved by the Council, based on the Council's pre-approved financial institution list and form.

[Mandatory Condition OAR 345-025-0006(8); PRE-RF-01]

The applicant provides 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. To demonstrate its ability to receive an adequate bond or letter of credit, the applicant provides a July 16, 2019 letter from The Hanover Insurance Group, stating that "The Hanover Insurance Group (through The Hanover Insurance Company) serves as surety for Ecoplexus, Inc., …[and given] Ecoplexus' financial strength and credit experience, Hanover provides bonding capacity within a total work program of $75,00,000". Furthermore, the letter clarifies that Hanover Insurance Group has "bonded single performance

and payment bonds in excess of $30,000,000." The Hanover Insurance Group has been evaluated by Council and is included on the 2021 pre-approved financial institution list.

The applicant also provides, as evidence of its financial capability to obtain a bond or letter of credit without violating its bond indenture provisions, articles of incorporation, common stock covenants, or similar agreements, a legal opinion letter dated August 6, 2019 from Stoel Rives, LLP. The legal opinion letter affirms that based on review of the applicant's February 5, 2019 Articles of Organization and a Copy of the Operating Agreement (Documents), the applicant has the ability to construct and operate the facility without violating the terms of its Documents.[99] Based on review of the legal opinion and financial assurance letter, which are largely consistent with similar letters historically reviewed by Council under the standard, the Council finds that the applicant has obtained some level of assurance of its ability to obtain a bond or letter of credit.

**Conclusions of Law**

Based on the foregoing recommended findings of fact, and subject to compliance with the recommended conditions, the Council finds that the 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:*
>
> > *(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017****

**Findings of Fact**

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

The analysis area for potential impacts to fish and wildlife habitat, as defined in the project order, is the area within and extending ½-mile from the site boundary. To inform the evaluation of impacts under the Council's Fish and Wildlife Habitat standard, both biological and botanical

[99] MSEFAPP ASCDoc1-13 Exhibit M Financial 2020-11-09.

surveys were conducted including wetland delineation surveys, special status species surveys, raptor and eagle surveys, and habitat mapping as further described below.

*Methodology*

The applicant's methodology for evaluating habitat quantity and quality within the analysis area, and the identification of state sensitive and other non-listed special status species included consultation with ODFW, desktop and field surveys. Consultation with ODFW began in 2018 and is ongoing. Additionally, on July 23, 2019, the applicant conducted a site visit with staff from both ODFW and ODOE.

The literature review evaluated the following sources: a 2011 National Land Cover Database published in 2015, a United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Trust Resources Report, 2019 Oregon Biodiversity Information Center (ORBIC) database, and the Oregon Department of Agriculture (ODA) Oregon Listed Plants by County (2019). The results of the literature review were used to establish a baseline habitat assessment, prior to conducting habitat categorization and wildlife field surveys in October 2018. The applicant provides results of the literature review in ASC Exhibit P Attachments P-3A and P-3B. To supplement this data, the applicant's desktop survey also included review of the United States Geological Survey's (USGS) 2019 The National Map; aerial imagery; Oregon Department of Agriculture Plant Conservation Program data; Jefferson County's Comprehensive Plan; ODFW Deer and Elk Winter Range maps; 2019 eBird; the National Audubon Society's 2019 Important Bird Areas; USGS's 2001 Breeding Bird Survey; and, Oregon Eagle Foundation, Inc's 2015 Annual Report.

Field surveys conducted in 2018 and 2019 included a habitat categorization and wildlife survey on October 9, 2018 (visual and pedestrian survey, 600 foot transects throughout the site); wetland delineation survey on October 30, 2018; and, raptor and eagle nest surveys (including both ground and helicopter surveying) from March 5 through July 1, 2019. In addition, the applicant initiated consultation with ODFW and the United States Fish and Wildlife Service (USFWS) in 2018, which continued through 2021.[100]

[100] In ASC Exhibit Q, applicant identifies two federally listed fish species and one potentially federally listed mammal species within the analysis area.

*Habitat Types and Categories in the Site Boundary*

Habitat types and categories within the site boundary, based on the applicant's literature and field surveys described above, include habitat categories 4 and 6. The identified habitat subtypes within Category 4 and 6 habitat within the site boundary include the following:

- Category 4[101]
  - Exotic Annual Grassland – Grassland Steppe dominated by non-native grasses and weeds
  - Rabbitbrush Shrub-Steppe – Shrub-steppe dominated by native and/or non-native grasses and forbs (<20% shrub cover)
- Category 6
  - Developed – Paved Roads

*Potential Fish and Wildlife Habitat Impacts*

Construction and operation of the facility would result in temporary and permanent habitat impacts to Category 4 habitat. Impacts to Category 6 habitat do not require compensatory mitigation under the Council's Fish and Wildlife Habitat standard, although if Category 6 habitat includes vegetation or agriculture, revegetation would still be required under OAR 345-025-0006(11). Temporary habitat impacts are those that would last for less than the operational lifetime of the facility and would result during construction and installation of facility components. The duration of temporary impacts to habitat is variable, based on vegetation type and extent. Permanent impacts are defined those that would exist for the operational life of the facility and would result from placement of permanent facility structures within a perimeter fenceline.

As presented in Table 4: *Summary of Habitat Categories and Estimated Permanent and Temporary Habitat Impacts from Facility*, the facility would temporarily disturb approximately 6.66 acres of Category 4 (grassland and shrub-steppe) habitat. The facility would permanently disturb approximately 270.18 acres of Category 4 (grassland and shrub-steppe) habitat. Because Category 6 does not require any mitigation resulting from impacts to habitat, only temporary and permanent impacts to Category 4 habitat would require habitat mitigation.

[101] In comments on the ASC, ODFW concurred with the applicant's Category 4 habitat designation, but also commented that given the value of the habitat within the site boundary for recognized eagle species in the analysis area, that if the applicant does not obtain an Incidental Take Permit from USFWS, as proposed, that the habitat designation should be Category 3. MSEFAPP Complete ASC Reviewing Agency Comment ODFW Jackle 2020-12-09.

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

| Habitat Category and Type | Perm. | Temp. | Calculated Mitigation Area (Temporal and Permanent Impacts)[1,2] |
|---|---|---|---|
| | Acres | | |
| **Category 4** | | | |
| Exotic annual grassland | 142.19 | 5.56 | 144.97 |
| Rabbitbrush shrub-steppe | 127.99 | 1.10 | 128.54 |
| **Category 6** | | | |
| Developed (paved roads) | 0 | 0.02 | 0.00 |
| ***Habitat Impact Summary*** | | | |
| Estimated Category 4 Impacts = | 270.18 | 6.66 | 273.51 |
| Estimated Category 6 Impacts = | 0 | 0.02 | 0.00 |
| **Total Area =** | **270.18** | **6.68** | **273.51** |

Notes:
Perm. = Permanent; Temp. = Temporary
1. Temporal Impact mitigation is based on a 1:1 acre ratio for Category 4, and zero for Category 6.
2. Permanent impact mitigation is based on a 1:1 ratio for Category 4, and zero for Category 6.

*Proposed Habitat Mitigation*

The facility would by located within Category 4 and 6 habitat. As presented in Table 4 above and in ASC Exhibit P Figure P-1, Category 6 habitat within the proposed site boundary is limited to a paved road and would not require mitigation for temporary or permanent impacts under the Council's Fish and Wildlife Habitat standard. The mitigation goal for Category 4 habitat is no net loss in either existing habitat quantity or quality. To achieve this goal, impacts must be avoided or unavoidable impacts must be mitigated through "reliable in-kind or out-of-kind, in-proximity or off-proximity" habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.[102]

To achieve a no net loss in habitat quantity and quality for temporary impacts of approximately 6 acres of Category 4 habitat, the applicant proposes to adhere to the requirements of a Revegetation and Noxious Weed Control Plan, as provided in draft format in Attachments F and G of this order. In the draft Revegetation Plan, the applicant proposes to, prior to construction of the facility or facility component, consult with the Department, ODFW, and the Jefferson County Weed Control Authority, to identify and discuss the area(s) that would need to be restored, monitoring reference plot locations and conditions, habitat category and habitat subtype conditions, topsoil restoration and revegetation methods, erosion and sediment control measures, and an implementation schedule. After additional consultation with ODFW, the Jefferson County Weed Control Authority, and the landowner to determine the appropriate seed

[102] OAR 635-415-0025(4)(b)

mix and application rate to use, the applicant would be obligated to monitor and report on the success of revegetation. After monitoring and reporting, success would be measured, as specified in Section IV.3. of the draft plan, based on percentage of desirable vegetation cover, vegetation density and diversity representing equal or greater conditions of the monitoring sites compared to reference sites.

The applicant proposes to conduct annual monitoring of monitoring sites for the first 5-years post construction; and submit semiannual monitoring reports to the Department and ODFW for review. Following Year 5 of revegetation monitoring, the applicant would confer with the Department and ODFW to develop an action plan for subsequent years. If after 5 years an area is not trending toward meeting the success criteria, and has not been converted by the landowner to an inconsistent use, the applicant may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability. In addition, if either the Department or applicant conclude that after Year 5 monitoring the revegetation of an area was unsuccessful, an action plan with applicable mitigation for the permanent loss of habitat quality and quantity may be implemented, if approved by the Department. The Department and ODFW thoroughly reviewed the draft Revegetation Plan and consider the revegetation plan satisfactory and inclusive of a robust monitoring proposal with quantitative success criteria.[103]

The applicant proposes to implement a Noxious Weed Control Plan applicable to all disturbance areas within the perimeter fenceline. Weeds would be controlled using both mechanical and chemical methods in surface-disturbed areas in accordance with the Revegetation Plan and the Noxious Weed Control Plan. As presented in the draft Noxious Weed Control plan, the overarching goals of the plan is to prevent, identify, and control weeds of disturbance areas within the site boundary. The applicant states that long-term weed control would be accomplished through the seeding of perennial grasses known to compete well with noxious weeds, or by maintaining the existing cover. Short-term weed control would be through herbicide use.

Based on the components included in the draft Revegetation and Weed Control Plans provided as Attachment P-6 and P-7 of this order, including both short- and long-term monitoring and reporting and quantitative success criteria, and concurrence obtained from ODFW, the Council finds that the applicant would meet the habitat mitigation goals for temporary habitat impacts. Based on the applicant's draft plans, and in order to provide the Department, ODFW and Jefferson County Weed Control Authority the opportunity to review final plans, the Council imposes the following conditions:

**Fish and Wildlife Habitat Condition 1:** The certificate holder shall:

a. Before beginning construction, finalize and submit a Revegetation Plan, based upon the draft plan provided in Attachment F of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW. The scope of finalizing the plan shall, at a minimum, include the following:

[103] MJSEFAPP Complete ASC Reviewing Agency Comment ODFW Jackal 2020-03-16.

i. Final assessment of temporary habitat impacts (in acres), based on habitat quality of habitat subtype, and final facility design, presented in tabular format.
ii. Survey and sampling protocol for evaluating the success criteria of all previously-disturbed wildlife habitat areas based on pre-disturbance habitat quality and diversity of habitat temporarily impacted.
iii. Description of topsoil salvage, scarification and restoration methods if intended to be implemented.
iv. Approval of appropriate seed mix composition from the ODFW.

b. During construction and operation of the facility or facility component, implement the requirements of the plan; monitor and report results of revegetation activities to the Department, as required by the plan.

[GEN-FW-01]

**Fish and Wildlife Habitat Condition 2:** The certificate holder shall:

a. Before beginning construction, finalize and submit a Noxious Weed Control Plan, based upon the draft plan provided in Attachment G of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW and Jefferson County Weed Control Authority. The finalized plan shall, at a minimum, include the results of preconstruction weed survey and updated County weed lists.
b. During construction and operation, implement the requirements of the plan.

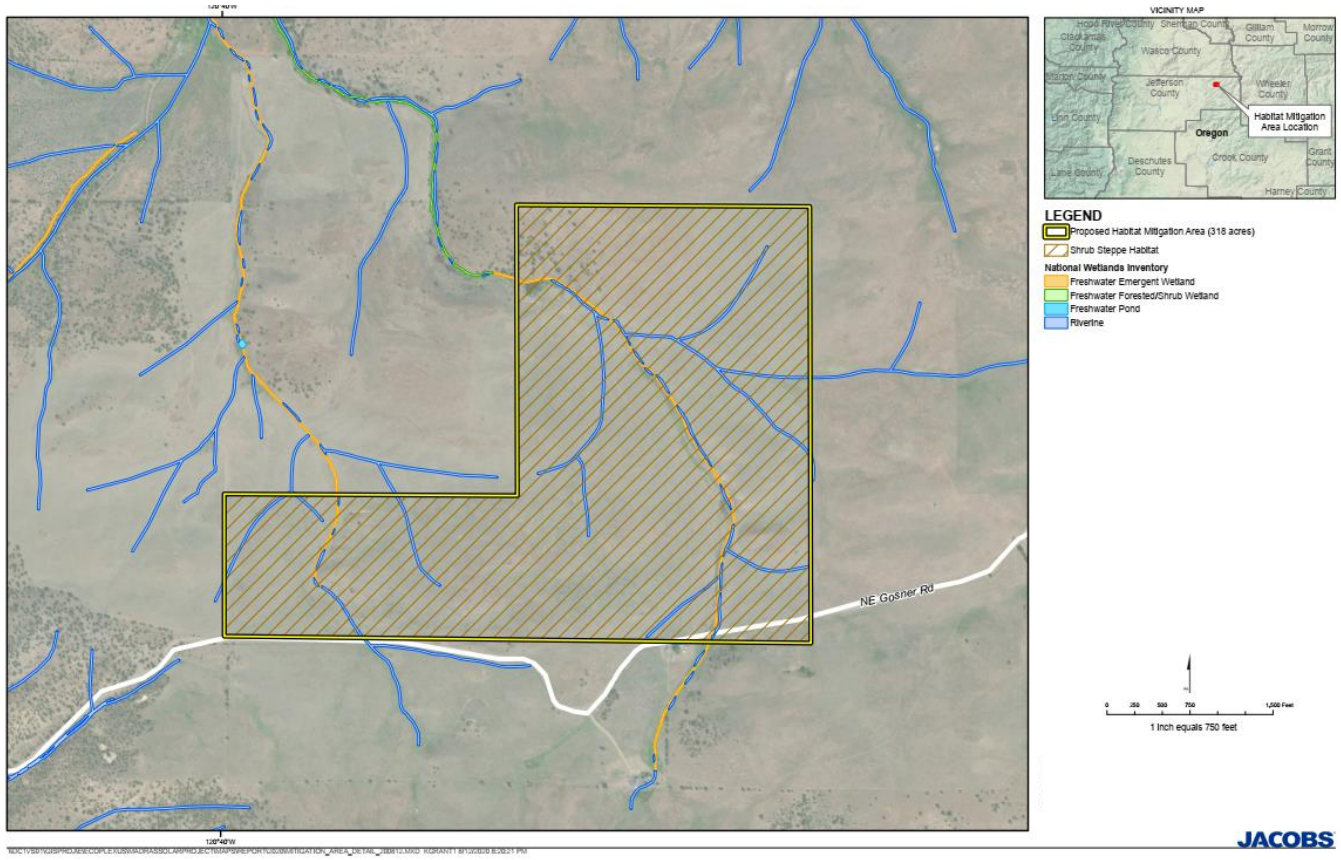
[GEN-FW-02]

The applicant proposes two compensatory mitigation options to mitigate temporal (i.e. loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function) and permanent habitat impacts. The first compensatory option (Option 1) includes developing a payment-in-lieu option to a third party for habitat acquisition and maintenance, where the applicant would contribute funds to a third party to then be used by the third party for habitat conservation and maintenance. The applicant clarifies that this mitigation option, as outlined in the draft Habitat Mitigation Plan (HMP), included as Attachment H of this order, is presented for the purpose of preserving the option in the future. The Council notes that sufficient information has not been included in the ASC to consider the option under the Fish and Wildlife Habitat standard and is therefore not further discussed in this order.

The second compensatory option (Option 2) included in the draft HMP includes direct implementation of habitat mitigation actions by the applicant, in which the applicant would acquire a habitat mitigation area (HMA) containing similar habitat quality and quantity as the habitat impacted by the facility, and would be responsible for the monitoring, maintenance, and evaluation that would take place as presented in the draft HMP. For this option, the applicant has identified a potential HMA location within the Blue Mountains ecoregion, comprised of up to 319 acres of Category 2, 3, and 4 shrub steppe habitat, as presented in Figure 3 below. The

proposed potential HMA has been recognized by ODFW as an "area [that] could offset the impacts to project development."[104]

**Figure 3: Proposed Habitat Mitigation Area**




For either compensatory mitigation option, the applicant proposes acreage ratios to meet ODFW's mitigation goal for Category 4 habitat impacts. Specifically, the applicant commits to mitigate permanent impacts to Category 4 grassland and shrub-steppe habitat by including one acre in the HMA for every one acre permanently impacted by the facility (a 1:1 ratio). The applicant proposes to mitigate temporal impacts by including half an acre in the HMA for every acre of Category 4 habitat temporarily disturbed by the facility (a 0.5:1 ratio). Based on this methodology, the HMA for the facility would include approximately 274 acres as mitigation for approximately 271 acres of both permanent and temporal habitat loss of Category 4 habitat. As mentioned above, Category 6 habitat is limited to a paved road and would not require mitigation for temporary or permanent impacts under the Council's Fish and Wildlife Habitat standard.

The applicant's draft HMP includes proposed enhancement actions and success criteria to be implemented at the HMA to protect and improve habitat, and to determine whether the mitigation goals and standards were met. Preconstruction requirements were also provided, and

[104] MSEFAPP Complete ASC Reviewing Agency Comment ODFW Jackle 2020-12-09.

include an HMA habitat assessment, grazing assessment, enhancement action review, provision of success criteria, and legal instrument. Based on the Council's review of the HMP, in coordination with ODFW, the Council finds that the proposed mitigation would satisfy the Council's Fish and Wildlife Habitat Standard, and recommends the following condition be imposed:

**Fish and Wildlife Habitat Condition 3:** The certificate holder shall:

a. Before beginning construction, finalize and submit a Habitat Mitigation Plan, based upon the draft plan provided in Attachment H of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW. In the finalization of the plan, the Department may request specific reporting requirements including specific information, frequency and format. Components of the plan to be finalized shall include, at a minimum, a final assessment of permanent habitat impacts (in acres) based on habitat quality of habitat subtype, and final facility design, presented in tabular format.
b. Before beginning construction, select qualified specialists that have substantial experience in creating, enhancing, and protecting habitat mitigation areas within Oregon; and provide the identity and qualifications of the personnel or contractors selected to implement and manage the habitat mitigation areas to the Department.
c. During Construction and operation of the facility, implement the requirements of the plan as approved under sub(a) of this condition.

[GEN-FW-03]

*State Sensitive Species within the Analysis Area and Facility Potential Impacts*

As presented in ASC Exhibit P, based upon a current literature review, the July 2019 field visit, and field surveys in 2018 and 2019, the analysis area (within and extending 5 miles from proposed site boundary) contains suitable habitat for 10 state sensitive species and therefore facility construction and operation could result in impacts to these species.[105] The table below, Table 5: *State Sensitive Species with Potential to Occur within the Analysis Area*, lists State Sensitive Species which have the potential to occur based on suitable habitat within the analysis area.

**Table 5: State Sensitive Species with Potential to Occur within 5-Mile Analysis Area**

| Species | State Status |
|---|---|
| **Birds** | |
| Ferruginous hawk | Sensitive – Critical (SC) |
| Peregrine falcon | Sensitive – Vulnerable (SV) |

[105] The Department notes that while the Oregon Department of Agriculture (ODA) does not classify plant species as "sensitive," it does classify plant species as "threatened," "endangered," or "candidate" for listing. As explained in ASC Exhibit Q, and discussed further in Section IV.I. *Threatened and Endangered Species* of this order, no federally or state-listed plants are documented to occur in Jefferson County, Oregon.

**Table 5: State Sensitive Species with Potential to Occur within 5-Mile Analysis Area**

| Species | State Status |
|---|---|
| Swainson's hawk | SV |
| **Mammals** | |
| California bat | SV |
| Pallid bat | SV |
| Spotted bat | SV |
| Townsend's big-eared bat | SC |
| **Fish** | |
| Bull trout (Coastal Recovery Unit) | SC |
| Chinook Salmon (Deschutes River Evolutionarily Significant Unit) | SV |
| Steelhead (Middle Columbia River Evolutionarily Significant Unit) | SC |

Potential impacts to state sensitive wildlife species during facility construction and operation are expected to primarily be indirect from disturbance impacts (noise, vehicular traffic, habitat loss).

*Potential Impacts to Avian Species*

Potential facility related impacts to state sensitive avian species, as identified by the applicant in ASC Exhibit P, could include temporary and permanent habitat loss, and loss of potential nesting and foraging opportunities. However, none of the identified state sensitive species listed in Table 5 above were observed within the analysis area during the applicant's 2018 and 2019 field surveys. The applicant explains that although the Swainson's Hawk was observed 1.5 miles north of the analysis area, and 5 miles southeast of the analysis area during field surveying, based on recent fires and limited observations of preferred prey and their sign (e.g., rodent burrows, scat) within the site boundary, and an abundance of foraging habitats surrounding the site, Swainson's hawks currently using the site as foraging habitat could be expected to relocate to other comparable habitats closer to their nest sites.[106] Additionally, because the facility would be sited entirely within Category 4 shrub-steppe habitat, and doesn't contain suitable nesting habitat for the five state sensitive avian species, the Council finds that the construction and operation of the facility is not likely to result in significant adverse impacts to the identified state sensitive avian species.

However, in order to reduce potential indirect disturbance impacts to state sensitive avian species observed, or that have the potential to occur within the analysis area, the applicant proposes to monitor raptor nest substrates within 0.25 of a mile from disturbance areas during construction, in accordance with ODFW recommended time periods. In addition to construction monitoring of nest substrates, and to further minimize potential impacts from facility construction the Council imposes the following condition:

[106] MSEFAPP ASCDoc1-16 Exhibit P Fish and Wildlife 2020-11-09. Section P.7.2.2

**Fish and Wildlife Habitat Condition 4:** The certificate holder shall:

a. Prior to construction of the facility or facility component, hire a qualified Biologist to conduct a raptor nest survey within 0.25 miles from proposed disturbance areas. The certificate holder shall submit to the Department, in consultation with ODFW, for review and concurrence, survey protocol identifying the survey area and methods to be used to identify raptor nests. Raptor nest surveys shall be conducted no more than two weeks prior to the start of construction activities. If the biologist detects active raptor nests, the certificate holder shall implement and maintain spatial buffers around the nests and seasonal restrictions, as presented in the table below.

**ODFW Raptor Nest Buffers and Seasonal Restrictions**

| Species | Spatial Buffer | Seasonal Restriction | Release Date if Unoccupied |
|---|---|---|---|
| Golden eagle | 0.25 mile | Feb 1- Aug 15 | May 15 |
| Bald Eagle | 0.25 mile | Feb 1- Aug 15 | May 15 |
| Peregrine falcon | 0.25 mile | Jan 1 – Jul 1 | May 15 |
| Ferruginous hawk | 0.25 mile | Mar 15 – Aug 15 | May 31 |
| Swainson's hawk | 0.25 mile | Apr 1 – Aug 15 | May 31 |

If a nest becomes active during construction that was not identified as active during the preconstruction surveys, the certificate holder may request review by the Department, in consultation with ODFW, of an exception to the spatial buffer and seasonal restrictions.

b. During construction of the facility or facility component:
   i. Maintain approved buffers around active raptor nests
   ii. Avoid any blasting and pile-driving noise to the extent feasible during the nesting season for golden eagles (January 1 to August 1) within 0.25 mile of any occupied nest.

[GEN-FW-04]

*Potential Impacts to Mammals*

In ASC Exhibit P, based upon presence of suitable habitat within the analysis area, the applicant explains that four special-status bat species have the potential to occur within the analysis area. However, due to marginal foraging habitat, lack of water sources, and no suitable roosting habitat within the proposed site boundary, and considering construction and operation activities generally occurring during daylight hours (when bats are generally absent), the construction and operation of the facility is not anticipated to result in significant loss or degradation of bat foraging habitat or activity within the proposed site boundary. The Council concurs with the applicants determination, and finds that the facility is not expected to result in significant adverse impacts on the aforementioned state sensitive mammals.

*Potential Impacts to Fish*

Three special status fish species [Steelhead (Middle Columbia River Evolutionarily Significant Unit), Chinook Salmon (Deschutes River Evolutionarily Significant Unit), and the Bull trout (Coastal Recovery Unit)] were identified by the Applicant as having the potential to occur within the analysis area. However, as discussed in *potential impacts to mammals* above, there are no water sources nor aquatic habitats within the proposed site boundary. The applicant explains that the nearest fish habitat is Lake Simtustus located approximately 900 feet north of the site boundary and down approximately 600 feet in elevation from the lowest point within the site boundary. Based on absence of aquatic habitat within the proposed site boundary, elevation of the proposed site boundary, and the proposed site boundary distance from the nearest potential habitat, the applicant determined that the facility would not have any direct or indirect impacts to the identified state sensitive fish species or their habitat. The Council notes that while unlikely, it is possible that if not controlled, erosion from the facility construction and operation could enter the Lake Simtustus, and cause an adverse impact to habitat for the identified special status fish. However, because the applicant has proposed, and is required to implement a number of erosion control measures (as discussed in Section IV.D. *Soil Protection* of this order), which would serve to reduce potential erosion impacts from the facility to areas immediately surrounding the proposed site boundary, the Council finds that the construction and operation of the facility is not likely to result in significant adverse impacts to the identified state sensitive fish species.

Based upon potential impacts of the facility to the above-listed sensitive species with the potential to occur within the analysis area, and therefore could potentially be impacted by facility construction and operation due to the introduction of noxious weeds and vehicle disturbances, the applicant proposed best management practices and minimization measures in ASC Exhibit P, which the Council imposed as the following conditions:

**Fish and Wildlife Habitat Condition 5:** The certificate holder shall hire a qualified biologist to develop and implement an environmental training course for all construction facility personnel and on-site contractors. The training course shall include, but not be limited to discussion on reporting of injured or dead wildlife on the site, adherence to site speed limits, and trash control.
[CON-FW-01]

**Fish and Wildlife Habitat Condition 6:** The certificate holder shall:

a. Before beginning construction of the facility or facility component, visibly establish marked construction boundaries where construction activities may take place. The boundaries should constrain construction personnel, activity, and traffic only to areas approved by the certificate holder or construction contractor as an area deemed necessary for construction.
b. Before beginning and during construction, facility personnel and on-site contractors shall not remove existing vegetation beyond approved construction boundaries.
c. Before beginning and during construction, operation, and retirement of the facility, ensure that facility personnel and on-site contractors use existing roads to the

maximum extent possible, and restrict off-road travel to only be allowed in case of emergencies.

d. Before beginning and during construction, operation, and retirement of the facility, impose and enforce a speed limit of 20 miles per hour while driving within the facility site boundary.

[GEN-FW-05]

**Fish and Wildlife Habitat Condition 7:** Before beginning construction of the facility or facility component, where vegetation clearing activities are to occur, the certificate holder shall conduct vegetation clearing activities between September 1 and March 1 to the greatest extent possible. Any vegetation clearing outside of this period will be conducted only following a nest clearance survey and will be performed no more than 7 days prior to the clearing of the area in order to ensure that no birds are nesting in the area in question. If birds are discovered, no clearing will occur until the birds have left the nest for the season.

[CON-FW-02]

**Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Council finds that facility would comply 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 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 facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.*

**Findings of Fact**

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of the facility are not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the facility is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission.[107]

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

*Methodology – Literature Review*

In order to identify threatened and endangered species that might occur within the analysis area, the applicant consulted with both the Oregon Department of Fish and Wildlife (ODFW) and the U.S. Fish and Wildlife Service (USFWS), and also reviewed multiple databases and literature resources. The applicant's literature review evaluated the following sources:

- 2011 National Land Cover Database (Homer et al., 2015)
- The National Map (U.S. Geological Survey [USGS], 2019)
- Bull Trout General Information and Life History (USFWS, 2019b)
- Bull Trout Revised Critical Habitat Designation (USFWS, 2010)
- Bull Trout Final Rule Determining Threatened Status (USFWS, 1998)
- Fisher General Information and Life History (USFWS, 2019c)
- Steelhead General Information and Life History (USFWS, 2019d)
- Oregon Department of Agriculture [ODA] Plant Conservation Program (ODA, 2019)
- Oregon Department of Agriculture [ODA] *Oregon Listed Plants by County* (ODA, 2019)
- USFWS IPaC Report (USFWS, 2019a)

Additionally, as explained in ASC Exhibit Q, the Oregon Biodiversity Information Center (ORBIC) database was queried for records of state and federal special-status species.

*Literature Review Results*

[107] Although the Council's standard does not address federally-listed threatened or endangered species, applicants must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

The results of the applicant's literature review confirmed that there are no state listed threatened or endangered (T&E) plants or mammal species with potential or suitable habitat within the analysis area. The results also indicated that there were two federally-listed fish species with suitable habitat within the analysis area, however, there is not suitable habitat for these species within the facility site boundary (i.e. there are no waters or wetlands within the site boundary).

*Field Surveys*

The applicant's consultant, Jacobs, conducted a site visit on October 9, 2018, which evaluated habitat categorization and wildlife and botanical conditions. Results of those surveys are provided in ASC Exhibit P. An additional site visit was conducted on July 23, 2019, which included USFWS and ODFW. The site was viewed from both vehicle, and on foot, and no federally or state listed threatened or endangered mammal species, or signs of their presence within the site boundary were identified.

*Impact Assessment and Recommendations*

The facility would not be expected to result in impacts to state-listed T&E species, including plant, mammal and fish. Based on the above analysis, the Council finds that there are no state listed threatened or endangered species that are likely to occur in the analysis area, and as such, the facility would not result in impacts to the likelihood or survival of any T&E species.

**Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions, the Council finds that the facility would comply 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.*
> ****[108]*

**Findings of Fact**

[108] The facility is not a special criteria facility under OAR 345-015-0310; therefore OAR 345-022-0080(2) is not applicable.

The Scenic Resources Standard requires the Council to find that visibility of facility structures, plumes, vegetation loss and landscape alterations would not cause a significant adverse impact to identified scenic resources and values. To be considered under the standard, scenic resources and values must be identified as significant or important in local land use plans, tribal land management plans, and/or federal land management plans. The analysis area for the Scenic Resources standard is the area within and extending 10-miles from the proposed site boundary.

Applicable Land Use and Management Plans

ASC Exhibit R Table R-1, recreated below, identifies 8 local, state, tribal and federal land use and management plans that the applicant identified as applicable to the analysis area.[109] The Council did not identify any local, state, tribal or federal land use or management plans applicable to the analysis area that were omitted.

**Table 6: Identification of Applicable Local, State, Tribal, and Federal Land Use and Management Plans for Lands within 10-Mile Scenic Resources Analysis Area**

| Governmental Agency | Plan |
|---|---|
| **Local (City)[1]** | |
| City of Madras, Oregon | *City of Madras Comprehensive Plan* (revised through periodic review in 2003, amended in 2018) |
| **Local (County)** | |
| Jefferson County, Oregon | *Jefferson County Comprehensive Plan* (adopted in 2006, amended 2013) |
| **State** | |
| Oregon Parks and Recreation Department | *The Cove Palisades State Park Master Plan* (2002) |
| Oregon Parks and Recreation Department | *Madras Mountain Views Scenic Bikeway Management Plan* (2013) |
| **Tribal** | |
| Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO) | *Management Plan* (1995) |
| **Federal** | |
| United States Department of Agriculture Forest Service | Record of Decision for the Land and Resource Management Plan for the Ochoco National Forest and Crooked River National Grassland (1989) |
| United States Department of Agriculture Forest Service | Crooked River National Forest Land and Resource Management Plan (1989) |
| Bureau of Land Management, Central Oregon Resource Area | Lower Deschutes River Management Plan Record of Decision (1993) |

[109] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-5

**Table 6: Identification of Applicable Local, State, Tribal, and Federal Land Use and Management Plans for Lands within 10-Mile Scenic Resources Analysis Area**

| Governmental Agency | Plan |
|---|---|
| Notes:<br>• The Council recognizes that the Applicant did not include the local land use plans for both the City of Metolius and the City of Culver. Through its own analysis, the Council determined that neither of these plans include or identify important or significant scenic resources that would then necessitate evaluation under the standard. | |

As discussed in more detail below, the applicant reviewed the plans to identify specific scenic resources designated as significant or important.

*City of Madras Comprehensive Plan (CMCP)*

The CMCP identifies the Cascade Mountain Range as a scenic resource in its Goal 5 inventory. Goal 5 Policy A of the CMCP requires the City to preserve the scenic vistas afforded by the Cascade Mountain Range by establishing height regulations to limit the height of structures, residential and commercial, in the City Zoning Ordinance.[110]

The applicant states that it did not evaluate potential impacts to the Cascade Mountain Range because the Cascade Mountain Range is not located within the analysis area for scenic resources but adds that the facility would have a minimal impact on views of the Mountains from the City of Madras.[111]

The Council disagrees with the applicant's assessment that the Cascade Mountain Range is the scenic resource protected by the CMCP. As cited by the applicant, the CMCP states:

> "Almost any location in the City offers *scenic views and vistas* of the nearby Cascade Mountain Range. It is the desire of the City to preserve this scenic resource for the enjoyment of the residents of the City. To that end, the city shall establish height regulations to limit the height of structures, residential and commercial, in the Zoning Ordinance" Emphasis added.[112]

The CMCP references "scenic views and vistas of the Cascade Mountain Range" as the scenic resource the City desires to preserve. Further, because no City Zoning Ordinance implementing the CMCP would apply to development on the nearby mountain range, the Council interprets the "scenic resource" referred to in the CMCP to be the scenic views and vistas of the Cascade Mountain Range from locations in the City. This is consistent with Goal 5 Policy A, also cited by

[110] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-6
[111] Ibid.
[112] City of Madras Comprehensive Plan, as referenced in MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-6

the applicant, which requires the city to "[p]reserve the scenic vistas afforded by the Cascade Mountain Range."[113]

*Jefferson County Comprehensive Plan*

The Jefferson County Comprehensive Plan (JCCP) identifies five river segments as significant or important for their scenic designations, and thirteen scenic resources which are considered outstanding scenic sites.[114] One of the river segments and two of the outstanding scenic sites are within the 10-mile analysis area for impacts to scenic resources:

- Lower segment of the Deschutes River (from Pelton Dam to the north county line)
- Cove Palisades State Park
- Canyon walls of the Deschutes and Crooked Rivers

Neither the JCCP or the applicant identify specific geographic boundaries for the canyon walls of the Deschutes and crooked rivers. As discussed further below, applicant based its evaluation of impacts on representative views within the canyons south of Cove Palisades State Park based on views identified as important in the Cove Palisades State Park Master Plan.

*The Cove Palisades State Park Master Plan*

The applicant reviewed the Cove Palisades State Park Master Plan to identify specific scenic management objectives and scenic resources identified as significant or important.[115] The applicant cites Scenic Resource Management Objective A, which specifies vegetative management objectives intended to keep views from designated important viewpoints open, as relevant to the identification of significant or important scenic resources:

> "Keep views from viewpoints open. Trees and shrubs should be selectively removed or pruned to retain important views from established viewpoints. Important areas for retaining views include the two viewpoints along the east rim road, which are planned

[113] Ibid.
[114] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-7
[115] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-8

to remain open, selected views from the Peninsula Group Camp and views from the café at the Marina."[116]

Based on Scenic Resource Management Objective A of the Plan, the applicant identified the following viewpoints within the Cove Palisades State Park as significant or important scenic resources:

- Mountain View Drive Viewpoint 1
- Mountain View Drive Viewpoint 2
- View from Café at the Marina
- View from Peninsula Group Camp

The Council reviewed the Cove Palisades State Park Master Plan and notes that Scenic Resource Management Object A only identifies scenic resources for which vegetative management is needed. In addition to the established viewpoints, the Council notes that the Cove Palisades State Park Master Plan identifies views from each of the two Jordan Road bridges, as well as views to the cliffs opposite of the Park's developed areas, and views from Jordan Road for motorists as important.[117] While the applicant did not specifically identify these areas in its evaluation, the photo survey locations selected to evaluate impacts to the canyon walls of the Crooked and Deschutes Rivers are located along Jordan Road and appear to be representative of these resources.

*Madras Mountain Views Scenic Bikeway Management Plan*

The Madras Mountain Views Scenic Bikeway Management Plan identifies an approximately 30-mile loop through Jefferson County that starts and ends in the City of Madras and passes through the communities of Metolius and Culver and passes through Cove Palisades State Park along the canyon rim of Lake Billy Chinook. The Madras Mountain Views Scenic Bikeway Management Plan was developed by the Oregon Parks and Recreation Department and identifies the Jefferson County Chamber of Commerce as its lead proponent. The Council notes that, because the bikeway is designated by the state and is not otherwise listed in a local, state, tribal, or federal land use management plan as a significant or important scenic resource, the applicant has reserved the right to take the position that OAR 345-022-0080 does not require analysis of state designated scenic bikeways with respect to scenic resources.[118]

[116] Cove Palisades State Park Master Plan, pg. 111, as referenced in MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-8.
[117] Cove Palisades State Park Master Plan, pg. 22
[118] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-8.

*Confederated Tribes of the Warm Springs Reservation of Oregon Management Plan*

The applicant reviewed the Management Plan for the Tribal Council of the Confederated Tribes of the Warm Springs Reservation of Oregon but the Management Plan does not provide an inventory of scenic resources, or goals and policies related to protection of scenic resources.[119]

*Record of Decision for the Land and Resource Management Plan for the Ochoco National Forest and Crooked River National Grassland, and Crooked River National Forest Land and Resource Management Plan*

The Crooked River National Grassland is located within the scenic resources analysis area, and is directly west of and adjacent to the Facility site boundary at its nearest point. The applicant reviewed both the Record of Decision for the Land and Resource Management Plan for the Ochoco National Forest and Crooked River National Grassland (Crooked River ROD), and the Crooked River National Forest Land and Resource Management Plan. The only management area identified in the Crooked River National Grassland Land and Resource Management Plan and the associated Record of Decision with an emphasis on visuals that is in the analysis area for scenic resources is the Lake Billy Chinook View Area. The Lake Billy Chinook View Area is defined as: "the view area that can be seen from Lake Billy Chinook outside the Cove Palisades State Park and within the boundary of the Crooked River National Grassland."[120]

*Lower Deschutes River Management Plan Record of Decision*

As identified in the section discussing the JCCP, the lower segment of the Deschutes River (from Pelton Dam downstream to the north county line) is located within the scenic resources analysis area for the Facility. Applicant explains that the river segment was designated as the Deschutes River Scenic Waterway Recreation Area in 1970 and is a component of the Oregon State Scenic Waterways System. The river segment was designated by the U.S. Congress as a National Wild and Scenic River in 1988. Because of its state and federal designation as a scenic waterway, and because the river segment is incorporated in the Goal 5 inventory of the JCCP for its scenic designation, the applicant evaluated the Lower Deschutes Wild and Scenic River as a significant or important scenic resource.

Visual Impacts

The applicant conducted an analysis to determine the likelihood that facility components would be potentially visible from the scenic resources identified as significant or important in the applicable local, state, tribal, and federal land use and management plans applicable to the analysis area. Energy facility components proposed to be constructed by the applicant include solar modules, inverters, and transformers. Related or supporting facilities proposed to be constructed by the applicant include underground collection cables, a generator step-up

[119] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-8.
[120] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-9.

transformer and substation, a control house, internal service roads, a main access road, the point of interconnection where the transmission line interconnects with the existing electrical grid, and additional temporary construction areas such as staging areas and, potentially, a temporary batch plant.[121]

The applicant explains that the maximum height of the H-frame poles that would hold the overhead cables connecting the substation to the POI is approximately 80 feet. The maximum height of the inverters and transformers would be approximately 10 feet tall. The solar array modules would be approximately 8 feet tall when fully rotated. The applicant further explains that the existing overhead transmission line is supported by a combination of steel towers and wood H-frame structures. The existing structures range in height from approximately 70 to 135 feet and are spaced approximately 600 feet apart and vary depending on site conditions.[122]

The applicant evaluated potential impacts from construction and operation of the facility on the following five scenic resources identified as significant or important in the local, state, tribal, and federal land management plans:

- Lower Deschutes River – from Pelton Dam downstream to the north County line (including Deschutes River Scenic Waterway Recreation Area and Lower Deschutes Wild and Scenic River)
- Madras Mountain Views Scenic Bikeway
- The Cove Palisades State Park
- Canyon walls of Deschutes and Crooked Rivers
- Lake Billy Chinook View Area

To evaluate potential visual impacts from facility structures and loss of vegetation and alteration of the landscape the applicant developed a scenic resources map that includes the locations of the significant or important scenic resources identified in its review and conducted a zone of visual influence (ZVI) analysis to identify whether facility components would be potentially visible from the scenic resource. The applicant notes that the ZVI analysis was conducted using the values for the tallest facility components, which are the 80-foot H-Frame poles that hold the overhead cable connecting the facility substation to the Point of Interconnect at the center of the facility and the 10-foot pad-mounted inverters and transformers located throughout the area within the facility's security fence. The applicant notes that these conservative values were likely to cause the model to overestimate potential visibility of facility components.[123] The applicant also discusses potential impacts associated with glare from the solar modules in ASC Exhibit R, noting that when viewed collectively from a distance at similar elevations, the limited reflectivity of the solar modules may contribute to an overall appearance of a dark line on the horizon. In closer-in views, the solar modules would be perceivable, however, they are unlikely to be visible or substantial sources of glint or glare. The

[121] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-10
[122] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-10
[123] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-2

applicant explains that the solar modules have tracking equipment which means that they will rotate as the sun's angle changes and that most modern solar modules employ antireflective (AR) coating, which is designed to nearly eliminate the reflection of sunlight off the module face, and both of these would result in minimized glare.[124]

If the ZVI analysis showed potential visibility, the applicant further evaluated the potential impacts of the construction and operation of the facility on the identified scenic resources by conducting site visits to the resources areas to assess the level of visibility of the facility and document existing views from sensitive viewing areas using high-resolution photography. Finally, the applicant conducted a visual analysis for potential impacts from the facility based on the Federal Highway Administration's Visual Impact Assessment methodology defined in the Guidelines for the Visual Impact Assessment of Highway Projects.[125]

A summary of the results of the applicant's analysis is provided in Table R-2, which is recreated below.[126]

[124] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Section R.5.5.
[125] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-3
[126] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-11

**Table 7: Scenic Resources Identified in Applicable Local, State, Tribal, and Federal Land Use and Management Plans, Potential Visibility, and Analysis Results**

| Scenic Resource | Managing Jurisdiction | Plan Where Scenic Resource is Identified | Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary | Is Facility Potentially Visible? | Analysis Results |
|---|---|---|---|---|---|
| Lower Deschutes River – from Pelton Dam downstream to the north County line<br><br>Deschutes River Scenic Waterway Recreation Area<br><br>Lower Deschutes Wild and Scenic River | Jefferson County/ BLM | *Jefferson County Comprehensive Plan* (Jefferson County, 2006) *Lower Deschutes River Management Plan Record of Decision* (BLM, 1993) | 4.2 – North | Yes – unlikely, and only at approximately 5 miles from the Facility along a 0.2-mile-long section of Bureau of Indian Affairs (BIA) Road 24, and along an approximately 400-foot-section of the river at river level. | No significant potential adverse impacts to the scenic resource – appearance likely blended or muted with surrounding elements and nearly undetectable in the background of views toward the horizon along the plateau of the facility site. |
| Madras Mountain Views Scenic Bikeway | OPRD/ Jefferson County | *Madras Mountain Views Scenic Bikeway Management Plan* (OPRD, 2013) | 2.5 – South | Yes – minimally and only from intermittent points along a 1.7-mile section of SW Belmont Lane. | No significant potential adverse impacts to the scenic resource – appearance screened from the road by existing juniper forest in the foreground and weak visual contrast where the Facility may be visible in the middleground of views toward the Facility. |

**Table 7: Scenic Resources Identified in Applicable Local, State, Tribal, and Federal Land Use and Management Plans, Potential Visibility, and Analysis Results**

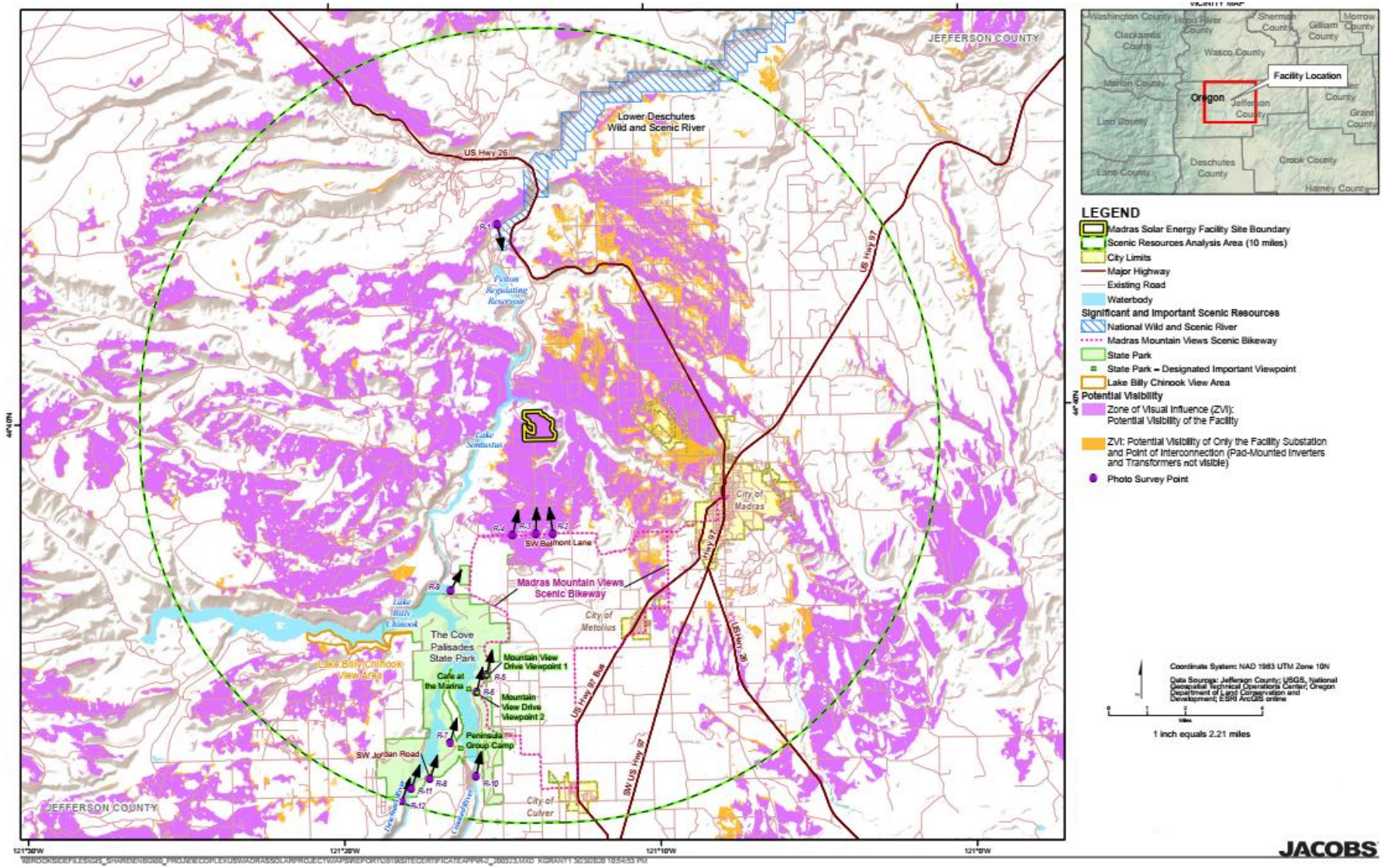
| Scenic Resource | Managing Jurisdiction | Plan Where Scenic Resource is Identified | Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary | Is Facility Potentially Visible? | Analysis Results |
|---|---|---|---|---|---|
| The Cove Palisades State Park | OPRD | *Jefferson County Comprehensive Plan* (Jefferson County, 2006) *The Cove Palisades State Park Master Plan* (OPRD, 2002) *Crooked River National Forest Land and Resource Management Plan* (USFS, 1989b) | 3.1 – South | Yes – only from an isolated 64-acre area located approximately 3.1 miles south of the Facility that is not designated as a significant or important viewpoint. | No significant potential adverse impacts to the scenic resource – no visibility form designated important viewpoints in the park. Potential visibility only occurs in the middleground of views from a portion of the park that is not identified for scenic resource management. |
| Canyon walls of Deschutes and Crooked Rivers | Jefferson County | *Jefferson County Comprehensive Plan* (Jefferson County, 2006) | 0.4 – North, West, South | Yes – unlikely, and only from isolated areas upland of the rim forming the canyon walls. No visibility along roadways or at water level within the canyons. | No significant potential adverse impacts to the scenic resource – no visibility or impact along roadways or at water level. Potential views from isolated upland areas are likely blended or muted with surrounding elements and nearly undetectable in the background of views toward the Facility. |
| Lake Billy Chinook View Area | USFS | *Record of Decision for the Land and Resource Management Plan for the Ochoco National Forest and Crooked River National Grassland* (USFS, 1989a) *Crooked River National Forest Land and Resource Management Plan* (USFS, 1989b) | 5.8 – Southwest | No | No impact. |

(Notes Omitted)

1

As shown in the table, the applicant represents that the facility would be potentially visible from four of the five significant or important scenic resources it identified in its review. A detailed analysis of the applicant's visual impact assessment for the 5 important or significant scenic resources within the analysis area is provided below. For reference, the results of the applicant's ZVI analysis, as presented in ASC Exhibit R Figure R-2, is presented below.

**Figure 4: Applicant's ZVI Analysis for Scenic Resources within 10-Mile Analysis Area**



*Lower Deschutes River, Wild and Scenic River*

The nearest portion of the management area boundary for the Lower Deschutes Wild and Scenic River is located approximately 4.2 miles north of the Facility site boundary. The applicant's ZVI viewshed analysis showed that the majority of views from the Lower Deschutes Wild and Scenic River toward the facility would be precluded by the existing elevation and topography of the river canyon.[127] The analysis showed that the facility could be visible to motorists and boaters from a small area within the Lower Deschutes Wild and Scenic River boundary, approximately 5 miles from the Facility site boundary along an approximately 0.2-mile-long section of BIA Road 24, and along an approximately 400-foot-section of the river at river level.[128]

The applicant documented the potential view of the facility from the northbound shoulder of BIA Road 24 with a photograph that shows a view with potential visibility of the Facility from the mapped boundary of the Lower Deschutes Wild and Scenic River. The facility location is on the plateau that forms the horizon in the background of the viewshed.[129]

The applicant states that at the distance represented in the photograph (approximately 4.2 miles), the facility would appear obscured or may be undetectable in the surrounding landscape. The applicant further notes that existing transmission lines that transect the proposed site boundary are not visible from the photo survey location, and that it is unlikely that facility components, which are proposed to be under the height of the transmission lines, would be visible.[130]

The applicant further represents that the facility would comply with Section 412 (Scenic and Natural Hazard Rim Set Back) of the Jefferson County Zoning Ordinance (JCZO) which requires a 30-foot setback from the rim edge of steep slopes such as the walls of Willow Creek Canyon located along the northern and eastern perimeter of the facility site boundary which are visible from the photo survey location. The applicant states that compliance with this setback will further obscure views of the Facility.[131] The applicants compliance with the JCZO Section 412 is further evaluated in Section IV.E.1.

Because views of the facility from the majority of the Lower Deschutes Wild and Scenic River management area are precluded by the existing elevation and topography of the river canyon, and because distance, topography, and vegetation, are likely to preclude or obscure views from locations within the management area, the Council concurs with applicant's assessment finds

[127] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Figure R-2
[128] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Figure R-13
[129] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-1
[130] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-13
[131] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14

that the facility would not be likely to result in significant potential adverse impacts to scenic qualities of views from Lower Deschutes Wild and Scenic River.

*Madras Mountain Views Scenic Bikeway*

At its nearest point, the Madras Mountain Views Scenic Bikeway route follows SW Belmont Lane approximately 2.5 miles south of the proposed site boundary. The applicant's ZVI viewshed analysis shows that the facility could be visible to cyclists from intermittent locations along a 1.7-mile section of SW Belmont Lane, however, views towards the facility would be screened by up to 2 miles of existing juniper forest in foreground views from most vantage points. The applicant notes that cyclists on SW Belmont Lane are traveling in an east-west direction and the dominant landscape feature along the route is Mount Jefferson to the west.[132]

The applicant documented representative views of the facility's location from SW Belmont Lane with photographs.[133] Two photographs show views of the facility location that are precluded by existing topography and vegetation.[134] One photograph, which was taken from the intersection of SW Belmont Lane and SW Elk Drive, along the route of the Madras Mountain Views Scenic Byway facing the facility site boundary, shows an unobstructed view of the facility's location about 2.5 miles to the North.[135] The applicant explains that for an approximately 80-foot segment of SW Belmont Lane at the intersection, the facility may be visible and will appear similar as a dark geometric outline or shadow with a low profile on the landscape. The applicant states that facility components will lack definition and detail and will not dominate the existing landscape.[136]

Because views of the facility along the 30-mile route of the Madras Mountain Views Scenic Bikeway will be precluded by existing topography, elevation, and vegetation, the Council concurs with applicant's assessment and finds that the facility would not be likely to result in significant potential adverse impacts to scenic views from the Madras Mountain Views Scenic Bikeway. The Council notes that the applicant identified one location along the route with an unobstructed view of the facility location, the intersection of SW Belmont Lane and SW Elk drive, but at the 2.5 distance from the facility location, facility components would not dominate the landscape from this location.

*The Cove Palisades State Park*

The majority of the Cove Palisades State Park boundary is located around Lake Billy Chinook approximately 3.6 miles southwest from the facility site boundary and within the scenic

[132] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14
[133] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-2 through 4.
[134] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-2, R-4.
[135] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-3.
[136] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14

resources analysis area. The applicant's ZVI viewshed analysis shows that the facility would not be visible from areas within the park boundary surrounding Lake Billy Chinook.[137]

The applicant identifies an isolated 64-acre area of the park located on approximately 3.1 miles south of the Facility where the facility would potentially be visible, however, because the area is not designated as an important viewpoint in the Cove Palisades State Park Master Plan, the applicant did not further analyze potential impacts.[138] The Council notes that this area appears to be the undeveloped area surrounding the Round Butte geological feature, which is not listed independently as a significant or important scenic resource in the JCCP or the Cove Palisades State Park Master Plan.

The applicant conducted a photo survey of views it identified as important or significant in the Cove Palisades State Park Master Plan. The photo survey documents that that views of the facility location from both viewpoints on SW Mountain View Drive, the view from the entrance to the marina and Upper Deschutes Day Use Area, and from the Café at the Marina and Peninsula Group Camp are precluded by existing elevation and topography.[139]

Because the facility location would not be visible from views identified as significant or important in the Cove Palisades State Park Master Plan, the Council concurs with the applicant's assessment finds that the construction and operation of the facility would not be likely to result in significant potential adverse impacts to scenic qualities of views from Cove Palisades State Park.

*Canyon walls of Deschutes and Crooked Rivers*

The Jefferson County Comprehensive Plan identifies the "Canyon walls of the Deschutes and Crooked Rivers" as significant or important scenic resources within the scenic resource analysis area. Because the JCCP does not identify specific locations or views as significant or important, the applicant conducted a photo survey of representative views from four accessible locations:

- Round Butte Overlook Park Interpretive Center, approximately 4.4 miles southwest of the Facility site boundary
- A shoulder pullout on SW Jordan Road adjacent to the Crooked River's inlet to Lake Billy Chinook facing toward the Facility site boundary.
- A shoulder pullout on SW Jordan Road adjacent to the Deschutes River's inlet to Lake Billy Chinook facing toward the Facility site boundary.
- A portion of the Deschutes Canyon – Steelhead Falls Wilderness Study Area accessible from the northbound shoulder of SW Jordan Road and adjacent to the Deschutes River's inlet to Lake Billy Chinook.[140]

[137] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. Figure R-2
[138] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15
[139] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15
[140] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15, R-16

Views of the facility site were precluded from view by existing elevation and topography at each of these locations.[141] The applicant further states that the facility may be visible from isolated upland areas above the canyons, but the facility components would likely be blended or muted with surrounding elements and nearly undetectable in the background of views toward the Facility.

Because the facility site is not visible from accessible views of the canyon walls of Deschutes and Crooked Rivers, and would not be dominant in views from isolated areas where views are not precluded by elevation and topography, the Council concurs with the applicant's assessment finds that the construction and operation of the facility would not be likely to result in significant potential adverse impacts to scenic qualities of views of the canyon walls of Deschutes and Crooked Rivers.

*Lake Billy Chinook View Area*

The Lake Billy Chinook View area is defined in the Crooked River National Grassland Land and Resource Management Plan as "the view area that can be seen from Lake Billy Chinook outside the Cove Palisades State Park and within the boundary of the Crooked River National Grassland." Based on its ZVI analysis, and on the geographic relationship between the facility and Lake Billy Chinook, the facility would not be visible from the Lake Billy Chinook View Area.[142]

Because the facility would not be visible from views of the Lake Billy Chinook View Area from Lake Billy Chinook, the Council concurs with the applicant's assessment and finds that the construction and operation of the facility would not be likely to result in any significant adverse impacts to scenic resources in the Lake Billy Chinook View Area.

*Views of the Cascade Mountain Range from the City of Madras*

As discussed above, the City of Madras Comprehensive Plan references "scenic views and vistas of the Cascade Mountain Range" as a significant or important scenic resource. The applicant did not conduct a formal analysis of potential impacts to this resource because it interpreted the CMCP to identify the Cascade Mountain Range itself as the scenic resource, and the mountain range is outside the analysis area for scenic resources. The applicant states, however, that the construction and operation of the facility would have only a minimal impact on views of the mountain from the city.[143]

The Council's review of the applicant's ZVI viewshed analysis confirms that the facility site would not be visible from the majority of areas within the City of Madras city limits. The facility

[141] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment R-1, Photographs R-9 through R-12
[142] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15, R-16
[143] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-6

location would be potentially visible from industrial areas of in the northwest section of the City, and from isolated upland areas on the eastern edge of the city limits. Even from these areas, views of the facility would potentially be obscured by existing structures, vegetation, or topography, and based on the applicant's analysis of views from a similar distance (3+ miles) the facility would be likely to blend with the landscape where visible and would, in any case be visually subordinate to the Mountain Range itself.

Because of the limited potential for visibility of the facility location from areas within the City of Madras city limits, and because even at the closest distance of 3.3 miles, facility components would not be likely to dominate the landscape, the Council concurs with applicant's assessment and finds that the construction and operation of the facility would have only a minimal impact on views of the Cascade Mountain Range from the City of Madras.

**Conclusion of Law**

Based on the foregoing findings of fact, the the Council concludes that the design, construction and operation of the facility would not be likely to result in significant adverse impacts to any scenic resource identified as significant or important in a local, tribal, or federal land or resource management plan, in compliance with 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).*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*
> ** * **

**Findings of Fact**

Section (1) of the Historic, Cultural and Archaeological Resources standard generally requires the Council to find that a 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.[144]

The analysis area for the Historic, Cultural and Archaeological Resources standard includes the area within the proposed site boundary. The applicant provided information regarding historic, cultural, and archeological resources in ASC Exhibit S, and as stated therein, the applicant's desktop survey, as further described below, included the analysis area and area extending one mile from the analysis area. The Oregon Legislative Commission on Indian Services identified the Confederated Tribes of the Warm Springs Indian Reservation of Oregon (CTWSRO), the Klamath Tribes and the Burns Paiute Tribe as potentially affected by the facility pursuant to OAR 345-001-0010(51)(o).

*Description of Discovery Measures*

In November 2018, the applicant's archeological consultant (from Jacobs Engineering Group Inc. or Jacobs) conducted a desktop file search and a field survey, to evaluate the presence and potential impacts of the facility on historic and cultural resources determined likely eligible for listing on the National Register of Historic Places (NRHP); and, archeological objects and sites. As explained in ASC Exhibit S, the file search evaluated the Oregon State Historic Preservation Office (SHPO) online geographic information system database to identify previously recorded cultural resources within the analysis area and its vicinity. Also included in the file search was a review of 14 previous cultural resource investigations conducted within one mile of the site boundary. None of the 14 previous investigations reviewed crossed into the facility site boundary.

*Results of Discovery Measures*

The desktop search and evaluation of the 14 previous cultural resource investigations identified two cultural resources within one mile of the site boundary. The desktop review did not identify any previously recorded NRHP-eligible properties, archeological sites, or objects within the proposed site boundary.

The pedestrian survey of the facility site boundary was conducted by a team of archeologists from Jacobs, and accompanied by a Geo Visions, Inc. archeological technician.[145] The pedestrian survey was conducted within the facility site boundary, and linear transects, oriented generally north/south and spaced no more than 20 meters apart, were walked. The applicant notes that all portions of the site boundary were surveyed, except areas that were excessively steep, and because portions of the survey area was recently burned and showed signs of previous

[144] The site boundary does not encompass public lands; therefore, OAR 345-022-0090(1)(c) is not applicable.
[145] Geo Visions, Inc. a private sector enterprise wholly owned and operated by the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO). https://www.wsgeovisions.com/

agricultural activity, surface visibility was excellent. The combination of field documentation including notes on ground visibility, vegetation, landforms, and areas of visible disturbance, and the soil profile of the site boundary resulted in a recommendation from Jacobs for no subsurface testing.

The applicant provided their Cultural Survey Report to each of the three tribal governments potentially affected by the facility, and SHPO for review. In a February 25, 2020 comment letter, SHPO stated that they had reviewed the provided report, and concur that a good faith effort was implemented and that the facility would likely have no effect on any significant archeological objects or sites. Furthermore, SHPO states that based on the information provided, additional archeological research is not anticipated for the facility.[146]

*Potential Impacts to Historic, Cultural, and Archeological Resources*

In ASC Exhibit S, although no cultural resources were identified during the pedestrian survey, it is possible for previously unidentified resources to be impacted during facility construction activities. As such, the applicant commits to implementing the following actions and protective measures through an Inadvertent Discovery Plan in ASC Exhibit S, Attachment S-2:

- Upon the discovery of previously unrecorded cultural resources, all work in the area must stop within 100 feet of the discovery. Oregon SHPO and the affected tribes will be notified within 24 hours of the find in accordance with the Inadvertent Discovery Plan outlined in Attachment S-2.
- Upon the discovery of human remains, work within 100 feet of the discovery must stop
- The Jefferson County Sheriff and County Medical Examiner (depending on the county in which the remains are discovered) will be notified in the most expeditious manner possible, in accordance with ORS 97.740-97.760.
- Efforts will be taken to protect the area of the find from further disturbance.
- If the remains are determined to be associated with an archaeological or Native American site, SHPO and affected tribes will be notified. Appropriate measures will be taken to protect the site from further disturbance until a treatment plan is agreed upon by all involved parties.

To verify that construction activities are conducted in compliance with the Inadvertent Discovery Plan and the Attachment Tribal Position Paper on the Treatment of Human Remains, the Council imposes the following Historic, Cultural, and Archeological Condition:

**Historic, Cultural and Archeological Condition 1:** During construction, operations, and retirement of the facility, the certificate holder shall implement and adhere to the requirements of the Inadvertent Discovery Plan (and Attachment Tribal Position Paper on the Treatment of Human Remains), substantially similar to the plan provided in Attachment I of the Final Order on ASC.

[146] MSEFAPP pASC Reviewing Agency Comment SHPO Case No 19-1001_Pouley 2020-02-25.

[GEN-HC-01]

**Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions of law, and based upon compliance with the recommended condition, the Council finds that the facility would comply with the Council's Historic, Cultural, and Archeological Resources standard.

**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.*
*****[147]

**Findings of Fact**

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

The applicant evaluates impacts to important recreational opportunities based on the potential of construction or operation of the facility to result in any of the following: direct or indirect loss of a recreational opportunity, excessive noise, increased traffic, and visual impacts of facility structures or plumes. ASC Exhibit T provides information about recreational

[147] The facility is not a special criteria facility under OAR 345-0015-0310; therefore, OAR 345-022-0100(2) is not applicable.

opportunities. The analysis area for the Recreation standard is the area within and extending five miles from the site boundary.

To analyze the facility against this standard, the Council must first evaluate whether an identified recreational opportunity is important. The Council must then evaluate whether the design, construction or operation of the facility could adversely impact the identified important recreational opportunity. If the facility could adversely impact the resource, then the Council must consider the significance of the potential impact.

Recreational Opportunities within the Analysis Area

In accordance with OAR 345-001-0010(59)(d), and consistent with the study area boundary, the analysis area for recreational opportunities is the area within and extending 5 miles from the proposed site boundary. As presented in ASC Exhibit T, the applicant conducted a review of published and unpublished resources including maps, GIS files, comprehensive plans, park and recreation plans, park master plans, and internet sites to identify existing recreational opportunities within the analysis area. Based on this review, 21 recreational opportunities were identified within the analysis area at distances of 0 to 4.7 miles, as presented in Table 8: *Recreational Opportunities within the Analysis Area and Distance from Proposed Site Boundary*. The location of identified recreational opportunities within the analysis area is presented in ASC Exhibit T Figure T-1, and presented below in Figure 5: *Recreational Opportunities within the Analysis Area*.

**Table 8: Recreational Opportunities within the 10-Mile Analysis Area and Distance from Proposed Site Boundary**

| Recreational Opportunity | Management or Jurisdiction | Distance from Site Boundary (miles) | Special Designation | Determination of Importance (Yes/No) |
|---|---|---|---|---|
| Crooked River National Grassland | Local/State/Federal | 0 | Ranger District | Yes |
| Willow Creek Canyon Trail | State/Federal | 0.3 | Regional Trail | Yes |
| Lake Simtustus Resort and Marina | Private | 0.4 | None | No |
| Pelton Park | Portland General Electric | 1.1 | None | No |
| Madras Mountain Views Scenic Bikeway | State | 2.5 | State-designated Scenic bikeway | Yes |
| The Cove Palisades State Park | State | 3.1 | State Park | Yes |
| Desert Peaks Golf Course | City of Madras | 3.4 | None | No |
| Pelton Wildlife Overlook | Portland General Electric | 3.8 | None | No |

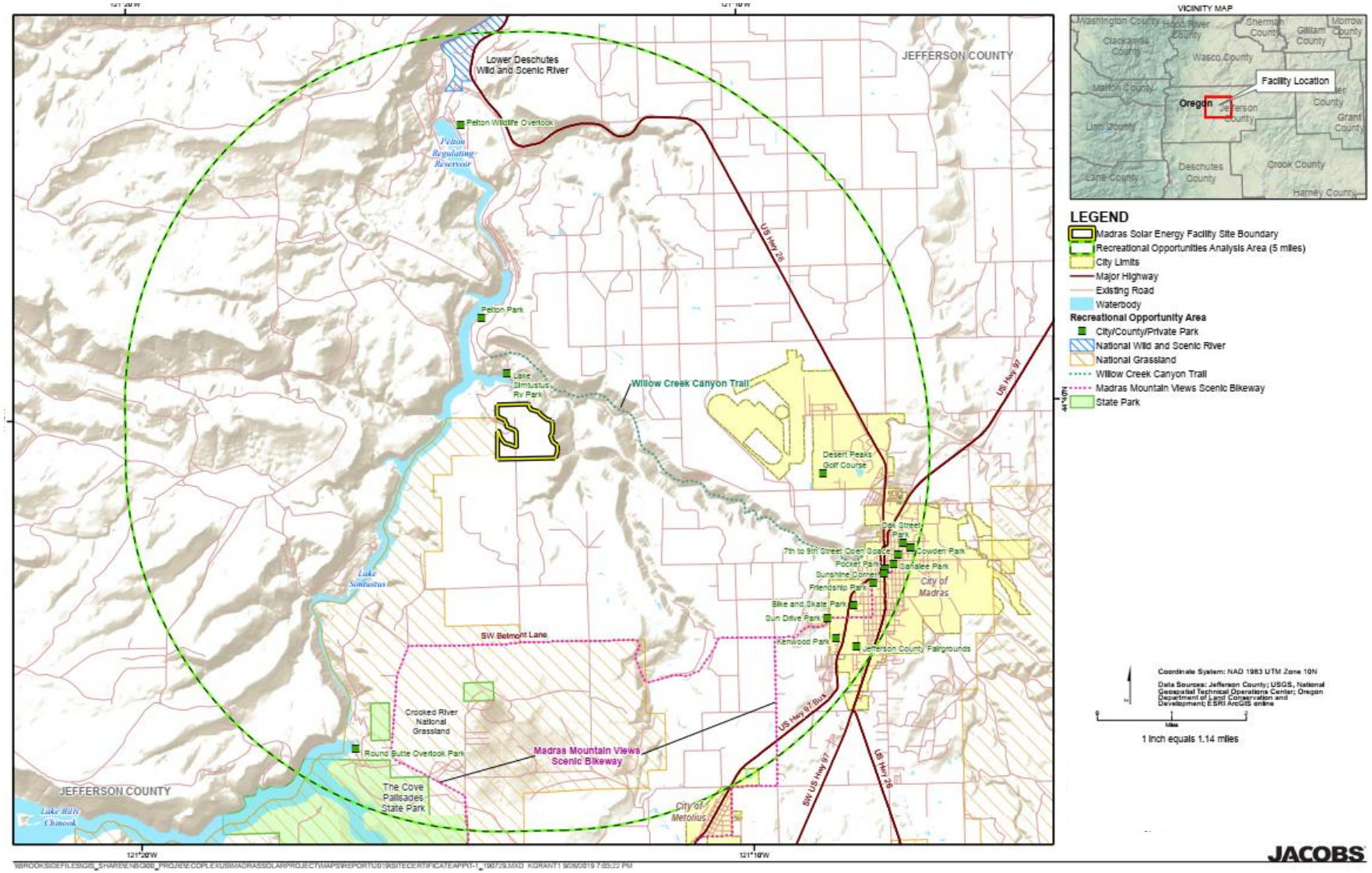
**Table 8: Recreational Opportunities within the 10-Mile Analysis Area and Distance from Proposed Site Boundary**

| Recreational Opportunity | Management or Jurisdiction | Distance from Site Boundary (miles) | Special Designation | Determination of Importance (Yes/No) |
|---|---|---|---|---|
| Round Butte Overlook Park | Portland General Electric | 4.0 | None | Yes |
| Sun Drive Park | City of Madras | 4.1 | None | No |
| Lower Deschutes Wild and Scenic River | Federal | 4.2 | Federal Wild and Scenic River; State Scenic Waterway | Yes |
| Bike and Skate Park | City of Madras | 4.3 | None | No |
| Kenwood Park | City of Madras | 4.3 | None | No |
| Friendship Park | City of Madras | 4.4 | None | No |
| Pocket Park | Private | 4.6 | None | No |
| Sunshine Corner | Private | 4.6 | None | No |
| Sahalee Park | City of Madras | 4.6 | None | No |
| 7th to 9th Street Open Space | City of Madras | 4.6 | None | No |
| Jefferson County Fairgrounds | Jefferson County | 4.6 | None | Yes |
| Oak Street Park | City of Madras | 4.6 | None | No |
| Cowden Park | City of Madras | 4.7 | None | No |

Notes:
1. Cells hi-lited/shaded grey indicates recreational opportunities are recommended "important," and therefore evaluated under the Council's Recreation standard.

1

**Figure 5: Recreational Opportunities within the Analysis Area**



Under the Council's Recreation standard, the Council must find that, taking into account mitigation, the facility is not likely to result in a significant adverse impact to those identified important recreational opportunities. In ASC Exhibit T, the applicant characterizes 14 of 21 recreational opportunities as not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors (Lake Simtustus Resort and Marina, Pelton Park, Desert Peaks Golf Course, Pelton Wildlife Overlook, Sun Drive Park, Bike and Skate Park, Kenwood Park, Friendship Park, Pocket Park, Sunshine Corner, Sahalee Park, 7th and 9th Street Open Space, Oak Street Park and Cowden Park), and recommends the remaining 7 recreational opportunities be considered important. Based on the evaluation presented below, the Council agrees with the applicant's conclusions related to the 14 opportunities identified as not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors. The Council's evaluation of the applicant's recreational opportunity "importance" assessment is presented below.

*Crooked River National Grassland*

As presented in ASC Exhibit T, Crooked River National Grassland is an approximately 173,500 acre grassland that is primarily managed for general forage and deer and antelope habitat, with opportunities for biking, camping, fishing, hiking, horseback riding, wildlife viewing, off-highway vehicle riding, and water activities. An approximately 0.5 mile segment of the northwest corner of the grassland abuts (i.e. is within 0 feet of) the facility site boundary. The applicant describes that the areas within the grassland closest to the site boundary are managed for foraging habitat, where the nearest opportunities for public access and recreation extend 3.5 miles from the site boundary. The grassland is the only National Grassland in Oregon, is part of the Ochoco National Forest and managed by the United States Forest Service (USFS). This recreational opportunity is managed under the USFS's 1989 Crooked River National Grassland Land and Resource Management Plan. The applicant describes the demand for opportunities at the grassland to be high (over 100,000 users per day), and confirms that because it is the only National Grassland in Oregon, the opportunities at this resource are unique, rare and irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be "important" under the Council's standard.

*Willow Creek Canyon Trail*

As presented in ASC Exhibit T, Willow Creek Canyon Trail is an approximately 6.2 mile long trail running east to west that begins in the City of Madras and follows the course of Willow Creek to Lake Simtustus. The trail provides hiking, running, biking and wildlife viewing opportunities, and is located approximately 0.3 miles, at the closest point, to the facility site boundary. The grassland is one of 5 designated regional trails, with a large greenway connected directly to a population center, managed by the Bureau of Land Management (BLM) and USFS. The applicant assumes that the demand for opportunities at the trail is moderate based on capacity, and confirms that because it is only one of 5 designated regional trails, the opportunities at this resource are unique, rare and irreplaceable. For all of these reasons, the Council agrees with

the applicant's conclusions and finds this recreational opportunity to be "important" under the Council's standard.

*Lake Simtustus Resort & Marina*

As presented in ASC Exhibit T, Lake Simtustus Resort & Marina is an RV park with 77 camping hook-ups, and provides camping, wildlife viewing, boating, water sports and fishing opportunities. This recreational opportunity is located approximately 0.4 miles, at the closest point, to the facility site boundary. The resort and marina are privately owned and one of three similar facilities in the analysis area. The applicant assumes that the demand for opportunities at the resort and marina is moderate based on capacity, and confirms that because it is one of three similar facilities with similar opportunities, the opportunities at this resource are neither unique, rare or irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and therefore not evaluated under the Council's standard.

*Pelton Park*

As presented in ASC Exhibit T, Pelton Park is a camping site with 67 sites including yomes and cabins, a park general store, and an onsite 2-mile trail with views of Lake Simtustus. The camping site provides opportunities for wildlife viewing, hiking, water skiing, paddling and fishing. This recreational opportunity is located approximately 1.1 miles, at the closest point, to the facility site boundary. The camping site is privately owned and one of three similar facilities in the analysis area. The applicant assumes that the demand for opportunities at the camping site is moderate based on capacity, and confirms that because it is one of three similar facilities with similar opportunities, the opportunities at this resource are neither unique, rare or irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and therefore not evaluated under the Council's standard.

*Madras Mountain Views Scenic Bikeway*

As presented in ASC Exhibit T, Madras Mountain Views Scenic Bikeway is a 29-mile scenic bikeway loop from Sahalee Park in Madras, that traverses through high desert ecosystem, past historical landmarks and through Crooked River National Grassland. The bikeway offers views of agricultural land, basalt palisades over the Deschutes and Crooked Rivers, Lake Billy Chinook and all seven major volcanic peaks. The scenic bikeway provides opportunities for biking, bike-touring, scenic and wildlife overlooks, and access opportunities to detour off to connect to Cove Palisades Park. This recreational opportunity is located approximately 2.5 miles, at the closest point, to the facility site boundary. The bikeway is publicly owned, designated a scenic bikeway by Oregon Parks and Recreation Department (OPRD), and is 1 of 17 designated scenic bikeways in Oregon. The applicant assumes that the demand for opportunities at the scenic bikeway is moderate based on designation and capacity, and confirms that because it is specially

designated as a scenic bikeway with opportunities for viewing unique natural and historic features, the opportunities at this resource are unique, rare and irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be "important" and therefore evaluated under the Council's standard.

*The Cove Palisades State Park*

As presented in ASC Exhibit T, The Cove Palisades State Park is a 5,200 acre state park managed by OPRD. The park offers opportunities for full service camping including 170 RV sites, day-use areas, hiking, picnicking and wildlife viewing, boating, water sports, and fishing. This recreational opportunity is located approximately 3.1 miles, at the closest point, to the facility site boundary. The park is the largest state park managed by OPRD and is 1 of 5 state parks in the region. The applicant confirms that the demand for opportunities at the park is high based on recorded use of 459,000 users per day, and confirms that based on the high degree of demand with opportunities for nearly year-round camping, day-use and lake access, the opportunities at this resource are unique, rare and irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be "important" and therefore evaluated under the Council's standard.

*Desert Peaks Golf Course*

As presented in ASC Exhibit T, Desert Peaks Golf Course is a 9-hole golf course, with opportunities for golfing, including putting and use of a pro shop and clubhouse. This recreational opportunity is located approximately 3.4 miles, at the closest point, to the facility site boundary. The golf course is owned by the City of Madras and is the only golf course in Madras. The applicant confirms that the demand for opportunities at the golf course is moderate based on capacity, and confirms that based on the moderate degree of demand, lack of special designation or management, and common nature of the golf course resources within the region, the opportunities at this resource are neither unique, rare or irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and therefore not evaluated under the Council's standard.

*Pelton Wildlife Overlook*

As presented in ASC Exhibit T, Pelton Wildlife Overlook is a day-use area with two wildlife viewing decks overlooking the Pelton Regulating Reservoir, owned by Portland General Electric (PGE). This recreational opportunity is located approximately 3.8 miles, at the closest point, to the facility site boundary. The applicant assumes that the demand for opportunities at the overlook is low based on capacity. The applicant confirms that based on the low degree of demand, and commonality of similar viewing opportunities within the analysis area, the opportunities at this resource are neither rare, irreplaceable or unique. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be

not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and therefore not evaluated under the Council's standard.

*Round Butte Overlook Park*

As presented in ASC Exhibit T, Round Butte Overlook Park is a day-use viewing area, with an interpretive center, managed by PGE, offering views of canyon rims, Round Butte Hydroelectric Dam, Lake Billy Chinook, and Lake Simtustus. The recreational opportunity is popular for bird watching, and site of an annual Eagle Watch festival. This recreational opportunity is located approximately 4 miles, at the closest point, to the facility site boundary. The applicant assumes that the demand for opportunities at the park is moderate given the annual festival and picnicking capacity. The applicant confirms that based on the unique overlook viewing opportunities, the opportunities at this resource are outstanding. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be "important" and therefore evaluated under the Council's standard.

*Sun Drive Park*

As presented in ASC Exhibit T, Sun Drive Park is an undeveloped city neighborhood park with native vegetation and no amenities. This recreational opportunity is located approximately 4.1 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed low degree of demand based on capacity and lack of amenities. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Lower Deschutes Wild and Scenic River*

As presented in ASC Exhibit T, the Lower Deschutes Wild and Scenic River is a federally designated Wild and Scenic River and State-designated Scenic Waterway, managed by BLM. Recreational opportunities at this resource include fishing, camping, hiking, wildlife viewing, biking and hunting. Unique features include scenic views of rimrock canyons, rapids and diverse plant communities. This recreational opportunity is located approximately 4.2 miles, at the closest point, to the facility site boundary. This wild and scenic river is 1 of over 50 designated rivers in Oregon. The applicant confirms that the demand for opportunities at the river is moderate, and confirms that based on the moderate degree of demand with scenic views and high-quality fishing, the opportunities at this resource are outstanding and irreplaceable. For all of these reasons, the Council agrees with the applicant's conclusions and finds this recreational opportunity to be "important" and therefore evaluated under the Council's standard.

*Bike and Skate Park*

As presented in ASC Exhibit T, Bike and Skate Park is a skate park with parking, restrooms, and an access point for the Willow Creek Canyon Trail. This recreational opportunity is located approximately 4.3 miles, at the closest point, to the facility site boundary. The skate park is the only one if its kind in Madras, but one of many within the region. The applicant assumes a moderate level of demand based on capacity and rareness. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features that could be replaced and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Kenwood Park*

As presented in ASC Exhibit T, Kenwood Park is an undeveloped city pocket park with an informal grass lawn and play structure. This recreational opportunity is located approximately 4.3 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed low degree of demand based on capacity. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Friendship Park*

As presented in ASC Exhibit T, Friendship Park is a landscaped city pocket park with a civic center, benches, picnic tables and historical sites. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed moderate degree of demand based on capacity and proximity to civic buildings. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Pocket Park*

As presented in ASC Exhibit T, Pocket Corner is a city pocket park with a bench. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed low degree of demand based on lack of facilities and capacity. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this

recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Sunshine Corner*

As presented in ASC Exhibit T, Sunshine Corner is a city pocket park (3,600 square feet) with a bench. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed low degree of demand based on lack of facilities and capacity. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Sahalee Park*

As presented in ASC Exhibit T, Sahalee Park is a 2-acre landscaped neighborhood city park with play structures, basketball courts, benches, picnic areas, and water features. Opportunities at this park include attendance of events, festivals, farmers markets, and access to the Madras Mountain Views Scenic Bikeway. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras, with similar amenities, with an assumed moderate degree of demand based on capacity. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*7th to 9th Street Open Space*

As presented in ASC Exhibit T, 7th to 9th Street Open Space is an open space with greenspace along a creek and access to city trails. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The greenspace is 1 of many (more than 10) areas used for similar activity, such as city parks, in Madras and has no amenities, with an assumed moderate degree of demand based on capacity. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Jefferson County Fairgrounds*

As presented in ASC Exhibit T, Jefferson County Fairgrounds is a fairground with over 50 acres of land, 15 buildings and indoor facilities, and a youth fishing pond. The fairgrounds include opportunities for fishing, picnicking, use as an RV park, attendance of the Jefferson County Fair and Rodeo, and private events such as weddings and reunions. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The fairgrounds is the only fairground in the county, with high demand. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains outstanding or unusual qualities and therefore is rare, with high demand, and therefore should be considered "important" and evaluated under the Council's standard.

*Oak Street Park*

As presented in ASC Exhibit T, Oak Street Park is a city park with a large, informal grassy area and a bench. This recreational opportunity is located approximately 4.6 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras and has limited capacity and amenities. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither unique, rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Cowden Park*

As presented in ASC Exhibit T, Cowden Park is a city park with a small, informal grassy area and a bench. This recreational opportunity is located approximately 4.7 miles, at the closest point, to the facility site boundary. The park is 1 of many (more than 10) city parks in Madras and has limited capacity and amenities. For all of these reasons, the Council agrees with the applicant's conclusions and finds that this recreational opportunity contains common features to other city parks in the area and therefore is neither rare or irreplaceable and, because there is no special management or designation, should be considered not important based on an evaluation of the OAR 345-022-0100(1)(a)-(e) factors and not evaluated under the Council's standard.

*Potential Direct or Indirect Loss of Recreational Opportunity*

*Direct Loss*

A direct loss to an important recreational opportunity would occur when construction or operation of the facility would impact a recreational opportunity by directly altering the resource so that it no longer exists in its current state. Based on the location of the facility in relation to the seven identified important recreational opportunities, as presented in Table 8:

*Recreational Opportunities within the Analysis Area and Distance from Proposed Site Boundary*, ranging from 0 to 4.6 miles, while the proposed site boundary would abut a boundary of the Crooked River National Grassland, the facility would not physically disturb, or result in ground disturbance, to any of the identified important recreational opportunities. The facility would also not require any temporary or permanent closure or removal of the important recreation opportunities to public use. Therefore, based upon review of the location and proximity of important recreational opportunities to the facility site, the Council finds that the facility would not be expected to result in indirect impacts to the important recreational opportunities.

*Indirect Loss*

Similar to the assessment of direct loss, indirect loss would result if construction or operation of the facility would impact a recreational opportunity by indirectly altering the resource or some component of it. To evaluate indirect loss associated resulting from the construction and operation of the facility, the Council considers potential noise, traffic and visual impacts to the above mentioned important recreational opportunities.

*Potential Noise Impacts*

The significance of potential noise impacts to identified recreational opportunities is based on the magnitude and likelihood of the impact on the affected human population or natural resources that uses the important recreational opportunity. The nearest important recreational opportunity to the proposed site boundary is Crooked River National Grassland, which abuts the western side of the facility site boundary, followed by the Willow Creek Canyon Trail located 0.3 miles from the facility site boundary. Potential noise impacts from facility construction and operation at the closest recreational opportunities are evaluated below as a proxy for potential significance of noise impacts are resources located at greater distances.

*Construction*

As evaluated in the ASC Exhibit X, facility construction activities that would generate noise include clearing, excavation, foundation (which includes operation of the temporary batch plant), erection and finishing. ASC Exhibit X Table X-5 shows the total composite noise level from these activities at a reference distance of 50 feet as well as additional distances, based on typical equipment operating during each phase of construction and the typical usage factor for each piece of equipment. The maximum predicted construction noise levels at 50 feet is 90 dBA. Noise levels of 90 dBA is similar to a boiler room or ambulance siren, and considered very loud.[148]

In ASC Exhibit T, the applicant explains that the grassland may experience temporary, elevated noise levels during construction, but argues that the areas impacted by construction noise are

[148] MSEFAPPDoc1-24 Exhibit X Noise 2020-11-09. Table X-2, p. X-1.

not accessible to the public, where publicly accessible areas are at a distance of 3 miles or greater and would not be expected to experience audible noise impacts.

The grassland is managed by USFS under the 1989 Crooked River National Grassland Land and Resource Management Plan, which prioritizes management for foraging habitat and deer and antelope winter range. The areas nearest to the proposed site boundary would experience noise impacts estimated at 90 dBA; however, these area are not represented as publicly accessible recreation areas, and would be limited to use by animals, which is factored into the impact evaluation because these areas contribute to the importance of the resource. However, based on consultation with ODFW, temporary, short-term noise levels from facility construction would not be expected to significantly impact grazing use or recreational hunting.

Therefore, based on consultation with ODFW, the Council finds that potential noise impact from facility construction at the Crooked River National Grassland would not be likely to result in significant adverse impacts.

The next closest important recreational opportunity is the Willow Creek Canyon Trail, located approximately 0.3 mile (1,584 feet) from the facility site boundary. The maximum predicted construction noise levels between 400 and 2,640 feet range from 72 to 56 dBA. These noise levels are similar to light traffic to a freeway, and considered moderately loud.[149] As shown in ASC Exhibit T Attachment T-1, the terrain between the proposed site boundary and the trail includes existing juniper, a moderate level of vegetation and elevation increase from canyon walls. In addition, there is an existing road travelling at the base of the canyon, between the proposed site boundary and the trail. Given the terrain, topography and existing road noise sources, the Council finds that noise impacts from facility construction would not be likely to result in significant adverse impacts.

The next closed important recreational opportunity to the proposed site boundary is Madras Mountain Views Scenic Bikeway, located at a distance of approximately 2.5 miles. As presented in ASC Exhibit X, at one mile, predicted construction noise levels range from 44 to 50 dBA. Based on a noise attenuation rate of 6 dBA per doubling of distance, noise levels at a distance of 2.5 miles would not be expected to audible. Therefore, the Council finds that noise impacts from facility construction would not be likely to result in significant adverse impacts at Madras Mountain Views Scenic Bikeway. Because the other important recreational opportunities within the analysis area are located at greater distances from the proposed site boundary than the scenic bikeway, the Council finds that there would be no impacts from facility construction noise at the other important recreational opportunities.

*Operation*

Facility components that would generate noise during operations include: inverter, inverter transformer, substation transformer and battery storage containers. In ASC Exhibit X, the

[149] MSEFAPP ASCDoc1-24 Exhibit X Noise 2020-11-09. Table X-2, p. X-1.

applicant provides a noise analysis inclusive of the operational sources and sound power levels (in A-weighted decibels) for facility components, as listed below:

- 19 inverters at 92 dBA, each
- 19 inverter transformers at 75 dBA, each
- 1 substation transformer at 86 dBA
- 120 battery storage containers at 87 dBA, each

Based on the statistical noise modeling results presented in ASC Exhibit X, compared to the location of the closest important recreational opportunity - Crooked River National Grassland, maximum operational noise levels of the facility would range between 30 to 35 dBA which is considered quiet. At distances greater than 1,000 feet, due to noise attenuation based on distance, operational noise from the facility would be 25 dBA or less and would not be expected to be audible. Therefore, because noise from facility operations is within a range considered quiet (20 to 40 dBA), the Council finds that operational noise from the facility would not impact any important recreational opportunities within the analysis area.

*Traffic Impacts*

Facility construction would result in up to 290 one way trips per day (construction truck trips and workforce trips) on US Highway 26 from the north and US 97 from the south. Local roads that would be used include SW Belmont Lane and SW Elk Drive. Of the 7 important recreational opportunities, the applicant identifies three, Madras Mountain Views Scenic Bikeway, Cove Palisades State Park and Round Butte Overlook Park, where SW Belmont Lane is also used for access to the resources. Construction-related traffic may result in minor delays in access and impacts to bikers from sharing the road, however, the applicant has not identified that road improvements or closures would be needed to support facility construction. Further, in ASC Exhibit U, the applicant confirms that the local roads have sufficient capacity to support the load and use by facility construction vehicles. Based on review of ASC Exhibits U and T, the Council agrees with the reasoning provided and finds that traffic impacts from facility construction would not be likely to result in significant adverse impacts to any important recreational opportunity.

Facility operations would include minimal trips generated, as the facility is proposed to be remotely operated and would only results in O&M inspection and maintenance related trips. The Council finds that traffic impacts from facility operation would not be likely to result in significant adverse impacts to any important recreational opportunity.

*Potential Visual Impacts*

The applicant conducted a zone of visual influence (ZVI) analysis to determine if the facility components could be seen from important recreational opportunities within the analysis area. The ZVI analysis is based on facility structures including 80-foot H-frame poles that would hold the overhead cables connecting the substation to the POI. The maximum height of the inverters

and transformers would be approximately 10 feet tall. The solar array modules would be approximately 8 feet tall when fully rotated. The applicant further explains that the existing overhead transmission line is supported by a combination of steel towers and wood H-frame structures. The existing structures range in height from approximately 70 to 135 feet and are spaced approximately 600 feet apart and vary depending on site conditions.[150]

The ZVI analysis methodology and overall visual impact assessment approach were the same for recreational opportunities, protected areas, and scenic resources. A detailed discussion of the methodology and visual assessment approach is provided in Section IV.J., *Scenic Resources*, of this order. The result of the ZVI analysis is provided in ASC Exhibit T, Figure T-2, which represents that facility components would be potentially visible at each of the 7 important recreational opportunities identified within the analysis area. Potential visibility impacts of facility components at the important recreational opportunities is evaluated below.

*Crooked River National Grassland*

The Crooked River National Grassland would abut the proposed site boundary for an approximately 0.5 mile segment on the western side of the grassland. Based on the applicant's ZVI analysis, the facility may be visible up to a distance of 3.5 miles from the proposed site boundary within the grassland. The applicant suggests that these impacts not be considered significant because the areas impacted are not publicly accessible and not specifically managed for scenic qualities, and would predominately impacts areas managed for foraging. The Council agrees that potential facility visibility within areas used for foraging would not result in impacts to the continued use of the area for foraging. Therefore, because the areas within the grassland that could experience visual impacts of the facility are not publicly accessible and not managed in a way that could be impacted by visibility, the Council finds that the facility would not cause a significant, adverse visual impact to the Crooked River National Grassland.

*Willow Creek Canyon Trail*

Willow Creek Canyon Trail is approximately 0.3 mile (1,584 feet) from the proposed site boundary. Based on the applicant's ZVI analysis, the facility may be visible from the foreground and middle ground for an approximately 1.9 mile segment of the trail as it approaches NW Pelton Dam Road, but otherwise would not be visible from the trail. To support the analysis, the applicant provides photographs from a point on Willow Creek Road (ASC Exhibit T Attachment T-1 Photograph T-1a), where applicant explains that that facility may appear, at this location, as a think dark line along the ridgeline. As presented in ASC Exhibit T Attachment T-1 Photograph T-1a, the existing viewshed includes vegetation, juniper trees, an existing road and high voltage transmission line. Based on review of the applicant's ZVI analysis and description that the visual impacts would appear as a dark black line, combined with vegetation screening and existing industrial infrastructure and development within the viewshed, the Council finds that the facility would not cause a significant, adverse visual impact to the Willow Creek Canyon Trail.

[150] MSEFAPP ASCDoc1-18 Exhibit R Scenic Aesthetic 2020-11-09, pg. R-10.

*Madras Mountain Views Scenic Bikeway*

The Madras Mountain Views Scenic Bikeway route follows SW Belmont Lane approximately 2.5 miles south of the proposed site boundary. The applicant's ZVI viewshed analysis shows that the facility could be visible to cyclists from intermittent locations along a 1.7-mile section of SW Belmont Lane, however, views towards the facility would be screened by up to 2 miles of existing juniper forest in foreground views from most vantage points. The applicant notes that cyclists on SW Belmont Lane are traveling in an east-west direction and the dominant landscape feature along the route is Mount Jefferson to the west.[151]

The applicant documented representative views of the facility's location from SW Belmont Lane with photographs.[152] Two photographs show views of the facility location that are precluded by existing topography and vegetation.[153] One photograph, which was taken from the intersection of SW Belmont Lane and SW Elk Drive, along the route of the Madras Mountain Views Scenic Byway facing the facility site boundary, shows an unobstructed view of the facility's location about 2.5 miles to the North.[154] The applicant explains that for an approximately 80-foot segment of SW Belmont Lane at the intersection, the facility may be visible and will appear similar as a dark geometric outline or shadow with a low profile on the landscape. The applicant states that facility components will lack definition and detail and will not dominate the existing landscape.[155]

Because views of the facility along the 30-mile route of the Madras Mountain Views Scenic Bikeway would be precluded by existing topography, elevation, and vegetation, the Council concurs with applicant's assessment and finds that the facility would not be likely to result in significant potential adverse impacts to scenic views from the Madras Mountain Views Scenic Bikeway. The Council notes that the applicant identified one location along the route with an unobstructed view of the facility location, the intersection of SW Belmont Lane and SW Elk drive, but at a 2.5 mile distance from the facility location, facility components would not dominate the landscape from this location.

*Cove Palisades State Park*

The majority of the Cove Palisades State Park boundary is located around Lake Billy Chinook approximately 3.6 miles southwest from the facility site boundary. The applicant's ZVI viewshed

[151] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14
[152] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-2 through 4.
[153] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-2, R-4.
[154] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-3.
[155] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14

analysis shows that the facility would not be visible from areas within the park boundary surrounding Lake Billy Chinook.[156]

The applicant identifies an isolated 64-acre area of the park located on approximately 3.1 miles south of the facility where the facility would potentially be visible, however, because the area is not designated as an important viewpoint in the Cove Palisades State Park Master Plan, the applicant did not further analyze potential impacts.[157] The Council notes that this area appears to be the undeveloped area surrounding the Round Butte geological feature, which is not listed independently as a significant or important scenic resource in the JCCP or the Cove Palisades State Park Master Plan.

The applicant conducted a photo survey of views it identified as important or significant in the Cove Palisades State Park Master Plan. The photo survey documents that that views of the facility location from both viewpoints on SW Mountain View Drive, the view from the entrance to the marina and Upper Deschutes Day Use Area, and from the Café at the Marina and Peninsula Group Camp are precluded by existing elevation and topography.[158]

Because the facility location would not be visible from views identified as significant or important in the Cove Palisades State Park Master Plan, the Council concurs with the applicant's assessment and finds that the construction and operation of the facility would not be likely to result in significant potential adverse impacts to scenic qualities of views from Cove Palisades State Park.

*Round Butte Overlook Park*

Round Butte Overlook Park is approximately 4 miles from the proposed site boundary. Based on the applicant's ZVI analysis, the facility would not be visible at the park. To support the analysis, the applicant also provides photographs from viewpoints at the park towards the facility, which confirm that the facility site would not be visible (ASC Exhibit T Attachment T-1 Photograph T-5). Based on review of the applicant's ZVI analysis and supporting photo documentation, the Council finds that the facility would not cause a significant, adverse visual impact to the Round Butte Overlook Park.

*Lower Deschutes Wild and Scenic River*

The nearest portion of the management area boundary for the Lower Deschutes Wild and Scenic River is located approximately 4.2 miles north of the Facility site boundary. The applicant's ZVI viewshed analysis showed that the majority of views from the Lower Deschutes Wild and Scenic River toward the facility would be precluded by the existing elevation and topography of the river canyon.[159] The analysis showed that the facility could be visible to

[156] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. Figure R-2
[157] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15
[158] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-15
[159] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Figure R-2

motorists and boaters from a small area within the Lower Deschutes Wild and Scenic River boundary, approximately 5 miles from the Facility site boundary along an approximately 0.2-mile-long section of BIA Road 24, and along an approximately 400-foot-section of the river at river level.[160]

The applicant documented the potential view of the facility from the northbound shoulder of BIA Road 24 with a photograph that shows a view with potential visibility of the Facility from the mapped boundary of the Lower Deschutes Wild and Scenic River. The facility location is on the plateau that forms the horizon in the background of the viewshed.[161]

The applicant states that at the distance represented in the photograph (approximately 4.2 miles), the facility would appear obscured or may be undetectable in the surrounding landscape. The applicant further notes that existing transmission lines that transect the proposed site boundary are not visible from the photo survey location, and that it is unlikely that facility components, which are proposed to be under the height of the transmission lines, would be visible.[162]

The applicant further represents that the facility would comply with Section 412 (Scenic and Natural Hazard Rim Set Back) of the Jefferson County Zoning Ordinance (JCZO) which requires a 30-foot setback from the rim edge of steep slopes such as the walls of Willow Creek Canyon located along the northern and eastern perimeter of the facility site boundary which are visible from the photo survey location. The applicant states that compliance with this setback will further obscure views of the Facility.[163] Applicant's compliance with the JCZO Section 412 is further evaluated in Section IV.E.1.

Because views of the facility from the majority of the Lower Deschutes Wild and Scenic River management area are precluded by the existing elevation and topography of the river canyon, and because distance, topography, and vegetation, are likely to preclude or obscure views from locations within the management area, the Council concurs with applicant's assessment and finds that the facility would not be likely to result in significant potential adverse impacts to scenic qualities of views from Lower Deschutes Wild and Scenic River.

*Jefferson County Fairgrounds*

Jefferson County Fairgrounds is approximately 4.6 miles from the proposed site boundary. Based on the applicant's ZVI analysis, the facility would not be visible at the fairgrounds. To support the analysis, the applicant also provides photographs from viewpoints at the fairgrounds towards the facility, which confirm that the facility site would not be visible (ASC Exhibit T Attachment T-1 Photograph T-7). Based on review of the applicant's ZVI analysis and

[160] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Figure R-13
[161] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, Attachment 1, Photograph R-1
[162] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-13
[163] MSEFAPP ASCDoc1-18_Exhibit_R_Scenic_Aesthetic 2020-11-09, pg. R-14

supporting photo documentation, the Council finds that the facility would not cause a significant, adverse visual impact to the Jefferson County Fairgrounds.

**Conclusions of Law**

Based on the foregoing findings of fact, and compliance with the conditions, the Council finds that the design, construction and operation of the facility would not be likely to result in a significant adverse impact to any important recreational opportunities in the analysis area and therefore the facility would comply 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.*
> ****[164]*

**Findings of Fact**

The Council's Public Services standard requires the Council to find that the 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.

The analysis area for potential impacts to public services from construction and operation of the facility is the area within and extending 10-miles from the site boundary. Based on the analysis area, the following evaluation assesses potential impacts to public and private providers within the cities of Madras, Culver and Metolius.

*Important Assumptions used in Applicant's Impact Assessment*

[164] OAR 345-022-0110(3) does not apply to this ASC because the facility would not meet the criteria for a special criteria facility as defined in ORS 469.373(1).

Important assumptions relied upon by the applicant to evaluate potential impacts from facility construction and operation to private and public service providers are summarized below:

*Construction Assumptions*

- 9-month construction duration, 22 work days per month
- Maximum construction workforce of 200; average construction workforce of 100
- 10 to 15 percent of workforce hired locally (10 to 15 workers)
- Approximately 360 temporary new residents in Jefferson County
- Haul routes would include US 26; US 26 to US 97; US 97 to SW Belmont Lane to SW Elk Drive
- Heavy and light-duty trucks would travel approximately 90 round-trips per day
- Workers would travel approximately 400 roundtrips per day (as low as 200 roundtrips per day, if carpooling is an available option), from a distance of 40 miles
- Total water use would include 12.8 million gallons for civil and site preparation, concrete mixing, drinking and sanitation
- Waste would be recycled or landfilled
- Restroom facilities would be provided via temporary portalets
- Stormwater drainage would be managed onsite and would not rely on existing systems

*Operation Assumptions*

- No full-time, onsite workers
- Annual water use would include 1.65 million gallons for solar module washing
- Minimal waste generated from maintenance and housekeeping activities
- Restroom facilities would be provided via temporary portalets

*Sewers and Sewage Treatment*

Facility construction and operation would result in sanitation waste. As represented in ASC Exhibits B and U, there would be no permanent restroom facilities onsite and all sanitation waste would be managed via portalet toilets, which would be managed via licensed third-party contractor for material handling and disposal. Therefore, the facility would not rely on or require use of existing public or private sewer system or sewage treatment, other than portalet sanitation waste. Because public or private providers of sewer and sewage disposal facilities would not be directly utilized by the facility, the Council finds that the facility would not be likely to result in significant adverse impacts.

*Water Service*

Facility construction would result in use of approximately 12.8 million gallons of water for civil and site preparation, concrete mixing and sanitation. Facility operation would result in use of approximately 1.65 million gallons of water per year for solar panel washing. Water use by

activity is presented in Section IV.Q.3 *Water Rights*, Table 12. In ASC Exhibit U Section U.3.3 Water, the applicant states that water needed during facility construction and operation would most likely be purchased from the Deschutes Valley Water District (Water District) and would be obtained via existing hydrant south of the proposed site boundary. ASC Exhibit O Attachment O-1 provides a November 20, 2019 letter from the Water District affirming that the district is both willing and able to meet the facility's water needs during construction, provided that the amounts are consumed at flows of 33 gallons per minute or less. The applicant also provides an additional 2020 letter which explains that the Water District has water rights totaling 28.446 cubic feet per second (cfs) or 18.38 million gallons per day (MGD) and pumping capacity of 23.5 cfs or 15.2 MGD under two water permits for municipal or quasi-municipal water use.[165]

Based upon review of the 2019-2020 Water District letters affirming an ability to meet facility construction and operational water demand under its existing water permits, the Council finds that the construction and operation of the facility are not likely to result in significant adverse impacts to the ability of public or private providers to provide water service.

*Stormwater Drainage*

The facility would not require use of or interconnection to a publicly or privately managed stormwater system. In addition, there are no existing public or private stormwater drainage systems that interconnect to the facility site. The applicant explains that facility components such as roads, substation, and solar array cells would be designed and constructed to maintain existing stormwater drainage patterns and it would avoid siting structures and components situated on steep slopes that surround the proposed site.

Because the facility would not interconnect to or require use of existing public or private stormwater drainage systems, the Council finds that construction and operation of the facility would not be likely to result in significant adverse impacts to the ability of stormwater drainage service providers to provide service.

*Solid Waste Management*

Facility construction and operation would result in solid waste generation. Construction-related solid waste would include approximately one 40-cubic yard roll-off per week, comprised of scrap steel, packaging materials and erosion control materials (e.g., silt fencing and straw wattles), waste concrete, and excavated soil.[166] Construction material and office recycling programs would be implemented to the extent practical to reduce the volume of material that would be disposed of as solid waste, which is discussed further in Section IV.N., *Waste Minimization*. Any non-recyclable waste would be disposed of offsite, hauled by a licensed sanitary service provider and disposed of in a landfill.

[165] MSEFAPP ASC Clarification Request (Water Rights) 2021-01-07

[166] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.1.

During operations, the primary waste generated would be solid waste from maintenance and ongoing operational activities. The applicant estimates approximately two yards of solid waste would be generated per month.[167] Waste such as universal waste (for example, lightbulbs and batteries) would be recycled according to applicable regulations. In addition, solid waste would be generated when batteries are replaced within the battery storage system as part of operational maintenance. Lithium-ion batteries would need to be changed approximately every 5 to 10 years. Flow batteries have a life span of approximately 10 to 20 years and would need to be replaced at least once during operation of the facility. With both battery technologies, self-contained battery components would be removed and disposed of or recycled by a qualified vendor or contractor.

Madras Sanitary Service provides residential and commercial solid waste management services within Jefferson County. The closest public transfer station to the facility site is the Jefferson County Box Canyon Transfer Station operated by Madras Sanitary Service, located approximately 11 miles by car from the facility, and the Crook County Landfill, operated by Crook County, is located in Prineville approximately 40 miles by car from the facility. According the Oregon Department of Environmental Quality, the Crook County Landfill is situated on a 1,640-acre site of which 75 acres have been used for disposal and has an estimated life of 50 additional years.[168]

As presented in ASC Exhibit U, the applicant commits to minimizing onsite solid waste through appropriate material estimating and efficient construction practices. In addition, to ensure onsite waste is minimized to the extent feasible, the Department recommends Council impose Waste Minimization Condition 1 under the Waste Minimization standard (see Section IV.N., *Waste Minimization*, of this order), which would require the applicant develop and implement a Solid Waste Management Plan during all phases of construction, operation and decommissioning. Therefore, based on the quantity and type of solid waste generated by the facility, existing and long-term capacity of the Crook County Landfill, and compliance with the recommended waste minimization condition, the Council finds that construction and operation of the facility would not be likely to result in significant adverse impacts to the ability of solid waste disposal providers to dispose generated waste.

*Traffic Safety*

Facility construction would result in potential traffic impacts. During peak construction periods, the applicant estimates that there would be 45 one-way truck deliveries and 100 one-way workforce vehicle trips, assuming worker car-pooling, to and from the facility site, resulting in an increase of 290 total roundtrip vehicle trips.[169] In the event carpooling is not an available option, the Department provides a maximum impact scenario of 490 roundtrips per day from a

[167] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.2.
[168] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Section U.3.5.
[169] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Section U.3.7.1.

combination of trucks and worker vehicles travelling a roundtrip distance of 80 miles, to and from the site. As presented above, haul routes proposed for use during construction include: US 26; US 26 to US 97; US 97 to SW Belmont Lane to SW Elk Drive. These routes are maintained by City of Madras Public Works Department, Jefferson County Public Works Department and the Oregon Department of Transportation (ODOT) Region 4.

Table 9: *Anticipated Increase in Traffic Volume from Construction on Transportation Routes*, below provides the primary transportation and haul routes to and from the facility, the road conditions, current estimated traffic volumes, and anticipated traffic volumes during peak construction.[170]

**Table 9: Anticipated Increase in Traffic Volume from Construction on Transportation Routes**

| Highway/ Transportation Route | Location | Milepost | Pavement Conditions | 2017 Average Daily Traffic (vehicles /day) | Estimated Average Daily Traffic Including Construction (vehicles /day)[1] | Percentage Increase |
|---|---|---|---|---|---|---|
| US 26 | North of Madras | 113.93 | Very Good | 15,000 | 15,490 | 3.2% |
| US 26 | Madras | 117.69 | Poor | 12,600 | 13,090 | 4.6% |
| US 97 | Madras | 92.44 | Poor | 11,200 | 11,690 | 2.6% |
| US 97 | Madras | 93.06 | Good | 10,100 | 10,590 | 2.8% |
| SW Elk Drive | Between SW Belmont Drive and Pelton Dam Road | N/A | Very Good | Assumed Less than 1,000 | 1,490 | 49% |

Notes:
1. Adjusted from 290 to 490 roundtrips per day by Department to account for potential limitations on carpooling.

Source: Generated from ASC Exhibit U; MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Table U-4 and U-5.

As presented in Table 9: *Anticipated Increase in Traffic Volume from Construction on Transportation Routes*, facility construction traffic represents a minimal increase in average daily volumes on State Highways US 26 and US 97 (from 3 to 5 percent). Facility construction traffic on local roads, including SW Elk Drive and SW Belmont Lane, is estimated to result in an

[170] Pavement conditions are reported by ODOT Pavement Services (2018) Pavement conditions on county roadways proposed as transportation routes were provided to applicant by Jefferson County MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09.

up to 49 percent increase in daily traffic levels, which the applicant describes as potentially significant. Based on review of Google Earth maps, the Council notes that from US 97, SW Belmont Lane contains many intersections without traffic signals, and is a one-lane, two-way road.

To reduce traffic delay impacts on local roads from slower, large delivery trucks, the applicant proposes to implement the following measures:

- Install and maintain 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, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.
- Implement advance signage, where possible, in accordance with the 2016 or recent version of the ODOT Traffic Control Plans Design Manual.
- Use pilot cars for slow or oversize loads per Oregon Administrative Rule 734-082-0035.
- Encourage and promote carpooling of the construction workforce, and potentially provide high-occupancy vans or buses to transport workers to the site.
- Use flag personnel to minimize the potential for accidents during large deliveries, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.
- Restrict or limit large trucks through the US 97/SW 5th Street corridor during the morning or evening peak of commuter traffic (generally 7-9am and 3-6 pm).
- At all times during construction, maintain at least one travel lane at entrance and exit points onto public roads.
- Require third-party contractors to consult with ODOT before construction to identify roadway segments or bridges that should be restricted for construction traffic, if any, and to obtain any heavy haul permits required to allow transport of oversized loads.

In addition to these measures and in response to a comment received from the Jefferson County Planning Department[171], to ensure that potential traffic impacts to local roads are minimized, the Council will require that, prior to construction, the applicant be required to develop a Traffic Management Plan that includes project details, a road conditions survey, schedule, description of mobility impacts and mitigation measures, and communication, as presented below:

**Public Services Condition 1:** The certificate holder shall:

a. Before beginning construction of the facility, or facility component, develop a Construction Traffic Management Plan. A copy of the Construction Traffic Management Plan shall be provided to the Department and Jefferson County Public Works Department. The Construction Traffic Management Plan shall, at a minimum, include the following:

[171] MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co. Stenbeck 2019-12-18

i. Construction details including construction contractor contact information, site plan showing surrounding streets and haul routes, employee parking areas, and delivery and receiving areas.
ii. A road conditions survey detailing the condition of NW Elk Drive, for the portion of roadway that is located within the site boundary.
iii. Schedule of construction activities, including total duration and work hours.
iv. Mobility impacts from maximum and average expected number of truck and worker trips to and from the site per hour and per day.
v. Mitigation measures including, but not limited to:
    - Installation and maintenance of 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, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.
    - Installation of advance signage, where possible, in accordance with the 2016 or recent version of the ODOT Traffic Control Plans Design Manual.
    - Use of pilot cars for slow or oversize loads per Oregon Administrative Rule 734-082-0035.
    - Encourage and promote carpooling of the construction workforce, and potentially provide high-occupancy vans or buses to transport workers to the site.
    - Use flag personnel to minimize the potential for accidents during large deliveries, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.
    - Restrict or limit large trucks through the US 97/SW 5th Street corridor during the morning or evening peak of commuter traffic (generally 7-9am and 3-6 pm).
    - At all times during construction, maintain at least one travel lane at entrance and exit points onto public roads.
    - Require third-party contractors to consult with ODOT before construction to identify roadway segments or bridges that should be restricted for construction traffic, if any, and to obtain any heavy haul permits required to allow transport of oversized loads.

b. During construction of the facility, or facility component, the certificate holder shall ensure that construction contractors adhere to the requirements of the Construction Traffic Management Plan.
c. Within 1 year of construction completion of the facility, the certificate holder shall demonstrate to the Jefferson County Public Works Department that the portion of NW Elk drive evaluated in the preconstruction road conditions survey has been restored to its preconstruction condition.

[GEN-PS-01]

Facility operation would not be expected to result in traffic impacts. Facility operation is anticipated to require four part-time technicians. The applicant estimates that each part-time

employee would make two round trips into and out of the facility per day, resulting in an additional 16 roundtrips per day, for a maximum increase of 0.16 percent on transportation routes.[172]

Based on compliance with the recommended Public Service Condition 1, and the temporary nature of potential construction-related impacts, the Council finds that potential traffic impacts from facility construction and operation would not be likely to result in significant adverse impacts to the ability of transportation providers to provide traffic safety.

*Air Traffic*

Facility construction and operation could result in impacts to navigable airspace from potential solar panel glare, outdoor light illumination, and tall structures located in proximity to public and private airports. The tallest facility structures would be the H-frame transmission poles at approximately 80 feet tall. Airports within proximity to the proposed site include the Madras Municipal Airport, a public airport located approximately 3 miles east, and the Bombay Farms Airport, a private airport located directly Southwest of the proposed site.[173, 174] Potential impacts related to outdoor light illumination are addressed above in Section IV.E.1 *Local Applicable Substantive Criteria* of this order.

ASC Exhibit E (Permits) includes a Determination of No Hazard to Air Navigation (Form 7460-1) obtained from FAA, which confirms that FAA conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and applicable Title 14 of the Code of Federal Regulations (CFR), part 77, and finds that facility structures would not exceed obstruction standards and would not be a hazard to air navigation. The FAA determination expired March 3, 2021. As presented in ASC Exhibit E, in addition to FAA's Determination of No Hazard to Air Navigation, the applicant identifies that submission of a Supplemental Notice of Actual Construction or Alteration form (Form 7460-2) to FAA is required within 5 days after construction reaches its greatest height as specified in the No Hazard/Determination.

Similar to FAA's review, Oregon Department of Aviation (Aviation) evaluates standards in CFR: *Title 14. Aeronautics and Space: PART 77—Safe, Efficient Use, and Preservation of the Navigable Space.* To address potential impacts to navigable airspace from facility structures, Aviation recommends that the applicant be required to, first, obtain Aviation review of Notice of Proposed Construction or Alteration (Form 7460-1); to then be followed by review of Form 7460-1 by the Federal Aviation Administration (FAA). This two-step process affords Aviation the opportunity to evaluate under OAR Chapter 738 whether proposed structures would result in obstructions to airspace at public use airports and private airstrips and determine whether, based on their evaluation, Aviation should notify its stakeholders of an opportunity to comment

[172] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Section U.3.7.3.
[173] MSEFAPP Complete ASC Reviewing Agency Comment ODA_Thompson 2020-12-09.
[174] A December 18, 2019 comment letter from the Jefferson County Special Advisory Group (SAG), also identifies the Bombay Farm Airport as "a private use airport located southwest of the site." MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co._Stenbeck 2019-12-18.

through the FAA review process. Because of the nexus under ORS 836.535(2) of an ASC, Aviation and FAA evaluation of structures, the two-step process would provide the most comprehensive opportunity for structure review and evaluation of potential impacts to air traffic providers by stakeholders (public) and state and federal agencies.

.facilityfacilityfacility.[175] Based on the above reasoning and analysis, the Council imposes the following condition:

**Public Services Condition 2**: The certificate holder shall:

a. First, submit to and receive responses from the Oregon Department of Aviation (Aviation) of 7460-1 Notice of Proposed Construction or Alteration Forms for all aboveground facility components. The certificate holder shall provide copies of Aviation responses, which must be consistent with ORS 836.535(2), to the Department, and shall respond to Aviation marking and lighting recommendations, if applicable.
b. Second, once Aviation responses on the 7460-1 forms are received, submit to and receive determinations from the Federal Aviation Administration (FAA) for all aboveground facility components. The certificate holder shall provide copies of FAA determinations to the Department.
c. Within 5-days of construction, certificate holder shall submit 7460-2 forms to FAA and Aviation and shall report both timing of submission and any results to the Department.

[GEN-PS-02]

The applicant references correspondence with the FAA confirming that facility operation would not result in glare that would adversely affect aircraft. Measures the applicant would employ to minimize potential glare from the operation of the solar facility are discussed further in Section IV.J *Scenic Resources* of this order.

Based on compliance with the above recommended condition, the Council finds that the facility would not be likely to result in significant adverse impacts on the ability of air traffic service providers to provide service.

*Police and Fire Protection*

*Police Protection*

Facility construction could result in impacts to police protection providers due to increases activity at the proposed site and increased population from temporary workers. As presented in ASC Exhibit U, and also discussed in the preceding sections, the applicant estimates 200 construction employees (maximum) would be onsite daily. Of the estimated 200 workers, 10 to 15 percent would be local residents (from Jefferson County), with the remaining workforce living in communities within a commutable distance of 70 miles from areas such as Redmond or Bend. Potential impacts from the increase in workers and truck deliveries commuting from

[175] MSEFAPP DPO Comments Reviewing Agency Oregon Department of Aviation 2021 2021-04-22.

outside of the analysis area, during peak worker levels, could include traffic safety risks and an increase in traffic on the roads within the analysis area.

The applicant explains that the local police service within the analysis area would be provided by the Jefferson County Sheriff's Office in Madras, Oregon. Backup law enforcement service is available from the Oregon State Police Eastern Region, also with an office in Madras. In ASC Exhibit U, the applicant provides a letter (Attachment U-2) from the Jefferson County Sheriff's Office (Sheriff) in which the Sheriff concurs that the facility is located within their service area, and also agrees to provide police protection services to the facility and area.

Facility operations would not be likely to impact police protection providers. The applicant estimates approximately two to four part-time workers, deployed on an as-needed basis for operations, maintenance (O&M) and repairs. Furthermore, these workers are expected to be hired locally, with the exception of positions that may require previous solar generation facility experience. In addition to the O&M workers, specialized third party contractors may be required for equipment repairs.

Based on the above reasoning analysis, the Council finds that the construction and operation of the facility would not be likely to impact law enforcement providers from providing service within the analysis area.

*Fire Protection*

Facility construction and operation could result in impacts to fire protection providers due to increased fire risk within the analysis area. Construction-related fire risks include accidental grass fires primarily caused by running vehicles and equipment. The risks of fires during operation of the facility would be the potential for electrical fires from electrical equipment associated with the solar modules, transmission lines, and the lithium-ion batteries, if used. Lithium-ion batteries are susceptible to overheating and require cooling systems, especially at the utility scale.[176] The gas released by an overheating lithium-ion cell is mainly carbon dioxide and the electrolyte solution, usually consisting of ethylene or propylene, may also vaporize and vent if the cell overheats. If selected, flow batteries would not present a flammability hazard and therefore would not require the cooling systems included with lithium-ion batteries.

ASC Exhibit U explains that the facility is located just outside the boundary for Jefferson County Fire District #1 (JCFD1). In a comment letter provided to the Department, the Deputy State Fire Marshal of the Oregon Office of State Fire Marshal requested that the applicant be required to coordinate with the local fire department to determine whether the fire department would need access or water supply for any fire-fighting purposes.[177] The applicant provides a letter of correspondence with the JCFD1 included in ASC Exhibit U, Attachment U-1. The letter indicates

[176] MSEFAPP ASCDoc1-2 Exhibit B Facility Description 2020-11-09, Section B.1.5.

[177] MSEFAPP pASC Reviewing Agency Comment Deputy State Fire Marshal_Mills 2020-02-20. The Department notes that Mills identifies 2019 OFC provisions from 1204.1 – 1204.4.1, however based on 1201.1, fire codes do not apply to utility-scale energy facilities.

that the facility site is located just outside the boundaries of the JCFD1 service territory and explains that if the applicant applies to annex the facility site into the JCFD1 boundaries they would provide fire and emergency service to the site. The process for annexation would take approximately four months, is summarized below, and provided as ASC Exhibit U, Attachment U-3:

1. Applicant submits an annexation application with the required information.
2. Annexation application receives preliminary review by Fire District staff.
3. Annexation application receives review by the Fire District Board.
4. Annexation application goes to the Jefferson County Board of Commissioners for a final decision.

The applicant explains that, prior to beginning construction of the facility, it would complete the annexation process to include the facility site into the service territory for JCFD1. The Council imposes the following condition to ensure that the applicant-represented commitment to complete the annexation process to include the facility site into the JCFD1 service territory is completed:

**Public Services Condition 3**: Before beginning construction, the certificate holder shall:
a. Apply for and receive a final order from the County Board of Commissioners for annexation of the facility site into the service territory of the Jefferson County Fire District #1.
b. Provide a copy of the annexation final order to the Department.
[PRE-PS-01]

In ASC Exhibits B and U, the applicant explains measures to reduce and mitigate the potential for fire hazards during construction and operation. Measures would include using established roads 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. The applicant's construction contractor would be required to provide firefighting equipment including shovels, beaters, portable water for hand sprayers, fire extinguishers, and other equipment. These measures as well as emergency and fire response procedures would be developed and provided in an Emergency Contingency Plan.

The applicant explains that the facility would be constructed and operated within a fenced perimeter which would provide a noncombustible, defensible space clearance to prevent fire spreading out and into the site. The proposed substation would have sufficient spacing between equipment to prevent the spread of fire and would be equipped with the basic firefighting equipment used during construction. Further, fire protection equipment kept on-site would be in accordance with the Oregon Fire Code. The limited vegetative ground cover within the solar module area would also help to minimize spread of fire, revegetation and weed management is discussed further in Section IV.H., *Fish and Wildlife Habitat*, of this order. Any potential fires inside the solar array would be controlled by trained staff who would have access

the facility site 24 hours a day. The applicant commits to inviting JCFD1 staff and volunteers to participate in an on-site emergency training and would make facility representatives available to participate in any annual meetings held by the JCFD1 to discuss emergency planning related to the facility. The applicant explains that it would develop an Emergency Contingency Plan which would include these and additional measures to prevent impacts to providers of fire safety during construction and operation of the facility. Based on the applicant's representations and to ensure that fire risk impacts are minimized, the Council imposes the following condition requiring the approval and implementation of the Emergency Contingency Plan:

**Public Services Condition 4**: The certificate holder shall:

a. Before beginning facility construction, submit to the Department for review, an Emergency Contingency Plan developed in coordination with Jefferson County Fire District #1. The Emergency Contingency Plan shall include but be not limited to:
   i. Emergency response procedures and communication channels for the project as well as information regarding the various components of the facility based on final design and battery technology selected (if any);
   ii. Procedures for on-site training for the certificate holder, construction contractor staff and staff and volunteers from the Jefferson County Fire District #1;
   iii. Identification of the type and location for fire protection equipment, location(s) of water source(s), and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code.

b. During facility construction and operation:
   i. Implement and adhere to the requirements of the Emergency Contingency Plan;
   ii. Participate annually in any Jefferson County Fire District #1 meetings held by the Fire District related to the facility; and
   iii. Verify and update applicable emergency contacts and emergency response procedures within the Plan.

   [GEN-PS-03]

As discussed in Section IV.A., *General Standard of Review*, to protect against fire dangers associated with the lithium battery storage, the final design of the battery storage system would comply with the most current adopted version of the National Fire Protection Association's *NFPA 855: Standard for the Installation of Stationary Energy Storage Systems* (NFPA, 2020), in effect at the time of construction, which is represented in General Standard Condition 8(c). In the same section, the Council discussed applicant-proposed measures to address the transportation of materials associated with the battery storage systems. Organizational Expertise Condition 7 requires the applicant to comply with Department of Transportation Pipeline and Hazardous Material Administration's 49 Code of Federal Regulations (CFR) 173.185, which provide requirements for the prevention of dangerous evolution of heat; prevention of short circuits; prevention of damage to terminals; and, prevention of contact with other batteries or conductive materials.

Based on compliance with the above-recommended Public Services Conditions, the Council finds that the construction and operation of the facility is not likely to result in significant adverse impacts to the ability of fire protection service providers to provide fire protection services.

*Housing*

Facility construction could result in impacts to housing providers. The applicant assumes that approximately 10 to 15 percent of the construction workers would be local residents (from Jefferson County), and therefore an average of 85, with a maximum of 200, new workers would be temporary residents (in-migrants) during facility construction. The applicant assumes the average household size would be 2.0 persons (since it is likely many workers would not be accompanied by families or others) during construction, resulting in a maximum of about 360 temporary new residents that may be associated with facility construction during the peak construction period.[178] Temporary construction workers are expected to utilize options that include hotels, campgrounds, recreational vehicle (RV) parks, and rental houses, all of which would be located within a commutable distance of 70 miles or 1 hour of travel to the facility. The applicant explains that there are over 500 hotel and motel rooms within the analysis area and, based on data obtained from Oregon Tourism Commission, were recently reported with an approximate 58 percent vacancy rate. Based on vacancy rate and maximum number of workers, and potential availability of RV and campsites within the area, the Council finds that temporary workers potentially residing in the analysis area during facility construction could result in limited housing availability but that it would be temporary and not be likely to result in significant adverse impacts on the providers of housing to provide service.

In ASC Exhibit U, the applicant conservatively estimates an average household size of 3.0 persons during facility operations. Assuming permanent housing for up to two new households may be required, and taking into account the average household size of 3.0 persons, as many as six new permanent residents could be added to the local population. Given the limited number of new permanent residents, the Council finds that the construction and operation of the facility would not be likely to cause significant adverse impact on the ability of housing providers to provide housing.

*Schools and Healthcare*

Facility construction and operation could result in increased demand of health care providers. However, due to the relatively small number of new temporary residents and new permanent residents, significant new demands are not expected from health care facilities that serve the area. The nearest hospital to the facility is St. Charles Madras, and is an approximate 9 mile drive from the facility. The applicant explains that the St. Charles health care system, which offers basic, intermediate, and advanced life support emergency medical care and transportation also has health care systems in Redmond, Prineville, and Bend. Based on the

[178] MSEFAPP ASCDoc1-21 Exhibit U Public-Services 2020-11-09, Section U.1.2.1

relatively small number of new temporary residents during construction and new permanent residents during operation, the Council finds that the facility is not likely to cause significant adverse impact on the ability of communities to provide health care.

Facility construction would not be expected to increase demand of school providers due to the temporary nature of the activity and low likelihood that families would relocate permanently. The applicant estimates that during operations, up to two new permanent households, with a maximum of four new schoolchildren could move to the analysis area. Due to the relatively small number of new temporary residents and new permanent residents, significant new demands are not expected from schools that serve the area. Therefore, the Council finds that the construction and operation of the facility are not likely to result in significant adverse impacts to the ability of school providers to provide schools.

**Conclusions of Law**

Based on the foregoing analysis, and in compliance with OAR 345-022-0110(2), the Council includes 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:*

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

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

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

**Findings of Fact**

The Waste Minimization Standard requires the Council to find that the applicant would minimize the generation of solid waste and wastewater, and that the waste generated would be managed to minimally impact surrounding and adjacent areas. Pursuant to OAR 345-022-

0020(2), the Council may issue a site certificate for a 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.

*Solid Waste*

Facility construction, operation and decommissioning would result in solid waste generation. The applicant estimates the volume of construction waste would be one 40-cubic-yard roll-off per week during active construction.[179] The solid waste generated includes general construction debris such as scrap metal (steel, copper, and aluminum), packing materials (from installed solar photovoltaic modules and associated electrical equipment), waste concrete, and excavated soil. Erosion control materials, such as straw and silt fencing, would also be generated during construction. The waste generated from construction may also include small amounts of hazardous waste, such as paint, spent lubrication oils, and solvents.

The applicant describes that waste generated during construction would be minimized by implementing efficient construction practices and ensuring that detailed amounts of materials are delivered on site. Recyclable materials consisting of scrap steel, cardboard, general packaging materials, and wood would be segregated from solid waste and transported to a recycling facility. Waste concrete and hardened concrete from concrete washout areas would be incorporated into the foundation excavations or transported offsite and disposed of at the Jefferson County Box Canyon Transfer Station. Excavated soil would be used onsite as fill or transported offsite for disposal. Solid waste that is not recyclable would be collected, sorted, and transported offsite for disposal at the Jefferson County Box Canyon Transfer Station for likely disposal at the Crook County Landfill. Additional discussion of waste disposal and recycling facility capacity within the analysis area, see Section IV.M., *Public Services*.

During operations, the primary waste generated would be solid waste from maintenance and ongoing operational activities. The applicant estimates approximately two yards of solid waste would be generated per month.[180] During operations, the primary waste generated would be solid waste from maintenance and ongoing operational activities. The applicant estimates approximately two yards of solid waste would be generated per month.[181] Waste such as universal waste (lightbulbs and batteries) would be recycled according to applicable regulations. Solar panels that are nonfunctional, exchanged during operations or are retired would be recycled to the maximum extent feasible through the Solar Energy Industries Association (SEIA) National PV Recycling Program.[182] The applicant explains that the purpose of this program is to combine services offered by recycling partners in order to provide cost-effective and environmentally responsible and that SEIA sponsors this program and research and development that could help make the entire industry landfill free. In addition, solid waste would be generated when batteries are replaced within the battery storage system as part of

[179] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.1.
[180] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.2.
[181] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.2.
[182] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.3.

operational maintenance. Lithium-ion batteries would need to be changed approximately every 5 to 10 years. Whereas, flow batteries have a life span of approximately 10 to 20 years and would need to be replaced at least once during operation of the facility. Lithium-ion battery modules require replacement periodically as the modules lose their effectiveness through repeated charge/discharge cycles. The following procedures would be implemented for lithium-ion battery replacement during operations and retirement:[183]

- The facility operator would disconnect and de-energize battery system prior to removal from the installed racks and package the batteries for transport to a licensed facility.
- At the recycling facility, the qualified contractor would dismantle battery modules and prepare individual cells for metals recovery.
- Individual cells would be processed in a furnace to recover metals. Recovered metals may include aluminum, calcium, lithium, and a metal alloy comprising cobalt, copper, nickel, and iron.
- Recovered metals would be recycled or separated to recover individual metals where economically viable.

Flow batteries would also require replacement at least once during facility operations. Similar to the procedures for lithium-ion batteries, the batteries would be de-energized, removed, and transported to a licensed disposal facility where they will be recycled or properly disposed.

The applicant explains in ASC Exhibit G that during operation small amounts of hazardous materials may be generated including oils, lubricants, and solvents on site. The hazardous materials required for maintenance would be stored in accordance with U.S. Environmental Protection Agency and U.S. Occupational Safety and Health Administration regulations, as applicable. [184] Safety data sheets of each hazardous material would be stored onsite. Properly trained operational personnel would be responsible for managing the handling, storage, transport, and disposal of hazardous materials. Hazardous materials would be stored onsite and cleanup kits would be maintained and available on site to minimize the impact resulting from a spill. The applicant represents that it would develop and implement a Spill Prevention Control and Countermeasure Plan (SPCC) for the battery storage system, which would include management of hazardous and nonhazardous materials, as well as response, cleanup and disposal procedures.[185] The Council adopts Soil Protection Condition 1, requiring the applicant to finalize and implement the SPCC prior to facility construction and operation.

At the time of facility retirement and decommissioning, as discussed further in Section IV.G., *Retirement and Financial Assurance*, aboveground equipment would be removed, sold for scrap, reused or recycled, or disposed of at a local landfill. Electrical cables would be rendered inert; aboveground cables would be removed, and underground cables would be left in place if below three feet below ground. The applicant maintains that similar procedures for minimizing,

[183] MSEFAPP ASCDoc1-22 Exhibit V Waste 2020-11-09, Section V.3.2.
[184] MSEFAPP ASCDoc1-7_Exhibit_G_Materials 2020-11-09, Section G.3.
[185] MSEFAPP ASCDoc1-2 Exhibit B Facility Description 2020-11-09. Section B.2.2.3

recycling, and disposing of solid waste during construction will be employed during retirement of the facility. The retirement of the battery storage system, if constructed and operated, would involve disposing of battery components at an offsite facility approved for disposal or recycling of batteries, similar as the procedures during operations.

Based on the applicant's proposed solid waste minimization measures, the Council imposes the following condition:

**Waste Minimization Condition 1:** During construction, operation and decommissioning, the certificate holder shall submit to the Department, for review and approval, a Waste Management Plan that includes a materials and waste inventory (type and estimated quantity) consistent with the inventory included in ASC Exhibit G; and the Hazardous Materials Business Plan and Spill Control and Countermeasure Plan, as applicable to the battery storage system and required per Soil Protection Condition 2. The Department shall recommend additional waste minimization measures for any waste types generated onsite, as necessary. The Waste Management Plan shall identify all waste minimization measures to be implemented per material type, including but not limited to:

a. Recycling steel and other metal scrap
b. Recycling wood waste
c. Recycling packaging wastes such as paper and cardboard
d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler
e. Segregating all hazardous wastes such as oil, oily rags and oil-absorbent materials, mercury containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous waste.
f. Recycling solar panels that are nonfunctional or retired through the Solar Energy Industries Association National PV Recycling Program (or similar program).
g. Recycling battery components at an offsite facility approved for disposal or recycling of batteries, to the maximum extent possible

[GEN-WM-01]

*Wastewater*

The applicant explains in ASC Exhibit V that during construction, wastewater generated during construction would result from portable toilets, which would be managed by a local contractor for disposal off site in accordance with state law. An average of 15 portable toilets would be onsite during construction, including 40 portable toilets during peak construction. Portable handwashing stations would also be used during construction would be hauled off site as well.

Other than washwater periodically generated from washing panels, industrial wastewater would not be generated during facility operation. Solar panel washwater would not include cleaning solvents, and would be discharged by evaporation and seepage into the ground, as required in recommended Soil Protection Condition 2. Based on the limited sources of

wastewater, the Council finds that it would be unlikely for the surrounding area to be impacted by facility wastewater generation.

**Conclusions of Law**

Based on the foregoing analysis, and in compliance with OAR 345-022-0120(2), the Council finds that, based upon negligible sources of facility-related wastewater and compliance with the recommended solid waste management plan condition, waste would be minimized during facility construction, operation and decommissioning and therefore the applicant has sufficiently addressed 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 facility would not be a nongenerating facility as defined in statute and therefore Division 23 is not applicable.

## IV.P Division 24 Standards

The Council's Division 24 standards include specific standards for the siting of energy facilities, including wind projects, underground gas storage reservoirs, transmission lines, and facilities that emit carbon dioxide. Because the facility includes an approximate 200 feet 230-kV transmission line, which would connect the Point of Interconnect to the existing Portland General Electric (PGE) Pelton Dam to Round Butte 230-kV transmission line, the Council's Division 24 Siting Standards for Transmission Line standard applies, as evaluated below.

### 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 implementation of measures to reduce the risk of induced current. ASC Exhibit AA provides the applicant's analysis to support Council's review of the facility's compliance with the standard.

*Electric Fields*

Electric fields around transmission lines are produced by the presence of an electric charge, measured as voltage, on the energized conductor. Electric field strength is directly proportional to the line's voltage; increased voltage produces a stronger electric field. 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.

In ASC Exhibit AA, the applicant explains that the proposed 230-kV transmission line, connecting the facility substation to the point of interconnect switching station, would be located directly adjacent to the PGE Pelton Dam to Round Butte 230-kV transmission line. By proposing to site the proposed 230-kV transmission line near the middle of the proposed site boundary, the transmission line would be located behind multiple security fences. Based on the proposed siting of the 230-kV transmission line, the applicant indicates that the transmission line would be inaccessible to the public. Based on the proposed siting of the transmission line, and because the 9-kV per meter standard and modeling requirements of OAR 345-024-0090(1) are required for areas accessible to the public, the applicant determined that the 9-kV per meter standard and modeling of electric fields would not be required to demonstrate compliance with the standard. Because the 200-foot segment of 230-kV transmission line would be located within the facility perimeter fenceline and inaccessible to the public, the Council concludes that it would be reasonably unlikely for members of the public to experience any impacts from alternating current electric fields.

*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." Recommended General Standard Condition 8 [based on the mandatory condition contained in OAR 345-025-0010(4)], presented in Section IV.A. *General Standard of Review* requires, in part, the applicant 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.

Based upon review of the applicant's evaluation, and subject to General Standard Condition 8, the Council finds that the applicant can design, construct and operate the facility 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 site certificate conditions, the Council finds that the facility would comply 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 facility complies with "all other Oregon statutes and administrative rules…as applicable to the issuance of a site certificate for the facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for water rights.

### IV.Q.1 Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce: OAR 340-035-0035

*(1) Standards and Regulations:*

*****

*(b) New Noise Sources:*

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

*(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.*

*****

*(3) Measurement:*

*(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;*

*(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:*

*A. 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;*

*B. That point on the noise sensitive property line nearest the noise source.*

*(4) Monitoring and Reporting:*

*(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);…*

*(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:*

*****

*(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;*

*****

*(g) Sounds that originate on construction sites.*

*****

*(k) Sounds created by the operation of road vehicle auxiliary equipment complying with the noise rules for such equipment as specified in OAR 340-035-0030(1)(e);*

*****

The Oregon Department of Environmental Quality's (DEQ) Noise Control Regulations for Industry and Commerce apply to operational noise from proposed energy facilities, as industrial noise sources. In 1991, DEQ's Noise Control Program was terminated; however, the rules

remain in effect. Regulated sources of noise are legally responsible for complying with the applicable provisions and standards of the regulations. As described above, because ORS 469.503(3) and the Council's General Standard of Review (OAR 345-022-0000) require Council to find that a facility complies with all other applicable requirements, which includes DEQ's noise control regulations, and because DEQ no longer enforces or monitors the regulations, Council assumes the authority as the decision maker to interpret and implement the DEQ noise rules.

**Findings of Fact**

OAR 340-035-0035 establishes 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.[186, 187] In ASC Exhibit X, the applicant explains that the proposed site has been unused except for pasture grazing one time in the past 25 years. There is no evidence in the record that the facility site has been in industrial or commercial use at any time during the last 20 years. Therefore, the facility is considered an industrial noise source and the site is considered a previously unused site and evaluated per the requirements of OAR 340-035-0035(1)(b)(B).

The analysis area for evaluating compliance with the DEQ noise regulation includes the area within and extending one-mile from the proposed site boundary.

Per OAR 340-035-0035(1)(b)(B), noise generated by a new industrial or commercial source located on a previously unused site must comply with two standards: the "ambient noise degradation standard" and the "maximum allowable noise standard." Both of these standards represent allowable noise levels at "real properties normally used for sleeping," otherwise referred to as a "noise sensitive property."

- Under the ambient noise degradation standard, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA in any one hour, with ambient noise levels established based on noise measurements taken at an appropriate noise measurement location (point on the noise sensitive property line nearest to the noise source).

- Under the maximum allowable noise standard at OAR 340-035-0035(1)(b)(B)(i), new industrial or commercial noise sources may not exceed the noise levels specified in the

[186] OAR 340-035-0015(47) defines a "previously unused industrial or commercial site" 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."
[187] OAR 340-035-0015(24) defines "industrial and commercial noise sources" as "noise generated by a combination of equipment, facilities, operations or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a…service."

noise rules Table 8, which are represented in Table 10: *Statistical Noise Limits for Industrial and Commercial Noise Sources* below.

**Table 10: 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 noise limits apply at "appropriate measurement points" on "noise-sensitive property." The "appropriate measurement point" is defined in the DEQ Noise Rules under OAR 340-035-0035(3)(b) as whichever of the following is farther from the noise source:

- 25 feet (7.6 meters) toward the noise source from that point on the noise-sensitive building nearest the noise source;
- That point on the noise-sensitive property line nearest the noise source; or
- Otherwise specified by applicant.

*Potential Noise Impacts*

In ASC Exhibit X, the applicant evaluates compliance with DEQ's noise rules by analyzing potential noise impacts from operation of the proposed solar array, associated inverters, inverter and substation transformers, and battery storage system.

The applicant reviewed aerial photography and conducted a site visit on July 1-2, 2019 to verify locations of noise sensitive properties. Based on this evaluation, the applicant identified eight noise-sensitive properties within one mile of the facility site boundary and conducted ambient noise monitoring at two of the noise sensitive properties located nearest to the facility, the closest of which is more than 1/2 mile away. Therefore, the evaluation of compliance with the DEQ noise rules, as further described below, is based upon modeled operational noise levels of the facility at the eight identified noise sensitive properties, using the lowest measured ambient noise level.

Based upon review of ASC Exhibit X, Council's assessment and review of the applicant's ability to comply with the noise requirements is provided below.

*Construction*

OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities; however, an evaluation of construction-related noise is presented in accordance with OAR Chapter 345 Division 21 information requirements and to inform the construction-related noise analysis required under the Council's Protected Areas and Recreation standards, found in Sections IV.F., *Protected Areas*, and IV.L., *Recreation*, of this order.

ASC Exhibit X Table X-4 summarizes the results of a U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control analysis of noise from construction equipment, power plant construction sites, and other types of facilities (EPA, 1971). Applicant utilized data from the EPA study as a basis for analysis in the absence of specific information about types, quantities, and operating schedules of its construction equipment. Applicant notes that use of these data is reasonable for estimating noise levels, given that they are still widely used by acoustical professionals.

Facility construction activities that would generate noise include clearing, excavation, foundation (which includes operation of the temporary batch plant), erection and finishing. ASC Exhibit X Table X-5 shows the total composite noise level from these activities at a reference distance of 50 feet as well as additional distances, based on typical equipment operating during each phase of construction and the typical usage factor for each piece of equipment. The maximum predicted construction noise levels at ½ mile for foundation and finishing is 55 dBA and for excavation is predicted at 56 dBA. At one mile, predicted construction noise levels range from 44 to 50 dBA. Applicant notes the calculated levels are likely conservative because the only attenuating mechanism considered was geometric spreading, which results in an attenuation rate of 6 dBA per doubling of distance; attenuation related to the presence of structures, trees or vegetation, ground effects, and terrain is not considered.

*Operations*

OAR 340-035-0035(1)(b)(B)(i) restricts noise levels of new industrial or commercial noise sources located on a previously unused industrial or commercial site from increasing the ambient statistical noise level, L10 or L50, by more than 10 dBA in any one hour. Ambient noise levels must be based on an appropriate noise measurement and noise measurement procedures established in OAR 340-035-0035(3)(b). OAR 340-035-0035(3)(b) establishes acceptable procedures as the Sound Measurement Procedure Manual (NPCS-1) adopted by the DEQ Commission in the 1970's or as otherwise approved by the Department.

*Equipment*

Facility components that would generate noise during operations include: inverter, inverter transformer, substation transformer and battery storage containers. In ASC Exhibit X, the applicant provides a noise analysis inclusive of the operational sources and sound power levels (in A-weighted decibels) for facility components, as listed below:

- 19 inverters at 92 dBA, each
- 19 inverter transformers at 75 dBA, each
- 1 substation transformer at 86 dBA
- 120 battery storage containers at 87 dBA, each

Applicant notes that the data are preliminary and states "*detailed vendor specifications will ultimately be developed to ensure the Facility complies with the conditions of certification*."

*Ambient Noise Measurements*

OAR 340-035-0035(1)(b)(B)(i) restricts noise levels of new industrial or commercial noise sources located on a previously unused industrial or commercial site from increasing the ambient statistical noise level, L10 or L50, by more than 10 dBA in any one hour, where ambient noise levels must be based on an appropriate noise measurement, as previously discussed, and noise measurement procedures established in OAR 340-035-0035(3)(b). OAR 340-035-0035(3)(b) establishes acceptable procedures as the Sound Measurement Procedure Manual (NPCS-1) adopted by the DEQ Commission in the 1970's or as otherwise approved by the Department. The procedures outlined in NPCS-1 primarily rely on manual tabulation of observed sound levels over a short time period, "approximately 20 minutes".

As presented in ASC Exhibit X, the applicant seeks Council approval of ambient noise measurement procedures other than NPCS-1, for the facility. The applicant utilized an Oregon Licensed Professional Acoustical Engineer (P.E., 58990PE), also Board Certified by the Institute of Noise Control Engineering (INCE Bd. Cert., 19001), to conduct ambient sound monitoring. Sound monitoring was conducted utilizing modern digital data logging sound level meters that report the appropriate metrics automatically (e.g., hourly $L_{50}$) and enable longer duration measurements. Sound levels were continuously monitored for approximately 7,000 minutes at each location.[188] The applicant affirms that based on use of a digital data logging meter and duration of monitoring, that the methods are consistent with the intent of NPCS-1. The Council agrees and approves the applicant's sound measurement methods.

To confirm compliance with the ambient degradation standard, applicant identified two noise sensitive properties as representative measurement points (R-3 and R-4), rather than individual measurement points at each noise sensitive property, as authorized under OAR 340-035-0035(3)(b).[189] As presented in ASC Exhibit X Figure X-1, the acoustic noise environment, including proximate noise sources, topography and land cover, of R-3 and R-4 is substantially similar or more conservative (e.g., includes less vegetative cover/screening) as the other noise sensitive property locations. Therefore, the Council finds that the use of the otherwise specified

[188] MSEFAPP ASC Clarification Request (Noise Responses) 2021-01-05

[189] OAR 340-035-0035(3)(b) authorizes use of otherwise specified measurement points if the measurement points established in the rules are not utilized.

measurements points is appropriate for the analysis of compliance with DEQ's noise regulations.

Ambient sound monitoring was conducted at representative locations R-3 and R-4. Larson Davis 831, ANSI S1.4 Type 1 (precision) data logging sound level meters were deployed for approximately 1 week. The hourly results are tabulated in applicant's ASC Exhibit X Attachment Tables A-1 and A-2 for R-3 and R-4, respectively, and are summarized in Table 11: *Summary of Ambient Noise Measurement Results.*

**Table 11: Summary of Ambient Noise Measurement Results**

| NSR ID | Distance to Facility | Time Period | Baseline Sound Level | | |
|---|---|---|---|---|---|
| | | | L1 | L10 | L50 |
| R-3 | Approx. ½ mile | Day | 37-62 | 28-55 | 23-47 |
| | | Night | 25-52 | 22-43 | 20-28 |
| R-4 | Approx. ½ mile | Day | 41-61 | 27-56 | 22-50 |
| | | Night | 26-55 | 22-43 | 19-36 |
| Source: ASC Exhibit X Tables A-1 and A-2 | | | | | |

As presented in Table 11: *Summary of Ambient Noise Measurement Results*, ambient conditions as measured at the noise sensitive properties located in closest proximity to facility components range from 22 to 50 dBA for daytime L50 and from 19 to 36 dBA for nighttime L50.

*Maximum Allowable and Ambient Noise Degradation Standards*

The applicant used an acoustic modeling software program to evaluate operational noise from the facility - the Computer Aided Noise Abatement (CadnaA) version 2018 MR1. CadnaA includes sound propagation factors adopted from International Organization for Standardization's (ISO) 9613-2 "Acoustics - Sound Attenuation During Propagation Outdoors" to account for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions.

Operational noise from the facility is compared to the maximum allowable noise limits, as summarized in Table 11 above (OAR 340-035-0035, Table 8), the most restrictive of which is 50 dBA at night. The applicant estimates the predicted full load sound levels attributable to facility operations at the closest residence, R-2, at 26 dBA without the battery storage units operating and 29 dBA with the battery storage. (See applicant's ASC Exhibit X Figures X-2 and X-3 for predicted sound contours of the solar only and solar plus battery storage system, respectively). The applicant notes that during nighttime hours, the inverters would not operate at full capacity and would therefore emit less noise. Additionally, the cooling requirements for the batteries and transformers are expected to be diminished during the nighttime hours, allowing the fans to operate at lower speed and sound level. Therefore, noise generated during facility operation is expected to comply with the 50 dBA maximum allowable noise standard.

The ambient noise degradation standard requires a demonstration that noise generated during facility operation must not cause the hourly L50 noise level at any noise-sensitive property to exceed 10 dBA above ambient statistical noise levels, or in this case, result in operational L50 noise levels of 33 dBA. The applicant's hourly ambient sound monitoring results at R-3 and R-4 are tabulated in ASC Exhibit X Tables A-1 and A-2, respectively. Per these tables, the quietest single nighttime (10:00 p.m. to 7:00 a.m.) L50 monitoring result was 19 dBA at R-4. Per the applicant the quietest average nighttime L50 monitoring results, or the values representative of the ambient statistical noise levels, were 23 dBA at R-3 and 24 dBA at R-4. Given that the highest predicted L50 sound level at the closest residence (albeit R2, which is a different residence than those at which ambient monitoring was conducted) is 29 dBA, noise generated during facility operation is expected to comply with the 10-dBA ambient degradation standard.

The applicant proposes to employ equipment selection and specification criteria necessary to ensure compliance with DEQ's noise regulation (OAR 340-035-0035). The applicant states that, while the facility is anticipated to operate in compliance with the DEQ's noise regulation without unusual noise mitigation measures, applicant has many measures available to ensure compliance is achieved during detailed design. Such measures may include specifying quieter equipment (when available) and installing improved acoustical enclosures or barriers. The applicant also commits to implementing a noise complaint response program in order to receive and respond to any potential noise complaints.

Given these representations by the applicant, coupled with applicant stating that *detailed equipment vendor specifications will ultimately be developed to ensure the Facility complies with the conditions of certification*, in order to ensure that operational noise associated with the facility, at final design, is consistent with or less than the modeled noise levels presented in ASC Exhibit X, the Council imposes the following conditions to afford the Department the ability to verify compliance with DEQ's noise regulation, based on consistency of sound power levels associated with final equipment selection compared to equipment information relied upon in ASC Exhibit X:

**Noise Control Condition 1:** Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall:

a. Submit to the Department a noise summary report presenting the sound power levels (in dBA) of noise generating equipment including solar array inverters and transformers, substation transformers, battery system inverters and cooling systems, as applicable to final design. The sound power levels shall be supported by equipment manufacturer specifications and noise data. The certificate holder shall provide, in tabular format, a comparison of the sound power levels used in ASC Exhibit X for noise generating equipment and sound power levels validated by manufacturer specifications.
b. If the sound power levels used in ASC Exhibit X to evaluate compliance with DEQ's noise rules are lower than sound power levels of final equipment selected, the certificate holder shall provide an updated noise analysis to demonstrate compliance with the ambient degradation standard and maximum allowable threshold. The ambient noise level utilized in ASC Exhibit X may be used for the updated noise analysis, if required.

[PRE-NC-01]

**Noise Control Condition 2:** Prior to and during facility operation, the certificate holder shall establish a noise complaint response program including facility contact name, phone number and email; procedure for filing complaints, facility response, and reporting to the Department; and details on how the information on filing noise complaints will be provided to members of the public. The certificate holder shall provide to the Department, for review, a copy of its procedure or plan for the noise complaint response program. [OPR-NC-01]

**Conclusions of Law**

Based on the recommended findings of fact and compliance with the recommended condition, the Council finds that the facility would comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

IV.Q.2 Removal-Fill Law

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."[190] 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. If a removal-fill permit is needed for the facility, it is Council that makes a determination whether or not DSL should issue such a permit.

**Findings of Fact**

ASC Exhibit J provides the applicant's analysis of wetlands and other nonwetland waters of the state within the analysis area, which encompasses the approximate 284 acre facility site boundary. To inform the analysis, the applicant conducted literature and field studies. The literature review included an evaluation of the following sources:

- 7.5-minute topographic maps (as provided by the U.S. Geological Survey [USGS] via the Environmental Systems Research Institute
- Jefferson County Oregon Tax lot, Urban Growth Boundary, City Boundary (2018) (digital files) (Figure 2 in Appendix A of Attachment J-1)
- National Wetlands Inventory maps from the U.S. Fish and Wildlife Service (2018) and National Hydrography Data Set (USGS, 2013) (Figure 3 in Appendix A of Attachment J-1)

[190] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.

- Soil Survey Geographic database for Upper Deschutes River Area, Oregon, including parts of Deschutes, Jefferson, and Klamath counties (NRCS, 2015) (Figure 4 in Appendix A of Attachment J-1)
- Hydric Soils List, Jefferson County (NRCS, 2017)
- Digital Globe 2016, aerial imagery, July 16, 2016 (Figure 5 in Appendix A of Attachment J-1)

A field study documenting the potential jurisdictional wetlands and waterbodies in proximity to the facility was conducted on October 30, 2018. Field studies followed procedures in the *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valley and Coast Region*. The wetland delineation report and fieldwork were completed by the applicant's environmental consultant, Jacobs Engineering Group Inc. (Jacobs), and is provided in ASC Exhibit J Attachment J-1. In March 2019, DSL issued a letter that concurred with the applicant's wetland delineation report.[191]

Overall, there were no wetlands identified within the analysis area, but three drainages mapped within the study area.[192] The applicant explains that all three of the drainages are exempt from DSL jurisdiction because all three of the drainages are ephemeral. In the March 2019 letter, DSL concurred that the three drainages are exempt and concluded that there are no jurisdictional features within the analysis area. Additionally, the applicant indicates that facility components would be sited to avoid all nonwetland water; therefore, no adverse impacts to any waters of the state are expected and the requirements for a removal-fill permit would not be triggered because no temporary or permanent disturbances to wetlands or other nonwetland waters of the state would occur as part of the construction or operation of the facility.

Therefore, based on review of ASC Exhibit J and DSL concurrence, the Council finds that the facility maintains compliance with the removal-fill law and the certificate holder is not currently required to obtain a removal-fill permit.

**Conclusions of Law**

Based on the foregoing findings of fact and conclusions, the Council finds that a removal-fill permit is not needed for the 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 these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires

[191] MSEFAPP ASCDoc-10 Exhibit J Wetlands 2020-11-09 Attachment J-2.

[192] MSEFAPP ASCDoc-10 Exhibit J Wetlands 2020-11-09 Attachment J-1 Figure 6.

that if a facility needs a groundwater permit, surface water permit, or water right transfer, that a decision on authorizing such a permit rests with the Council.

**Findings of Fact**

As described in ASC Exhibit O and in Section IV.M., *Public Services* of this order and in ASC Exhibit O, construction-related water use would include civil and site preparation for road compaction and dust suppression, as well as water used for concrete mixing for foundations and ballasts, and water for drinking and sanitation. During facility operation, water would be used for sanitation and solar module washing, approximately twice a year. Water during construction and operation of the facility would be supplied by the Deschutes Valley Water District (Water District) from its water supply system. Estimated water use from facility construction and operation is presented in Table 12: *Estimated Maximum Water Use from Construction and Operation* below.

**Table 12: Estimated Maximum Water Use from Construction and Operation**

| **Water Use Description** | **Quantity/Units** |
|---|---|
| | |
| *Construction* | Gallons |
| Civil and Site Preparation (road compaction and dust control) | 10,530,000 |
| Concrete (pads, foundations, and ballasts) | 2,225,000 |
| Potable and Sanitation Water | 50,000 |
| **Estimated Construction Water Use =** | 12,800,000 |
| *Operation* | Gallons/Year |
| Solar Panel Washing | 1,650,000 |
| **Annual Estimated Operational Water Use =** | 1,650,000 |
| Source: MSEFAPP ASCDoc1-15 Exhibit O Water Resources 2020-11-09, Section O-1. | |

The applicant maintains that no groundwater permit, surface water permit, or water right transfer is needed for the construction and operation of the facility because the Water District already has the permits and water rights to the sources of the water. The applicant provided correspondence from the Deschutes Valley Water District General Manager, who affirms that water for the construction and operation of the facility would be supplied under the District's municipal or quasi-municipal water permit or water right permit numbers S26113 and S36515.[193] [194] Under OWRD rules, examples of municipal water use include but are not limited to domestic water use, irrigation of lawns and gardens, commercial water use, industrial water

[193] MSEFAPP ASC Clarification Request (Water Rights) 2021-01-07

[194] OWRD provided links to publicly available water permits. Department review of water permit numbers S26113, S32674, S36515 indicate that permit numbers S26113 and S36515 have designations as municipal or quasi-municipal use.

use, fire protection, irrigation, and other water uses.[195] Where industrial water use means the use of water associated with the processing or manufacture of a product; including, but are not limited to, construction, operation and maintenance of an industrial site, facilities and buildings and related uses. The Department in consultation with OWRD recommend that the construction and operation of a solar generating facility is considered an industrial waste use under OWRD rules.

Further, in ASC Exhibit O, Attachment O-1, the applicant provides correspondence from the Water District that notes that the District is a municipal corporation incorporated under Chapter 264 of the ORS for the purpose of delivering water to persons within and outside of the Water District's boundaries. The Department's review of permit numbers S26113 and S36515 indicated that the designated places of use of water do not include the location of the site boundary in Township 10 South, Range 13 East, in portions of Sections 030 and 031. The Department concurred that the Water District is a municipal corporation incorporated under Chapter 264 and also notes that under OAR Chapter 690 definitions the Water District is also considered a "Municipal Corporation", which means any county, city, town or district as defined in ORS 198.010, that is authorized by law to supply water for usual and ordinary municipal water uses, and the Department maintained that the use of water for the proposed solar facility would be considered ordinary municipal water use because the use is for an industrial use.[196] Finally, under OAR 690-300-0010 (39), the Council maintains that the Water District would also be considered a "Public Corporation", which means a corporation that operates subject to control by a local government entity which, at least in part, is organized to serve a public purpose of, and receives public funds, from such government. The Council clarifies the above to point to the definition for Quasi-Municipal Water Use (the water use purpose within the Water District's permits), that states, "use of water through the water service system of a corporation *other than a public corporation created for the purpose of operating a water supply system*, for those uses usual and ordinary to municipal water use…A quasi-municipal water right *shall not be granted the statutory municipal preferences given to a municipality under … 540.510(3)*…".[197] [Emphasis added.] ORS 540.510 establishes that all water used for any purpose shall remain appurtenant to the premises upon which it is used and no change in use or place of use of any water for any purpose may be made without compliance with the listed provisions or with the exceptions defined in the statute. ORS 540.510(3)(a) allows for any water used under a

[195] OAR 690-300-0010(29).
[196] OAR 690-300-0010 (28).
[197] ORS 540.510 (3):
(a) Any water used under a permit or certificate issued to a municipality…may be applied to beneficial use on lands to which the right is not appurtenant if:
(A)The water is applied to lands which are acquired by annexation or through merger, consolidation or formation of a water authority, so long as the rate and use of water allowed in the original certificate is not exceeded;
(B)The use continues to be for municipal purposes and would not interfere with or impair prior vested water rights; or
***
(b)As used in this subsection, "municipality" means a city… a domestic water supply district formed under ORS chapter 264, a water supplier as defined in ORS 448.115 (Definitions for ORS 448.115 to 448.285) or a water authority formed under ORS chapter 450.

permit or certificate issued to a municipality may be applied to beneficial use on lands to which the right is not appurtenant if the use continues to be for municipal purposes and would not interfere with or impair prior vested water rights, such as the case with the Water District selling water to the applicant for use during construction and operation of the facility. ORS 540.510(3)(b) expands on what is considered a municipality, which includes a domestic water supply district formed under ORS chapter 264.

Notably, the Water District is considered a public corporation formed under ORS chapter 264 and a municipal corporation under OAR 690-300-0010 (28), therefore the statutory limitations stated in OAR 690-300-0010 (40), specially that quasi-municipal water rights shall not be granted the statutory municipal preferences given to a municipality under ORS 540.510, do not apply to the Water District and the Water District may use water which the right is not appurtenant (different place of use), if the use continues to be for municipal purposes (such as for the construction and operation of an industrial solar facility) and would not interfere with or impair prior vested water rights.

Based on the above findings that recommend that the Deschutes Valley Water District can supply water for the construction and operation of the facility under its existing water rights and permits, therefore, the Council finds that the applicant does not need a groundwater permit, surface water permit, or water right transfer.

**Conclusions of Law**

Based on the foregoing findings of fact, the Council concludes that the facility does not need a groundwater permit, surface water permit, or water right transfer.

## V. FINAL CONCLUSIONS AND ORDER

Madras PV1, LLC submitted an application for site certificate (ASC) to construct and operate approximately 63 MWs of solar photovoltaic power generation equipment and its related or supporting facilities (200 foot, 230 kV transmission line segment; 34.5 kV collection system; point of interconnect switching substation and substation; operations and maintenance enclosure; communication and supervisory control and data acquisition system; temporary staging areas; battery storage; temporary batch plant) to be located in Jefferson County. Subject to compliance with the recommended site certificate conditions and based on the preponderance of evidence on the record, the Council finds that:

1. The Madras Solar Energy Facility complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The Madras Solar Energy Facility complies with the standards adopted by the Council pursuant to ORS 469.501.

3. The Madras 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 facility.

Based on the findings of fact, reasoning, recommended conditions and conclusions of law in this order, the Council concludes that the applicant has satisfied the requirements for issuance of a site certificate for the proposed Madras Solar Energy Facility. Pursuant to ORS 469.401, Chair Grail executed the site certificate authorizing the applicant to construct, operate and retire the facility subject to the conditions set forth in the site certificate.

**Issued this 25th day of June 2021**

The ENERGY FACILITY SITING COUNCIL

By: Marcia Grail Digitally signed by Marcia Grail Date: 2021.07.14 07:00:38 -07'00'

Marcia L. Grail, Chair

**Attachments:**

Attachment A: Site Certificate
Attachment B: Index of Reviewing Agency Comments on preliminary/complete ASC; Comments Relied upon in DPO
Attachment C: Draft Proposed Order Index/Comments
Attachment D: Draft Outline of Spill Prevention, Control and Countermeasure Plan
Attachment E: Draft Erosion and Sediment Control Plan and Best Management Practices
Attachment F: Draft Revegetation Plan
Attachment G: Draft Noxious Weed Control Plan
Attachment H: Draft Habitat Mitigation Plan
Attachment I: Inadvertent Discovery Plan

# Attachment A: Site Certificate

**ENERGY FACILITY SITING COUNCIL**

**OF THE**

**STATE OF OREGON**

# Site Certificate for the

# Madras Solar Energy Facility

**ISSUE DATE**

**June 25, 2021**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Table of Contents

**1.0 Introduction and Site Certification** ..... 1

**2.0 Facility Location and Site Boundary** ..... 3

**3.0 Facility Description** ..... 1

**4.0 Facility Development** ..... 5

4.1 Construction ..... 5

4.2 Operations and Maintenance ..... 5

4.3 Retirement ..... 6

**5.0 Site Certificate Conditions** ..... 6

5.1 Condition Format ..... 6

5.2 General (GEN) Conditions: Design, Construction and Operations ..... 8

5.3 Pre-Construction (PRE) Conditions ..... 21

5.4 Construction (CON) Conditions ..... 24

5.5 Pre-Operational (PRO) Conditions ..... 24

5.6 Operational (OPR) Conditions ..... 24

5.7 Retirement (RET) Conditions ..... 25

**6.0 Successors and Assigns** ..... 27

**7.0 Severability and Construction** ..... 27

**8.0 Execution** ..... 27

**Attachments**

| | |
|---|---|
| Attachment A | Facility Location Mapsets (ASC Exhibit C) |

**Acronyms and Abbreviations**

| | |
|---|---|
| ASC | Application for Site Certificate |
| Council | Oregon Energy Facility Siting |
| Department | Oregon Department of Energy |
| DOGAMI | Oregon Department of Geology and Mineral Industries |
| HMP | Habitat Mitigation Plan |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and Maintenance |
| OAR | Oregon Administrative Rule |
| ODFW | Oregon Department of Fish and Wildlife |
| ORS | Oregon Revised Statute |

## 1.0 Introduction and Site Certification

This site certificate is a binding agreement between the State of Oregon (State), acting through the Energy Facility Siting Council (Council), and Madras PV1, LLC, (certificate holder) which is a wholly owned subsidiary of Ecoplexus Inc. (certificate holder owner, parent company). As authorized under Oregon Revised Statute (ORS) Chapter 469, the Council issues this site certificate authorizing the certificate holder to construct, operate, and retire the Madras Solar Energy Facility (facility) within the below described approved site boundary in Jefferson County, subject to the conditions set forth herein.

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

In order to issue this site certificate, the Council determined that the preponderance of the evidence on the record supports the conclusion that the facility complies with the applicable standards adopted by the Council pursuant to ORS 469.501. (ORS 469.503(1)). The Council determined that the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of this site certificate for the approved facility. If, in its review of an application, compliance with applicable Oregon statutes and administrative rules, other than those involving federally delegated programs, would result in conflicting conditions in the site certificate, the Council may resolve the conflict consistent with the public interest. A resolution may not result in the waiver of any applicable state statute. (ORS 469.503(3)). Further, the Council determined that the facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission under ORS 469.503(4), and that 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 under ORS 469.504(b).

As part of the EFSC review and decision process, in making the determination regarding compliance with statutes, rules and ordinances administered by another agency or compliance with requirements of ORS 469.300 to 469.563 and 469.590 to 469.619 where another agency has special expertise, consultation with the other agency occurs during the notice of intent and site certificate application process. (ORS 469.505(1)). Before resolving any conflicting conditions in site certificates or amended site certificates under ORS 469.503(3) and 469.504, the Council shall notify and consult with the agencies and local governments responsible for administering the statutes, administrative rules or substantive local criteria that result in the conflicting conditions regarding potential conflict resolution. (ORS 469.505(2)).

The findings of fact, reasoning, and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: the *Final Order on the Application for Site Certificate for the Madras Solar Energy Facility* issued on June 25, 2021 (hereafter, *Final Order on the ASC*).

This site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate (ORS 469.401(3)). This site certificate does not address, and is not binding with respect to, matters that are not included in and governed by this site certificate, and such matters include, but are not limited to: employee health and safety; building code compliance; wage and hour or other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council (ORS 469.503(3)).

Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate, shall upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. In addition, each state agency or local government agency that issues a permit, license or other approval for this facility shall continue to exercise enforcement authority over such permit, license or other approval (ORS 469.401(3)). For those permits, licenses, or other approvals addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules (ORS 469.401(2)).

The certificate holder must construct, operate, and retire the facility in accordance with all applicable rules as provided for in Oregon Administrative Rule (OAR) Chapter 345, Division 26. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate (ORS 469.430).

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this site certificate is subject to the provisions of ORS 192.502 *et seq*. and ORS 469.560. To the extent permitted by law, the Department and the Council will not publicly disclose information that may be exempt from public disclosure if the certificate holder has clearly labeled such information and stated the basis for the exemption at the time of submitting the information to the Department or the Council. If the Council or the Department receives a request for the disclosure of the information, the Council or the Department, as appropriate, will make a reasonable attempt to notify the

certificate holder and will refer the matter to the Attorney General for a determination of whether the exemption is applicable, pursuant to ORS 192.450.

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

The duration of this site certificate shall be the life of the facility, subject to termination pursuant to OAR 345-027-0013 or the rules in effect on the date that termination is sought, or revocation under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.

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

## 2.0 Facility Location and Site Boundary

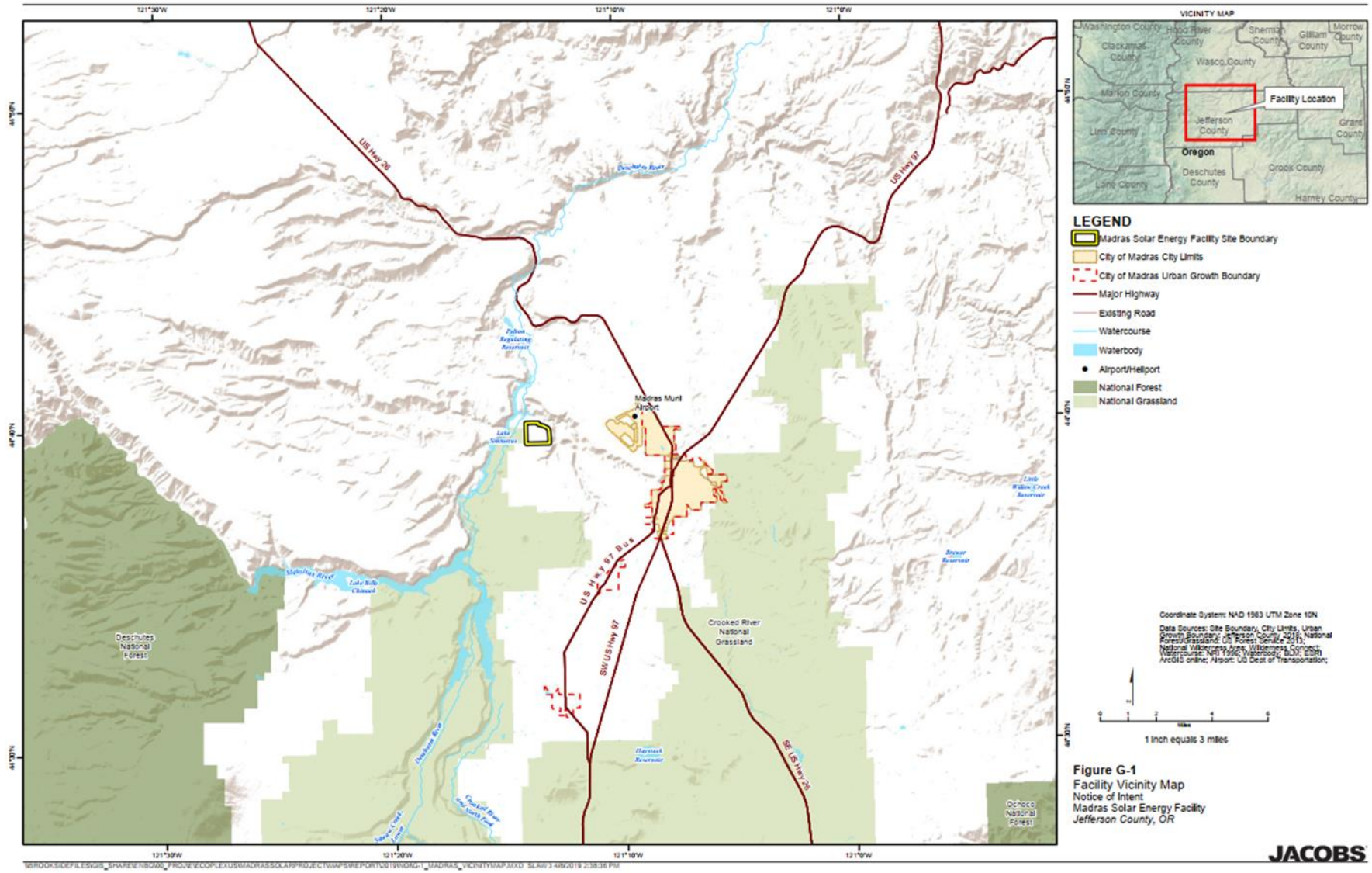
The approved facility site is located within Jefferson County, Oregon, approximately 5.5 miles west of the City of Madras, as presented in Figure 1: *Facility Regional Location*. The facility site is located east of Lake Simtustus, south and west of Willow Creek, and approximately 0.5 miles from the eastern boundary of the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO).

The approved site boundary includes approximately 284 acres of private land on which the applicant has negotiated an exclusive, long-term option to lease. 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.[1] After Council approves a Final Order on an application for site certificate and issues a site certificate, the "proposed facility" becomes the approved facility or facility.

A micrositing corridor, by definition, means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.[2] Micrositing corridors or areas are intended to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. The approved site boundary is considered a "micrositing area" with temporary and permanent disturbance within the site boundary to approximately 7 and 277 acres, respectively.

[1] ORS 469.300(25)
[2] OAR 345-001-0010(32)

## Figure 1: Facility Regional Location



## 3.0 Facility Description

The approved energy facility is comprised of up to 60 module blocks (crystalline silicon modules) which include tracker system/racks, ballasted posts (approx. 30,000 steel posts) and related electrical equipment (cabling; inverters and transformer; and switchgear).[3] The solar array is enclosed with an up to 8-foot (height), chain-link perimeter fence.[4]

The tracking system consists of metal table frames or "racks" with a rotating drive gear that could rotate up to 60 degrees in an east to west direction such that the modules track the sun throughout the day in order to increase solar production. The modules are approximately 4 to 5 feet off the ground when fully stowed. When fully rotated, the highest point of the module would be approximately 8 feet off the ground, while the minimum distance to the ground when fully rotated would range from 1 to 2 feet.

Each tracker table is bolted to steel posts driven into the ground to serve as the foundation. The post depths vary depending on soil conditions, but are typically driven to a depth of at least 8 feet below the surface. The facility is approved to install approximately 1,000 posts module block, with a maximum of approximately 30,000 posts for the facility at full build-out. Post locations are determined by the ground-coverage ratio (GCR), which is the ratio of the area of the modules to the total area. The GCR for the facility is approximately 39 percent. A ballasted design may be used in portions of the site featuring significant subsurface rock formations, which involves mounting the tracker tables on foundations embedded in concrete blocks (ballasts) that would rest on the surface of the ground rather than on posts driven into the ground.

Electrical cables connecting the modules to each other are mounted to the back of the modules using cable trays or wire harnesses. Several rows of modules are then collected in a combiner box located at the end of one of the rows. Other electrical cables within arrays are buried to a depth of at least 3 feet.

The direct current output from the modules is combined in parallel in combiner boxes and, from the combiner boxes, then its converted into alternating current via the inverters, the output of which is fed into transformers that step up in voltage to 34.5 kilovolt (kV). The inverters and transformers are mounted on a concrete pad measuring approximately 20 by 40 feet, with a maximum height of approximately 10 feet (including the inverters and transformers). The combination of the inverters and transformers is referred to as a power conversion station (PCS), with an approved total of 19 PCSs. Each PCS is located within the interior of the arrays. Each tracker column is equipped with on-board batteries that act as a backup power source to rotate the tracker units into the stowed position during high wind events and a loss of the primary 230 kV connection to the electrical grid. The transformers then

[3] Ballasted design may be required given soil conditions at the site, where tracking table posts would mounted on foundations embedded in concrete blocks.

[4] The approved security fence will be 6 feet tall with two strands of barbed wire, or 8 feet tall with no barbed wire.

convey the power via 34.5 kV underground collector lines to the switchgear, which consists of an industry standard electrical protection device that controls, protects, and isolates electrical equipment. The metal-clad switchgear enclosures typically measure approximately 33 feet long by 12 feet wide and 11 feet high.

*Related or Supporting Facilities*

Approved related or supporting facilities, described further below, include:

- 34.5 kV electrical collector lines
- Substation
- Point of interconnection switching station
- 230 kV transmission line
- Operations and maintenance enclosure
- Security fencing and gates
- Service roads
- Temporary construction areas
- Battery storage system

*34.5 kV Electrical Collector Lines*

The facility includes approximately 4 miles of belowground 34.5 kV collector lines that carry power from the switchgear to the approved substation. The 34.5 kV collector lines are underground, and are buried at a depth of approximately 3 feet.

*Substation*

The facility includes one substation, on approximately 2 acres. The substation includes incoming 34.5 kV feeder breakers; a main step-up transformer (from 34.5 to 230 kV); control enclosure; dead-end and shield pole; support steel; auxiliary station service transformer; circuit breaker; and a motor-operated disconnect switch. Components within the substation range up to 10 feet in height. The main step-up transformer contains up to 8,000 gallons of mineral oil and is located within an appropriate secondary spill containment system. The auxiliary station service transformer contains environmentally acceptable ester oil and therefore does not require secondary containment, however this is located on a concrete pad.

*Point of Interconnection Switching Station*

The approved point of interconnection (POI) switching station consists of a control house; circuit breaker; circuit switcher; metering, communications, protection and control; protection and control panel; and Supervisory Control and Data Acquisition (SCADA) and metering

equipment. The switching station features a three-breaker, ring-bus configuration.[5]

*230 kV Transmission Line*

The 230 kV transmission line extends approximately 200 feet within the approved site boundary and connects the Point of Interconnect to PGE's existing Pelton Dam to Round Butte 230 kV transmission line. The 230 kV transmission line is approved to use up to 4, 80-foot H-frame poles, each placed in concrete foundations approximately 12 feet deep and 4 feet in diameter.

*Operations and Maintenance Enclosure*

The O&M enclosure consists of a single, 8.5-foot-tall, 320-square-foot dry-storage shed located within the approved site boundary. Restroom facilities are provided in the form of temporary portable toilets, while any required water is trucked in from offsite sources. Approximately 10 gallons of sanitary wastewater is generated per day and is collected and transported offsite for treatment. Electric power and telephone is provided via local service providers.

The approved O&M enclosure would contain basic firefighting equipment for use onsite during maintenance activities, including shovels, beaters, portable water for hand sprayers, fire extinguishers and other equipment.

*Security Fencing and Gates*

The facility includes a perimeter security fence, consisting of chain-link or notch-style fencing. The security fence is approved to be either be 6 feet tall with two strands of barbed wire, or 8 feet tall with no barbed wire. The security fence features gated access at several points.

The fenced perimeter includes a clearance area between the fence and facility equipment to ensure noncombustible, defensible space.

*Site Access and Service Roads*

The facility has three main points of access from SW Elk Drive for construction and operation as shown on the conceptual site plan (see ASC Exhibit C Figures C-2A and C-2B). Two points of access are 20-foot-wide gravel access road segments into the southern end of the facility site. One of these access points extends into the portion of the facility west of SW Elk Drive and the other extends into the southern end of the facility east of SW Elk Drive. The graveled entrance/exit point west of SW Elk Drive ends within the facility site after approximately 120 feet and the graveled entrance/exit point east of SW Elk Drive ends within the facility site after

[5] In ASC Exhibit B, the applicant represents that the POI switching station would likely be owned by Portland General Electric Company (PGE), nonetheless it is represented as a related or supporting facility to the energy facility and therefore the applicant bears responsibility of all applicable compliance requirements.

approximately 140 feet. At the end of the access road segments, internal circulation is via the 16- to 20-foot-wide clear spaces between the rows of solar modules. The main access road providing access to the construction staging and laydown area, O&M enclosure, facility substation, point of interconnection and northern end of the facility site is a 24-foot-wide graveled road extending east from SW Elk Drive (see ASC Exhibit C Figures C-2A and C-2B) for approximately 960 feet before ending at the facility substation.

*Temporary Construction Areas*

Temporary construction areas are located within the approved site boundary. The temporary construction areas are used for equipment staging, parking and construction trailer. The temporary parking area is graveled.

*Temporary Concrete Batch Plant*

The facility may include a temporary concrete batch plant, for aggregate storage and concrete preparation for foundations. Any rock would be obtained from existing, permitted quarries, and may be crushed at the quarry or onsite, as needed. The projected maximum annual cubic yards of concrete to be produced would range from 5,000 to 25,000 cubic yards per year. The applicant would obtain a Basic Air Contaminant Discharge Permit (ACDP), a federally-delegated permit, from the Oregon Department of Environmental Quality (DEQ), if a batch plant is needed at the site to support construction activities. The temporary concrete batch plant would be removed from the site prior to commercial facility operation.

*Battery Storage System*

The battery storage system is approved to use either Lithium-ion or flow battery technology, and includes the following elements:

- Battery Storage Equipment (including batteries, racks, direct current (DC)-DC converters, and DC switchboards),
- Balance of Plant Equipment (low-voltage electrical systems; fire suppression; heating, ventilation, and air conditioning systems; building auxiliary electrical systems; and network/SCADA systems),
- Cooling System (separate chiller or condenser unit located outside the battery racks with chillers, pumps and heat exchangers),
- Standard-sized shipping containers, approximately 8 feet wide by 40 feet long by 9.5 feet high on a concrete slab. Each container would hold the batteries, SCADA system, cooling system, if needed, and a fire suppression system.

Both the approved Lithium-ion and flow batteries are placed inside standard-sized shipping containers (8 feet wide, 40 feet long, 9.5 feet high), which would be located atop a concrete slab. Each container holds the batteries, a SCADA system, a cooling system (if needed), and a fire suppression system.

If the approved Lithium-ion batteries are selected, the fire suppression system includes internal Stat-X 1500E aerosol fire suppression units inside each battery storage container, connected to a photo/heat detector. The battery storage system is designed to comply with the most current adopted version of the National Fire Protection Association's (NFPA) 855 Standard for the Installation of Stationary Energy Storage Systems.

## 4.0 Facility Development

### 4.1 Construction

Facility construction is anticipated to take 9-months. Construction activities would employ an average of 100 people and a maximum of 200 people during peak summer months. The facility is approved to be constructed in phases. In accordance with ORS 469.300(6), preconstruction conditions, if specified, may be satisfied for the applicable phase, facility component or for the facility, as applicable, based on final design and configuration. The approved construction phasing may occur in phases including: clearing (between September 1 and March 1 to the greatest extent feasible to avoid impacts on wildlife), excavation, foundation, erection and finishing. During foundation work, the applicant may utilize a temporary concrete batch plant, with a maximum production of 5,000 to 25,000 cubic yards, and is limited as a temporary use at the site to no more than 6-months at within any 12-month period.

Separate contractors may be hired for road and solar array foundation construction, electrical substation construction, solar module installation, and array connection and commissioning. Subsequently, construction is approved to be phased based on activity, facility component and/or construction contractor schedule.

The facility may be constructed in phases. In accordance with ORS 469.300(6), preconstruction conditions, if specified, may be satisfied for the applicable phase, facility component or for the facility, as applicable, based on final design and configuration.

### 4.2 Operations and Maintenance

Facility operation includes remote monitoring and does not include any full-time operations and maintenance (O&M) staff. The facility O&M activities would include routine, monthly inspections of the battery storage systems, unless otherwise recommended by the manufacturer.

O&M activities include replacement of electrolyte solutions every 10 to 20 years, if flow batteries are selected. If lithium-ion batteries are selected, O&M activities include battery replacement every 5 to 10 years. Nonfunctional solar panels would be recycled through the Solar Energy Industries Association (SEIA) National PV Recycling Program, to the maximum extent feasible.

O&M activities may include washing of solar modules. It is conservatively assumed that solar modules would be washed twice a year, which would require approximately 1,650,000 gallons of water per year. A third-party contractor would obtain water for panel cleaning from an offsite source. Water would then be applied via a tanker truck and would not have any cleaning solvents in it, unless otherwise approved by the Department. Washwater would be discharged by evaporation and seepage into the ground.

### 4.3 Retirement

Facility retirement includes disassembling the solar modules and electrical equipment and wires, and related electrical equipment including large transformers and battery components. Disassembly would use conventional construction equipment with the objective of maximizing the recycling of materials and minimizing the amount of disposed waste.

Disassembling the solar modules would involve removing the solar panels from their trackers, removing the steel trackers from their posts, and extracting the steel posts. The solar modules would be directly loaded onto recycler trucks and hauled off site, while the steel trackers and posts would be stockpiled and staged onsite awaiting loading by a recycler. Concrete equipment foundations and underground cables would be removed to a minimum depth of 3 feet below grade, and then disposed of at the Jefferson County Transfer Station (JCTS). Both the perimeter fencing and gravel (placed on access road segments and in the substation and laydown areas) would be removed, but would also be kept onsite until the material could be loaded by a recycler. The approved facility site would then be restored through minimal grading and revegetation with plants or seed mix consistent with the Noxious Weed Plan (Attachment G of this order) or landowner interests.

## 5.0 Site Certificate Conditions

### 5.1 Condition Format

The conditions in Sections 5.2 through 5.7 of this Site Certificate are organized and coded to indicate the phase of implementation, the standard the condition is required to satisfy, and an identification number (1, 2, 3, etc.).[6] The table below presents a "key" for phase of implementation:

| Key | Type of Conditions/Phase of Implementation |
|---|---|
| GEN | General Conditions: Design, Construction and Operation |
| PRE | Pre-Construction Conditions |

[6] The identification number is not representative of an order that conditions must be implemented; it is intended only to represent a numerical value for identifying the condition.

| Key | Type of Conditions/Phase of Implementation |
|---|---|
| CON | Construction Conditions |
| PRO | Pre-Operational Conditions |
| OPR | Operational Conditions |
| RET | Retirement Conditions |

Some conditions are coded for more than one phase of implementation.

The standards are presented using an acronym; for example, the General Standard of Review is represented in the condition numbering as "GS"; the Soil Protection standard is represented in the condition numbering as "SP" and so forth.

For example, the coding of Condition GEN-GS-01 represents that the condition is a general condition (GEN) to be implemented during design, construction and operation of the facility, is required to satisfy the Council's General Standard of Review, and is condition number 1. The condition language also includes in brackets [ ] the name of the condition as imposed in the Final Order on the Application (i.e. General Standard of Review Condition 1).

## 5.2 General (GEN) Conditions: Design, Construction and Operations

| Condition Number | General (GEN) Conditions |
|---|---|
| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| | |
| GEN-GS-01 | **General Standard of Review Condition 1:** The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.<br>a. Construction of the facility or facility component(s) shall commence within three years after the date of Council action [June 25, 2024]. Within 7 days of construction commencement, the certificate holder shall provide the Department written verification that it has met the construction commencement deadline by satisfying applicable preconstruction conditions and completing at least $250,000 work at the site.<br>b. Construction of the facility shall be completed within 18-months after the construction commencement date. Within 7 days of construction completion, the certificate holder shall provide the Department written verification that it has met the construction completion deadline.<br>[Mandatory Condition OAR 345-025-0006(4)] |
| GEN-GS-02 | **General Standard of Review Condition 2:** The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility or any phase 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.<br>[Mandatory Condition OAR 345-025-0006(2)] |
| GEN-GS-03 | **General Standard of Review Condition 3:** The certificate holder shall design, construct, operate and retire the facility substantially as described in the site certificate:<br>a. Use or occupation of land by solar photovoltaic energy generation components, as described in the site certificate, not to exceed 277 permanent acres;<br>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;<br>c. In compliance with all applicable permit requirements of other state agencies; and,<br>d. In compliance with all applicable lawful rules and requirements of federal agencies.<br>[Mandatory Condition OAR 345-025-0006(3); OAR 345-026-0015(3)] |

| | |
|---|---|
| GEN-GS-04 | **General Standard of Review Condition 5:** If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility or any phase of 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.<br>[Mandatory Condition OAR 345-025-0006(6)] |
| GEN-GS-05 | **General Standard of Review Condition 7:** Before any transfer of ownership of the facility, any phase 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 345-027-0400 apply to any transfer of ownership that requires a transfer of the site certificate.<br>[Mandatory Condition OAR 345-025-0006(15)] |
| GEN-GS-06 | **General Standard Condition 8:** The certificate holder shall:<br>a. Design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code as approved by the American National Standards Institute; and<br>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.<br>c. Design the battery storage system in accordance with the requirements of the National Fire Protection Association's (NFPA) 855: Standard for the Installation of Stationary Energy Storage Systems (NFPA, 2020) or most current version.<br>[Site Specific Condition OAR 345-025-0010(4)] |
| GEN-GS-07 | **General Standard Condition 9:** The certificate holder is authorized to construct a 230 kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor extends approximately 200 feet in length between the facility substation and the Point of Interconnect, and 0.5-of-a-mile in width.<br>[Site Specific Condition OAR 345-025-0010(5)] |
| GEN-GS-08 | **General Standard Condition 11:** The certificate holder shall:<br>a. Within six months after beginning construction, and every six months thereafter during construction, submit a semiannual construction progress report to the Department. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall report on the progress of construction and shall address the subjects listed in (b). When the reporting date coincides, the certificate holder may include the construction progress report within the annual report described in this rule.<br>b. After January 1 but no later than April 30 of each year after beginning operation of the facility, the certificate holder shall submit an annual report to the Department addressing the following for the calendar year preceding |

| | |
|---|---|
| | the date of the report:<br>i. Facility Status: An overview of site conditions, the status of facilities under construction and a summary of the operating experience of facilities that are in operation. The certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.<br>ii. Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors and shall describe any actions taken to prevent the recurrence of such problems.<br>iii. Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period.<br>iv. Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes.<br>v. Compliance Report: A report describing the certificate holder's compliance with all site certificate conditions that are applicable during the reporting period. For ease of review, the certificate holder shall, in this section of the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate.<br>vi. Facility Modification Report: A summary of changes to the facility that the certificate holder has made during the reporting period without an amendment of the site certificate in accordance with OAR 345-027-0350.<br>[OAR 345-026-0080] |
| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| GEN-OE-01 | **Organizational Expertise Condition 1:** The certificate holder shall report to the Department, within 7 days, any material change in the control, financial condition, governance, or management of the certificate holder's parent company, including any change that may affect the certificate holder's access to resources, expertise, or personnel relied upon for the construction, operation and retirement of the facility. The certificate holder shall provide sufficient information for the Department to evaluate whether the material changes could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a |

| | |
|---|---|
| | resource or interest protected by an applicable law or Council standard (specifically Organizational Expertise and Retirement and Financial Assurance Standards). |
| GEN-OE-02 | **Organizational Expertise Condition 3:** Before beginning construction of the facility or a facility component, as applicable, the certificate holder shall provide to the Department documentation that work contracts include provisions requiring that all construction contractors and subcontractors comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate. |
| GEN-OE-03 | **Organizational Expertise Condition 4:** The certificate holder shall notify the Department with 72 hours of any occurrence involving the facility if:<br>a. There is an attempt by anyone to interfere with its safe operation.<br>b. There is a significant natural event such as a fire, earthquake, flood, tsunami or tornado, or human-caused event such as a fire or explosion.<br>c. There is any fatal injury at the facility.<br>[OAR 345-026-0170] |
| GEN-OE-04 | **Organizational Expertise Condition 5:** The certificate holder shall, as soon as reasonably possible:<br>a. Report incidents or circumstances that may violate the terms or conditions of the site certificate, terms or conditions of any order of the Council, or the terms or conditions of any order issued under OAR 345-027-0230, to the Department . In the report to the Department, the certificate holder shall provide all pertinent facts including an estimate of how long the conditions or circumstances existed, how long they are expected to continue before they can be corrected, and whether the conditions or circumstances were discovered as a result of a regularly scheduled compliance audit;<br>b. Initiate and complete appropriate action to correct the conditions or circumstances and to minimize the possibility of recurrence;<br>c. Submit a written report within 30 days of discovery to the Department. The report must contain:<br>i. A discussion of the cause of the reported conditions or circumstances;<br>ii. The date of discovery of the conditions or circumstances by the responsible party;<br>iii. A description of immediate actions taken to correct the reported conditions or circumstances;<br>iv. A description of actions taken or planned to minimize the possibility of recurrence; and<br>v. For conditions or circumstances that may violate the terms or conditions of a site certificate, an assessment of the impact on the resources considered under the standards of OAR Chapter 345 Divisions 22 and 24 as a result of the reported conditions or circumstances.<br>[OAR 345-029-0010] |
| GEN-OE-05 | **Organizational Expertise Condition 6:** The certificate holder shall:<br>a. Before beginning construction of the facility or a facility component, notify |

| | |
|---|---|
| | the Department of the identity, telephone number, e-mail address and qualifications of the full-time, on-site construction manager. Qualifications shall demonstrate that the construction manager has experience in managing permit and regulatory compliance requirements and is qualified to manage a utility-scale solar facility construction project.<br>b. Before beginning operation, notify the Department of the identity, telephone number, e-mail address and qualifications of the facility/asset manager. Qualifications shall demonstrate that the operations manager has experience in managing permit and regulatory compliance requirements and is qualified to manage operation of a utility-scale solar facility.<br>c. Before beginning facility retirement, notify the Department of the identity, telephone number, e-mail address and qualifications of the personnel or entity responsible for facility decommissioning and restoration activities. Qualifications shall demonstrate that the identified personnel have experience in managing permit and regulatory compliance requirements and are qualified to decommission a utility-scale solar facility.<br>d. The certificate holder shall notify the Department within 72-hours upon any change in personnel or contact information provided to satisfy Condition 6(a) through (c). |
| GEN-OE-06 | **Organizational Expertise Condition 7:** The certificate holder shall contractually require its third-party contractor used to transport and dispose battery and battery waste to comply with all applicable federal regulations and manufacturer recommendations related to the transport and handling of battery related waste. |
| GEN-OE-07 | **Organizational Expertise Condition 8:**<br>a. The certificate holder shall provide to the Department a list of federal, state and local permits, including any third-party permits related to facility siting; and a schedule for obtaining identified permits.<br>b. Once obtained, certificate holder shall provide copies of all permits, including third-party permits, required for facility siting to the Department. |
| ***STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]*** | |
| GEN-SS-01 | **Structural Standard Condition 2:** The certificate holder shall design, engineer and construct facility components based on Site Class (soils-related category) determined through the site-specific geotechnical investigation (Structural Standard Condition 1), as reviewed and approved by the Department in consultation with DOGAMI. |
| GEN-SS-02 | **Structural Standard Condition 3:** 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. [Mandatory Condition OAR 345-025-0006(12)] |
| GEN-SS-03 | **Structural Standard Condition 4:** The certificate holder shall notify the Department, |

| | |
|---|---|
| | the State Building Codes Division and the DOGAMI promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the DOGAMI and the Building Codes Division to propose and implement corrective or mitigation actions.<br>[Mandatory Condition OAR 345-025-0006(13)] |
| GEN-SS-04 | **Structural Standard Condition 5:** The certificate holder shall notify the Department, the State Building Codes Division and the DOGAMI 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 DOGAMI and the Building Codes Division to propose and implement corrective or mitigation actions.<br>[Mandatory Condition OAR 345-025-0006(14)] |
| GEN-SS-05 | **Structural Standard Condition 6:** The certificate holder shall:<br>a. Before beginning construction:<br>i. Demonstrate that facility components have been setback a minimum of 30-feet from basalt rim rock areas (Hurbers Canyon) to lesson landslide hazards at the site, unless otherwise informed by the Site-Specific Geotechnical Investigation Report, as reviewed by DOGAMI.<br>ii. Create detailed geologic hazards maps to aid in facility layout. The geologic hazard maps shall be informed by the Site-Specific Geotechnical Investigation Report, as reviewed by the Department and DOGAMI, in accordance with Structural Standard Condition 1. A copy of the map shall be provided to the Department and DOGAMI.<br>b. During facility operation:<br>i. Register for the United States Geologic Service Volcano Hazards Program Notification Service.<br>ii. Develop emergency response and shut down procedures for seismic or nonseismic hazards or events and submit to the Department. |
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| GEN-SP-01 | **Soil Protection Condition 1:**<br>a. Prior to construction, the certificate holder shall provide a copy to the Department of its DEQ-issued NPDES 1200-C permit, including final Erosion Sediment Control Plan and associated drawings (as provided in Attachment E of the Final Order on the ASC).<br>b. During construction, the certificate holder shall:<br>i. Conduct all work in compliance with a final Erosion and Sediment Control Plan as required under the NPDES 1200-C.<br>ii. The certificate holder must provide copies of completed Erosion and Sediment Control Inspection Forms (forms) and identify any corrective actions upon request by the Department during construction inspections. |

| | |
|---|---|
| | c. Following completion of construction, the certificate holder shall provide to the Department DEQ verification that the NPDES 1200-C permit has been terminated, demonstrating that site stabilization has been achieved. |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| GEN-LU-01 | **Land Use Condition 2**: The certificate holder shall:<br>a. Prior to construction, provide to the Department and Jefferson County a facility construction schedule and facility layout map, with Jefferson County's Sensitive Bird Habitat (BH) Overlay Zone for County Site 26. The schedule and map shall identify whether any facility structures, which require a building permit, are located within Jefferson County's Sensitive Bird Habitat (BH) Overlay Zone for County Site 26. If there are such structures to be located within the BH zone, activities associated with the structures must be scheduled to occur outside of the protected periods listed below:<br><br>Species — Protected Period — Early Release<br>Bald Eagle — Jan 15 - Aug. 31 — May 15<br>Golden Eagle — Feb. 1 - Aug. 31 — May 15<br>Prairie Falcon — March 1 - Aug. 30 — June 1<br><br>b. During construction of structures identified per sub(a) within the BH Zone, the certificate holder may commence activities by the early release date if, based on the certificate holder's construction monitoring logs of County Site 26 conducted during the protected period, the nest sites are deemed by the Department, in consultation with ODFW, unoccupied or have been fledged. County Site 26 monitoring conducted in order to commence work within the BH Zone shall be based on a protocol approved by the Department, in consultation with ODFW. |
| GEN-LU-02 | **Land Use Condition 3:** The certificate holder shall design the facility in a manner that meets the following requirements:<br>a. Any outdoor lights shall be shielded to illuminate downward.<br>b. The outdoor light source (bulb or element) shall not be visible at or beyond the property line. |
| GEN-LU-03 | **Land Use Condition 4:** The certificate holder shall design, and construct signage necessary for the facility or facility components in accordance with the requirements of JCZO Section 406.1(C) through (H) and 406.3. |
| GEN-LU-04 | **Land Use Condition 5:** In order to obtain building permits from Jefferson County (Land Use Condition 1), the certificate holder shall demonstrate to the Department and Jefferson County Planning Department that the final facility design adheres to the following requirements for any onsite buildings which have a floor, roof and at least three walls:<br>a. All buildings shall have Underwriter's Laboratory rated Class A or B roofing or equivalent, or tile or metal roofing.<br>b. Facility access roads shall have a surface width of at least 20 feet, with minimum carrying capacity of 75,000 pounds. If not designed by an engineer, access roads shall be constructed of a minimum of 5 compacted inches of |

crushed rock meeting ODOT material standards. The access roads shall be compacted until a loaded 10 cubic yard dump truck ceases to deflect the road.

c. Facility access roads shall have a finished grade no greater than 10 percent unless approved by the fire chief. Grade shall not exceed 4 percent in turnarounds.
   Any portion of the access with a grade greater than 8 percent shall be surfaced with 1.5 inch class C asphalt mix, 0-11 oil mat, or four inch fiber mesh reinforced Portland cement concrete.
d. Curves shall have a minimum centerline radius of 55 feet, including the intersection of a driveway with a public road.
e. Gates shall be a minimum of 20 feet wide, and shall be of a swinging or sliding type constructed of materials that allow manual operation by one person. Electric gates shall be equipped with a Knox box purchased from the fire district.
f. An address sign shall be posted at the point where a driveway leaves a road, in such a manner as to be visible to vehicles approaching from both directions. A directional address sign must also be posted at the junction where an individual driveway leaves a shared driveway. Address signs shall contain white, reflective numbers at least 3 inches in height on a green background.
g. A primary fuel break shall be developed and maintained around all buildings. The fuel break shall be at least 30 feet wide, or to the property 226 line, whichever is the shortest distance. The fuel break shall be measured from the furthest extension of the structure, including attached carports, the outside edge of a deck, and the edge of roof eaves. The goal within the primary fuel break is to remove fuels that will produce flame lengths in excess of one foot. Brush, downed limbs and other dead plant material must be removed. The primary fuel break should contain primarily nonflammable ground cover such as asphalt, concrete, rock, brick, bare soil, green grass, or succulent ground cover. Combustible ground cover or plant materials, such as bark mulch or accumulated leaves and needles, are prohibited within twelve inches of buildings. Herbaceous plants such as groundcovers, bedding plants, bulbs and perennial flowers are permitted provided they are kept green during the fire season. Dry grass is allowed if kept less than four inches in height. Isolated groupings of deciduous ornamental shrubbery and trees, native trees or other low plants (less than 24 inches) are allowed when maintained in a green condition free of dead plant material and ladder fuels, and provided they are arranged and maintained in such a way that minimizes the possibility a fire can spread to adjacent vegetation. Healthy trees are permitted, provided they are pruned to remove branches that are dead or that are less than 10 vertical feet above the ground. A 15-foot clearance between tree limbs and stovepipes or chimney outlets must be maintained. No branches may

| | |
|---|---|
| | overhang within 25 vertical feet of a roof. Areas under decks shall be kept free of firewood, stored flammable materials, leaves and needles.<br>h. A fuel break shall be developed and maintained immediately adjacent to any driveway that is more than 150 feet in length. The fuel break shall extend at least ten feet from each side of the centerline of the driveway, or to the property line, whichever is the shortest distance. A minimum clear height of at least 14½ feet shall be maintained for the entire width of the driveway and fuel break. The driveway fuel break shall meet the same requirements as outlined in subsection (1) for ground cover and limbing of trees. |
| GEN-LU-05 | **Land Use Condition 6**: Before beginning construction of the facility or a facility component, the certificate holder shall provide documentation that underlying property owners have signed and recorded in the deed records for the county:<br>a. a "Waiver of Right to Remonstrate Against Accepted Farm Use Practices and the Maintenance or Construction of County Roads."<br>b. Agreement by 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). |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| GEN-RF-01 | **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.<br>[Mandatory Condition OAR 345-025-0006(7)] |
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| GEN-FW-01 | **Fish and Wildlife Habitat Condition 1:** The certificate holder shall:<br>a. Before beginning construction, finalize and submit a Revegetation Plan, based upon the draft plan provided in Attachment F of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW. The scope of finalizing the plan shall, at a minimum, include the following:<br>1. Final assessment of temporary habitat impacts (in acres), based on habitat quality of habitat subtype, and final facility design, presented in tabular format.<br>2. Survey and sampling protocol for evaluating the success criteria of all previously-disturbed wildlife habitat areas based on pre-disturbance habitat quality and diversity of habitat temporarily impacted.<br>3. Description of topsoil salvage, scarification and restoration methods if intended to be implemented.<br>4. Approval of appropriate seed mix composition from the ODFW.<br>5. During construction and operation of the facility or facility component, implement the requirements of the plan; monitor and report results of revegetation activities to the Department, as required by the plan. |

<table>
<tr><td>GEN-FW-02</td><td>Fish and Wildlife Habitat Condition 2: The certificate holder shall:<br>a. Before beginning construction, finalize and submit a Noxious Weed Control Plan, based upon the draft plan provided in Attachment G of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW and Jefferson County Weed Control Authority. The finalized plan shall, at a minimum, include the results of preconstruction weed survey and updated County weed lists.<br>b. During construction and operation, implement the requirements of the plan.</td></tr>
<tr><td>GEN-FW-03</td><td>Fish and Wildlife Habitat Condition 3: The certificate holder shall:<br>a. Before beginning construction, finalize and submit a Habitat Mitigation Plan, based upon the draft plan provided in Attachment H of the Final Order on the ASC, for review and approval by the Department, in consultation with ODFW. In the finalization of the plan, the Department may request specific reporting requirements including specific information, frequency and format. Components of the plan to be finalized shall include, at a minimum, a final assessment of permanent habitat impacts (in acres) based on habitat quality of habitat subtype, and final facility design, presented in tabular format.<br>b. Before beginning construction, select qualified specialists that have substantial experience in creating, enhancing, and protecting habitat mitigation areas within Oregon; and provide the identity and qualifications of the personnel or contractors selected to implement and manage the habitat mitigation areas to the Department.<br>c. During Construction and operation of the facility, implement the requirements of the plan as approved under sub(a) of this condition.</td></tr>
<tr><td>GEN-FW-04</td><td>Fish and Wildlife Habitat Condition 4: The certificate holder shall:<br>a. Prior to construction of the facility or facility component, hire a qualified Biologist to conduct a raptor nest survey within 0.25 miles from proposed disturbance areas. The certificate holder shall submit to the Department, in consultation with ODFW, for review and concurrence, survey protocol identifying the survey area and methods to be used to identify raptor nests. Raptor nest surveys shall be conducted no more than two weeks prior to the start of construction activities. If the biologist detects active raptor nests, the certificate holder shall implement and maintain spatial buffers around the nests and seasonal restrictions, as presented in the table below.<br><br>ODFW Raptor Nest Buffers and Seasonal Restrictions
<table>
<tr><th>Species</th><th>Spatial Buffer</th><th>Seasonal Restriction</th><th>Release Date if Unoccupied</th></tr>
<tr><td>Golden eagle</td><td>0.25 mile</td><td>Feb 1- Aug 15</td><td>May 15</td></tr>
<tr><td>Bald Eagle</td><td>0.25 mile</td><td>Feb 1- Aug 15</td><td>May 15</td></tr>
<tr><td>Peregrine falcon</td><td>0.25 mile</td><td>Jan 1 – Jul 1</td><td>May 15</td></tr>
<tr><td>Ferruginous hawk</td><td>0.25 mile</td><td>Mar 15 – Aug 15</td><td>May 31</td></tr>
</table></td></tr>
</table>

| | |
|---|---|
| | <table><tr><td>Swainson's hawk</td><td>0.25 mile</td><td>Apr 1 – Aug 15</td><td>May 31</td></tr></table><br>If a nest becomes active during construction that was not identified as active during the preconstruction surveys, the certificate holder may request review by the Department, in consultation with ODFW, of an exception to the spatial buffer and seasonal restrictions.<br>b. During construction of the facility or facility component:<br>i. Maintain approved buffers around active raptor nests<br>Avoid any blasting and pile-driving noise to the extent feasible during the nesting season for golden eagles (January 1 to August 1) within 0.25 mile of any occupied nest. |
| GEN-FW-05 | **Fish and Wildlife Habitat Condition 6:** The certificate holder shall:<br>a. Before beginning construction of the facility or facility component, visibly establish marked construction boundaries where construction activities may take place. The boundaries should constrain construction personnel, activity, and traffic only to areas approved by the certificate holder or construction contractor as an area deemed necessary for construction.<br>b. Before beginning and during construction, facility personnel and on-site contractors shall not remove existing vegetation beyond approved construction boundaries.<br>c. Before beginning and during construction, operation, and retirement of the facility, ensure that facility personnel and on-site contractors use existing roads to the maximum extent possible, and restrict off-road travel to only be allowed in case of emergencies.<br>d. Before beginning and during construction, operation, and retirement of the facility, impose and enforce a speed limit of 20 miles per hour while driving within the facility site boundary. |
| ***STANDARD: HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]*** | |
| GEN-HC-01 | **Historic, Cultural and Archeological Condition 1:** During construction, operations, and retirement of the facility, the certificate holder shall implement and adhere to the requirements of the Inadvertent Discovery Plan (and Attachment Tribal Position Paper on the Treatment of Human Remains), substantially similar to the plan provided in Attachment I of the Final Order on ASC. |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| GEN-PS-01 | **Public Services Condition 1:** The certificate holder shall:<br>a. Before beginning construction of the facility, or facility component, develop a Construction Traffic Management Plan. A copy of the Construction Traffic Management Plan shall be provided to the Department and Jefferson County Public Works Department. The Construction Traffic Management Plan shall, at a minimum, include the following:<br>i. Construction details including construction contractor contact information, site plan showing surrounding streets and haul routes, employee parking areas, and delivery and receiving areas. |

| | |
|---|---|
| | ii. A road conditions survey detailing the condition of NW Elk Drive, for the portion of roadway that is located within the site boundary.<br>iii. Schedule of construction activities, including total duration and work hours.<br>iv. Mobility impacts from maximum and average expected number of truck and worker trips to and from the site per hour and per day.<br>v. Mitigation measures including, but not limited to:<br>• Installation and maintenance of 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, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.<br>• Installation of advance signage, where possible, in accordance with the 2016 or recent version of the ODOT Traffic Control Plans Design Manual.<br>• Use of pilot cars for slow or oversize loads per Oregon Administrative Rule 734-082-0035.<br>• Encourage and promote carpooling of the construction workforce, and potentially provide high-occupancy vans or buses to transport workers to the site.<br>• Use flag personnel to minimize the potential for accidents during large deliveries, in accordance with the 2019, or recent version of the ODOT Traffic Control Plans Design Manual.<br>• Restrict or limit large trucks through the US 97/SW 5th Street corridor during the morning or evening peak of commuter traffic (generally 7-9am and 3-6 pm).<br>• At all times during construction, maintain at least one travel lane at entrance and exit points onto public roads.<br>• Require third-party contractors to consult with ODOT before construction to identify roadway segments or bridges that should be restricted for construction traffic, if any, and to obtain any heavy haul permits required to allow transport of oversized loads.<br>b. During construction of the facility, or facility component, the certificate holder shall ensure that construction contractors adhere to the requirements of the Construction Traffic Management Plan.<br>c. Within 1 year of construction completion of the facility, the certificate holder shall demonstrate to the Jefferson County Public Works Department that the portion of NW Elk drive evaluated in the preconstruction road conditions survey has been restored to its preconstruction condition. |
| GEN-PS-02 | **Public Services Condition 2**: The certificate holder shall:<br>a. First, submit to and receive responses from Oregon Department of Aviation (Aviation) of 7460-1 Notice of Proposed Construction or Alteration Forms for all aboveground facility components. The certificate holder shall provide |

| | |
|---|---|
| | copies of Aviation responses, which must be consistent with ORS 836.535(2), to the Department, and shall respond to Aviation marking and lighting recommendations, if applicable.<br>b. Second, once Aviation responses on the 7460-1 forms are received, submit to and receive determinations from the Federal Aviation Administration (FAA) for all aboveground facility components. The certificate holder shall provide copies of FAA determinations to the Department.<br>c. Within 5-days of construction, certificate holder shall submit 7460-2 forms to FAA and Aviation and shall report both timing of submission and any results to the Department. |
| GEN-PS-03 | **Public Services Condition 4**: The certificate holder shall:<br>a. Before beginning facility construction, submit to the Department for review, an Emergency Contingency Plan developed in coordination with Jefferson County Fire District #1. The Emergency Contingency Plan shall include but be not limited to:<br>i. Emergency response procedures and communication channels for the project as well as information regarding the various components of the facility based on final design and battery technology selected (if any);<br>ii. Procedures for on-site training for the certificate holder, construction contractor staff and staff and volunteers from the Jefferson County Fire District #1;<br>iii. Identification of the type and location for fire protection equipment, location(s) of water source(s), and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code.<br>b. During facility construction and operation:<br>i. Implement and adhere to the requirements of the Emergency Contingency Plan;<br>ii. Participate annually in any Jefferson County Fire District #1 meetings held by the Fire District related to the facility; and<br>iii. Verify and update applicable emergency contacts and emergency response procedures within the Plan. |
| ***STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]*** | |
| GEN-WM-01 | **Waste Minimization Condition 1:** During construction, operation and decommissioning, the certificate holder shall submit to the Department, for review and approval, a Waste Management Plan that includes a materials and waste inventory (type and estimated quantity) consistent with the inventory included in ASC Exhibit G; and the Hazardous Materials Business Plan and Spill Control and Countermeasure Plan, as applicable to the battery storage system and required per Soil Protection Condition 2. The Department shall recommend additional waste minimization measures for any waste types generated onsite, as necessary. The Waste Management Plan shall identify all waste minimization measures to be implemented per material type, including but not limited to:<br>a. Recycling steel and other metal scrap |

| | |
|---|---|
| | b. Recycling wood waste<br>c. Recycling packaging wastes such as paper and cardboard<br>d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler<br>e. Segregating all hazardous wastes such as oil, oily rags and oil-absorbent materials, mercury containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous waste.<br>f. Recycling solar panels that are nonfunctional or retired through the Solar Energy Industries Association National PV Recycling Program (or similar program).<br>g. Recycling battery components at an offsite facility approved for disposal or recycling of batteries, to the maximum extent possible |

### 5.3 Pre-Construction (PRE) Conditions

| Condition Number | Pre-Construction (PRE) Conditions |
|---|---|
| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| PRE-GS-01 | **General Standard of Review Condition 4:** General Standard Condition 4: 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 OAR 345-025-0006(5)] |
| PRE-GS-02 | **General Standard Condition 10:** At least 90 days prior to beginning construction, (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department a compliance plan 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. |

| | |
|---|---|
| | [OAR 345-026-0048] |
| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| PRE-OE-01 | **Organizational Expertise Condition 2:** Before beginning construction of the facility or a facility component, as applicable, the certificate holder shall provide to the Department the identity and qualifications of the major design, engineering and construction contractor(s). The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities and a demonstrated low rate of job incidence and injury rates. The certificate holder shall report to the Department any changes of major contractors. |
| ***STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]*** | |
| PRE-SS-01 | **Structural Standard Condition 1:** Before beginning construction, the certificate holder shall submit a protocol for the site-specific geotechnical investigation to the Department, for review in consultation with DOGAMI. At least 60-days prior to the commencement of construction, unless otherwise approved by the Department, the certificate holder shall utilize a certified Professional Engineer or Geologist to conduct a site-specific geotechnical investigation consistent with ASC Exhibit H Section H.4.1 and prepare a report consistent with the Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports, or newer guidelines if available to be submitted to the Department, for review in consultation with DOGAMI. The site-specific geotechnical investigation shall include a site-specific probabilistic seismic hazards assessment to inform Site Class design (see Structural Standard Condition 2). |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| PRE-LU-01 | **Land Use Condition 1:** Before beginning construction of the facility or facility component, as applicable, the certificate holder shall submit a Site Plan to the Department and Jefferson County for review; and shall obtain a site address and all other necessary local development permits (e.g. Driveway Connection Permit, to be followed by building permits, grading permit, and any others as applicable) from the Jefferson County Community Development Department. |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| PRE-RF-01 | **Retirement and Financial Assurance Condition 4:** Before beginning construction of the facility or a facility component, 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 total bond or letter of credit amount for the facility is $4.9 million dollars (Q4 2019 dollars), to be adjusted to the effective date, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:<br>a. The certificate holder may adjust the amount of the bond or letter of credit based on the design configuration of the facility, or any phase of the facility, by applying the unit costs presented in Table 3 of the Final Order on the ASC, and the contingencies illustrated in Table 3 of the Final Order on the ASC, and may further make adjustments based on unit costs for task and actions |

| | |
|---|---|
| | presented in ASC Exhibit W Attachment W-1 and W-2. Any revision to the restoration costs should be adjusted to the effective date as described in (b). Any modification to the unit costs presented in Table 3 of the Final Order on the ASC are subject to review and approval by the Council.<br>b. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:<br>i. Adjust the amount of the bond or letter of credit (expressed in Q4 2019 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 2019 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 2019 dollars to present value.<br>ii. Round the result total to the nearest $1,000 to determine the financial assurance amount.<br>c. The certificate holder shall use an issuer of the bond or letter of credit and a bond or letter of credit form approved by the Council, based on the Council's pre-approved financial institution list and form.<br>[Mandatory Condition OAR 345-025-0006(8)] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| PRE-PS-01 | **Public Services Condition 3**: Before beginning construction, the certificate holder shall:<br>a. Apply for and receive a final order from the County Board of Commissioners for annexation of the facility site into the service territory of the Jefferson County Fire District #1.<br>b. Provide a copy of the annexation final order to the Department. |
| ***STANDARD: NOISE CONTROL REGULATIONS (NC) [OAR 340-035-0035]*** | |
| PRE-NC-01 | **Noise Control Condition 1:** Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall:<br>a. Submit to the Department a noise summary report presenting the sound power levels (in dBA) of noise generating equipment including solar array inverters and transformers, substation transformers, battery system inverters and cooling systems, as applicable to final design. The sound power levels shall be supported by equipment manufacturer specifications and noise data. The certificate holder shall provide, in tabular format, a comparison of the sound power levels used in ASC Exhibit X for noise generating equipment and sound power levels validated by manufacturer specifications.<br>b. If the sound power levels used in ASC Exhibit X to evaluate compliance with DEQ's noise rules are lower than sound power levels of final equipment selected, the certificate holder shall provide an updated noise analysis to demonstrate compliance with the ambient degradation standard and |

| | |
|---|---|
| | maximum allowable threshold. The ambient noise level utilized in ASC Exhibit X may be used for the updated noise analysis, if required. |

### 5.4 Construction (CON) Conditions

| Condition Number | General (CON) Conditions |
|---|---|
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| CON-FW-01 | **Fish and Wildlife Habitat Condition 5:** The certificate holder shall hire a qualified biologist to develop and implement an environmental training course for all construction facility personnel and on-site contractors. The training course shall include, but not be limited to discussion on reporting of injured or dead wildlife on the site, adherence to site speed limits, and trash control. |
| CON-FW-02 | **Fish and Wildlife Habitat Condition 7:** Before beginning construction of the facility or facility component, where vegetation clearing activities are to occur, the certificate holder shall conduct vegetation clearing activities between September 1 and March 1 to the greatest extent possible. Any vegetation clearing outside of this period will be conducted only following a nest clearance survey and will be performed no more than 7 days prior to the clearing of the area in order to ensure that no birds are nesting in the area in question. If birds are discovered, no clearing will occur until the birds have left the nest for the season. |

### 5.5 Pre-Operational (PRO) Conditions

| Condition Number | Pre-Operational (PRO) Conditions |
|---|---|
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| PRO-SP-01 | **Soil Protection Condition 2:** If the final facility design includes battery storage, the certificate holder shall:<br>a. Before beginning operation, prepare and submit to the Department a Spill Prevention Control and Countermeasure Plan (SPCC), developed in compliance with 40 CFR 112, based on the template provided in Attachment D of the Final Order on the ASC, and a Hazardous Materials Business Plan.<br>b. During operations, adhere to the requirements of the SPCC and Hazardous Materials Business Plan, as finalized under sub(a) of this condition. |

### 5.6 Operational (OPR) Conditions

| Condition Number | Operational (OPR) Conditions |
|---|---|
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| OPR-SP-01 | **Soil Protection Condition 3:** During facility operation, the certificate holder may discharge solar panel wash water through evaporation or infiltration into the ground at the point of application. The use of chemicals, soaps, detergents and heated water is prohibited, unless Chemical Safety Data Sheets for low volatile organic compound/biodegradable cleaning chemicals and solvents are submitted to the Department for review and approval. Pressure washing is allowed, so long as it does not remove paint or other finishes. |
| ***STANDARD: NOISE CONTROL REGULATIONS (NC) [OAR 340-035-0035]*** | |
| OPR1-NC-01 | **Noise Control Condition 2:** Prior to and during facility operation, the certificate holder shall establish a noise complaint response program including facility contact name, phone number and email; procedure for filing complaints, facility response, and reporting to the Department; and details on how the information on filing noise complaints will be provided to members of the public. The certificate holder shall provide to the Department, for review, a copy of its procedure or plan for the noise complaint response program. |

### 5.7 Retirement (RET) Conditions

| Condition Number | General (RET) Conditions |
|---|---|
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| RET-RT-01 | **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)] |
| RET-RT-02 | **Retirement and Financial Assurance Condition 3:** If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed final retirement plan for the Council's approval. Upon the Council's approval of the final retirement |

| | |
|---|---|
| | plan, the Council may draw on the bond or letter of credit described in OAR 345-025-0006(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 shall pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.<br>[Mandatory Condition OAR 345-025-0006(16)] |

## 6.0 Successors and Assigns

To transfer this site certificate or any portion thereof or to assign or dispose of it in any other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0400.

## 7.0 Severability and Construction

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

## 8.0 Execution

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

**IN WITNESS THEREOF**, this site certificate has been executed by the State of Oregon, acting by and through the Energy Facility Siting Council and Madras PV1, LLC (certificate holder).

**ENERGY FACILITY SITING COUNCIL**

By: Marcia Grail Digitally signed by Marcia Grail Date: 2021.07.06 20:58:11 -07'00'

Marcia L. Grail, Chair

Date: 06-Jul-2021

**Madras PV1, LLC**

By: member: 2077A844-E5AF-4271-9BEF-BD883C112CD6 A1962525-4534-4B13-ACC3-3554202032F8 Digitally signed by member: 2077A844-E5AF-4271-9BEF-BD883C112CD6 A1962525-4534-4B13-ACC3-3554202032F8 Date: 2021.07.29 14:41:38 -04'00'

Authorized Representative

Date: 16-Jul-2021

By: Ernest Scott Piscitello Digitally signed by Ernest Scott Piscitello Date: 2021.07.28 20:23:24 -07'00'

Date: 16-Jul-2021

**Attachment** A

Facility Location Mapsets (ASC Exhibit C)




VICINITY MAP




## LEGEND

- Madras Solar Energy Facility Site Boundary
- Existing Pelton Dam to Round Butte 230-kV Transmission Line
- Existing Road
- Solar Modules, Power Conversion Stations, and Battery Storage (permanent disturbance)
- Point of Interconnect (permanent disturbance)
- Existing Transmission Line (temporary disturbance)
- O&M Enclosure (permanent disturbance)
- Substation (permanent disturbance)
- Staging and Laydown Area (permanent disturbance)
- Access Road (permanent disturbance)
- Access Road (temporary disturbance)
- Perimeter Fence (permanent disturbance)
- Perimeter Fence (temporary disturbance)

Coordinate System: NAD 1983 UTM Zone 10N

0 250 500 1,000 1,500
Feet

1 inch equals 500 feet

**Figure C-1**
Facility Layout
Application for Site Certificate
Madras Solar Energy Facility
*Jefferson County, OR*

JACOBS

## GENERAL PROJECT INFORMATION

| | |
|---|---|
| PROJECT NAME: | MADRAS PV1 |
| PROJECT ADDRESS: | LAT.: 44.65°, LON.:-121.25° |
| DEVELOPER NAME: | ECOPLEXUS |
| DEVELOPER ADDRESS: | 101 2ND ST., STE. 1250, SAN FRANCISCO, CA 94105 |

## GENERAL SYSTEM INFORMATION

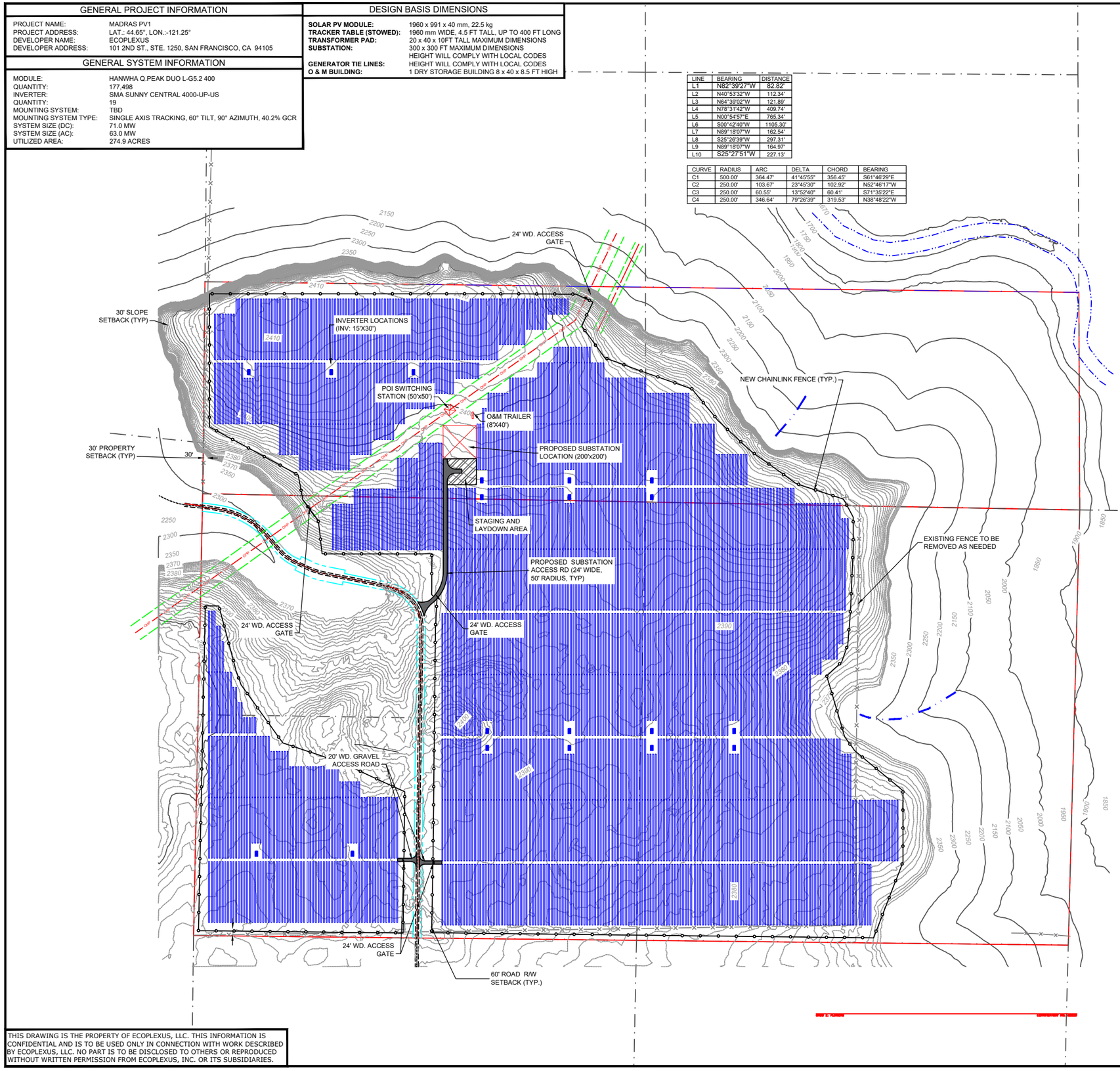
| | |
|---|---|
| MODULE: | HANWHA Q.PEAK DUO L-G5.2 400 |
| QUANTITY: | 177,498 |
| INVERTER: | SMA SUNNY CENTRAL 4000-UP-US |
| QUANTITY: | 19 |
| MOUNTING SYSTEM: | TBD |
| MOUNTING SYSTEM TYPE: | SINGLE AXIS TRACKING, 60° TILT, 90° AZIMUTH, 40.2% GCR |
| SYSTEM SIZE (DC): | 71.0 MW |
| SYSTEM SIZE (AC): | 63.0 MW |
| UTILIZED AREA: | 274.9 ACRES |

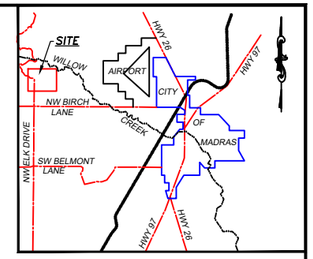
## DESIGN BASIS DIMENSIONS

| | |
|---|---|
| **SOLAR PV MODULE:** | 1960 x 991 x 40 mm, 22.5 kg |
| **TRACKER TABLE (STOWED):** | 1960 mm WIDE, 4.5 FT TALL, UP TO 400 FT LONG |
| **TRANSFORMER PAD:** | 20 x 40 x 10FT TALL MAXIMUM DIMENSIONS |
| **SUBSTATION:** | 300 x 300 FT MAXIMUM DIMENSIONS<br>HEIGHT WILL COMPLY WITH LOCAL CODES |
| **GENERATOR TIE LINES:** | HEIGHT WILL COMPLY WITH LOCAL CODES |
| **O & M BUILDING:** | 1 DRY STORAGE BUILDING 8 x 40 x 8.5 FT HIGH |

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N82°39'27"W | 82.82' |
| L2 | N40°53'32"W | 112.34' |
| L3 | N64°39'02"W | 121.89' |
| L4 | N78°31'42"W | 409.74' |
| L5 | N00°54'57"E | 765.34' |
| L6 | S00°42'40"W | 1105.30' |
| L7 | N89°18'07"W | 162.54' |
| L8 | S25°26'39"W | 297.31' |
| L9 | N89°18'07"W | 164.97' |
| L10 | S25°27'51"W | 227.13' |

| CURVE | RADIUS | ARC | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 500.00' | 364.47' | 41°45'55" | 356.45' | S61°46'29"E |
| C2 | 250.00' | 103.67' | 23°45'30" | 102.92' | N52°46'17"W |
| C3 | 250.00' | 60.55' | 13°52'40" | 60.41' | S71°35'22"E |
| C4 | 250.00' | 346.64' | 79°26'39" | 319.53' | N38°48'22"W |




## VICINITY MAP

NOT TO SCALE

## LEGEND & SYMBOLS

- SECTION OR SECTION SUBDIVISION LINE
- PARCEL BOUNDARY
- ROADWAY CENTERLINE
- RIGHT OF WAY BOUNDARY
- EASEMENT BOUNDARY
- EXISTING FENCE LINE
- OVERHEAD POWER LINE
- EDGE OF ASPHALT ROAD
- EDGE OF DIRT ROAD
- ONSITE STREAM DETERMINED BY OTHERS
- 10-FOOT CONTOUR LINE
- 100-FOOT CONTOUR LINE
- UTILITY POLE
- FOUND MONUMENT AS NOTED

NOTE:

THIS MAP OR PLAT AND THE SURVEY PROVIDED BY PBS ENGINEERING AND ENVIRONMENTAL INC., BY GREG E. FLOWERS, ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 8, 9, 11, 13, 18, AND 20 OF TABLE A THEREOF. THE FIELD WORK WAS BEGUN ON OCTOBER 25, 2018, AND CONCLUDED ON NOVEMBER 7, 2018. DATE OF PLAT OR MAP: FEBRUARY 1, 2019

300' 150' 0 300'

SCALE: 1" = 300'

THIS DRAWING IS THE PROPERTY OF ECOPLEXUS, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY ECOPLEXUS, LLC. NO PART IS TO BE DISCLOSED TO OTHERS OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM ECOPLEXUS, INC. OR ITS SUBSIDIARIES.

ecoplexus
ECOPLEXUS, Inc.
101 Second Street, Ste. 1250
San Francisco, CA 94105
Ph: 415-629-1802
Fx: 415-449-3466

**PRELIMINARY**

DO NOT USE FOR CONSTRUCTION

# FIGURE C-2A

| REV | DATE | DESCRIPTION |
|---|---|---|
| A | 07/03/2019 | INITIAL LAYOUT |
| B | 07/19/2019 | SETBACK AND ACCESS ROAD REV |
| C | 07/23/2019 | 60' ROAD SETBACK ADDED RACKS |
| D | 07/31/2019 | MOVED SUB LOCATION & ACCESS RD |

MADRAS PV1

JEFFERSON COUNTY
OREGON

| | |
|---|---|
| CIVIL REVIEW: | JH |
| DEV. REVIEW: | NR |
| DESIGNED BY: | BAB |
| DRAWN BY: | BAB |
| SCALE: | 1" = 300' |
| DATE: | 10/01/2019 |

DRAWING DESCRIPTION:

CONCEPTUAL SITE PLAN WITHOUT BATTERY STORAGE

LEVEL C
DRAWING No:

PV1.1

File: G:\My Drive\Projects\OREGON\04 Projects\Madras PV1\02 Design\Civil\CAD\Madras PV1 - Concept Plan Level C PV only - 191008.dwg, Layout: ECOP By: Ben, Plotted: Tue Oct 08, 2019 at 3:53pm, XREFs Used: - IMAGES Used:

## GENERAL PROJECT INFORMATION

| | |
|---|---|
| PROJECT NAME: | MADRAS PV1 |
| PROJECT ADDRESS: | LAT.: 44.65°, LON.:-121.25° |
| DEVELOPER NAME: | ECOPLEXUS |
| DEVELOPER ADDRESS: | 101 2ND ST., STE. 1250, SAN FRANCISCO, CA 94105 |

## GENERAL SYSTEM INFORMATION

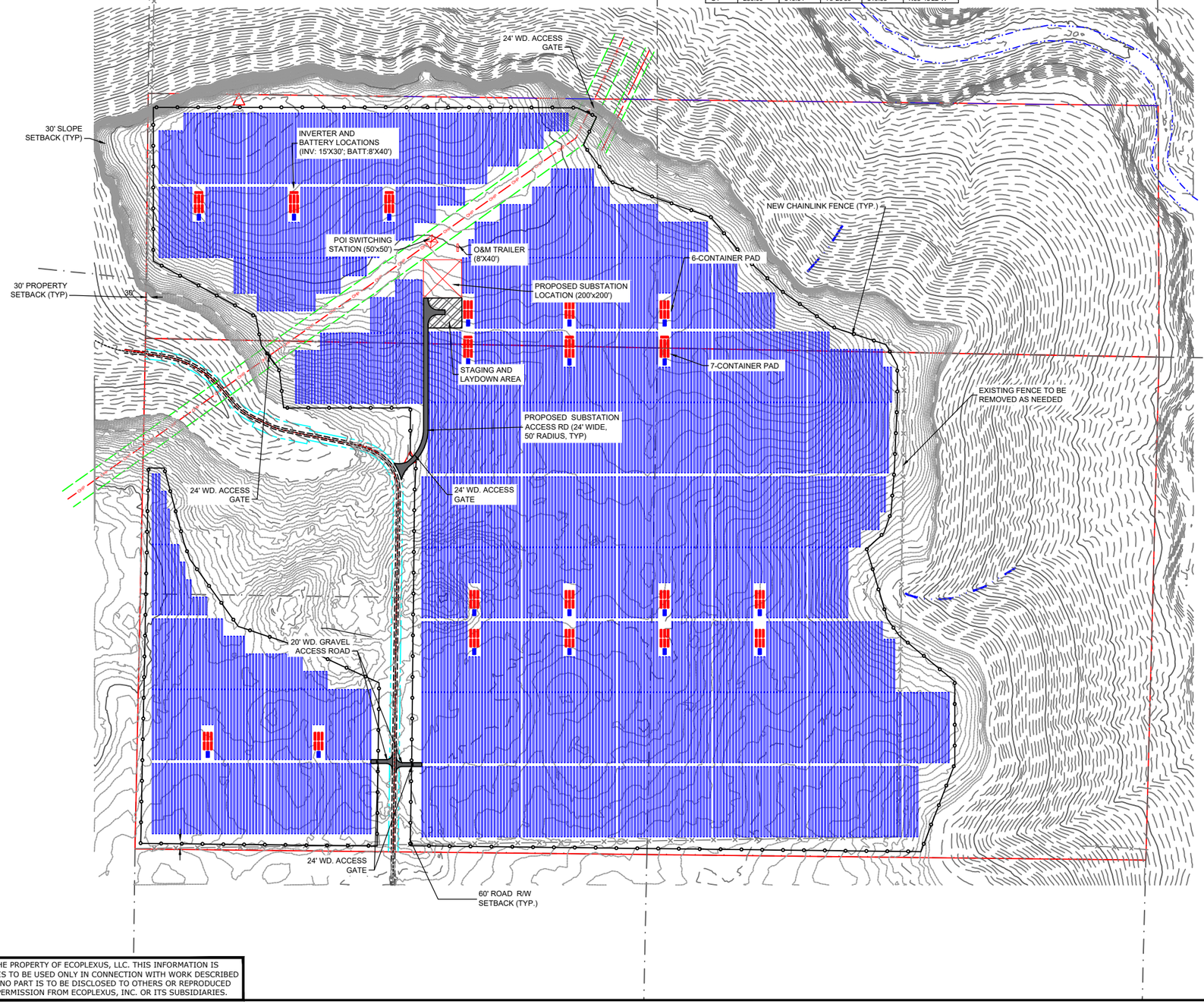
| | |
|---|---|
| MODULE: | HANWHA Q.PEAK DUO L-G5.2 400 |
| QUANTITY: | 175,446 |
| INVERTER: | SMA SUNNY CENTRAL 4000-UP-US |
| QUANTITY: | 19 |
| MOUNTING SYSTEM: | TBD |
| MOUNTING SYSTEM TYPE: | SINGLE AXIS TRACKING, 60° TILT, 90° AZIMUTH, 40.2% GCR |
| SYSTEM SIZE (DC): | 70.2 MW |
| SYSTEM SIZE (AC): | 63.0 MW |
| UTILIZED AREA: | 274.9 ACRES |

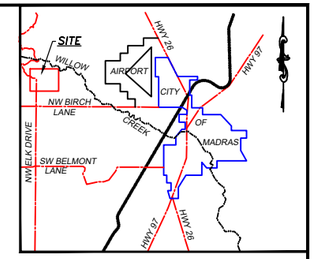
## DESIGN BASIS DIMENSIONS

| | |
|---|---|
| **SOLAR PV MODULE:** | 1960 x 991 x 40 mm, 22.5 kg |
| **TRACKER TABLE (STOWED):** | 1960 mm WIDE, 4.5 FT TALL, UP TO 400 FT LONG |
| **TRANSFORMER PAD:** | 20 x 40 x 10FT TALL MAXIMUM DIMENSIONS |
| **BATTERY CONTAINER:** | 8 x 40 x 9.5FT TALL MAXIMUM DIMENSIONS |
| **SUBSTATION:** | 300 x 300 FT MAXIMUM DIMENSIONS<br>HEIGHT WILL COMPLY WITH LOCAL CODES |
| **GENERATOR TIE LINES:** | HEIGHT WILL COMPLY WITH LOCAL CODES |
| **O & M BUILDING:** | 1 DRY STORAGE BUILDING 8 x 40 x 8.5 FT HIGH |

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N82°39'27"W | 82.82' |
| L2 | N40°53'32"W | 112.34' |
| L3 | N64°39'02"W | 121.89' |
| L4 | N78°31'42"W | 409.74' |
| L5 | N00°54'57"E | 765.34' |
| L6 | S00°42'40"W | 1105.30' |
| L7 | N89°18'07"W | 162.54' |
| L8 | S25°26'39"W | 297.31' |
| L9 | N89°18'07"W | 164.97' |
| L10 | S25°27'51"W | 227.13' |

| CURVE | RADIUS | ARC | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 500.00' | 364.47' | 41°45'55" | 356.45' | S61°46'29"E |
| C2 | 250.00' | 103.67' | 23°45'30" | 102.92' | N52°46'17"W |
| C3 | 250.00' | 60.55' | 13°52'40" | 60.41' | S71°35'22"E |
| C4 | 250.00' | 346.64' | 79°26'39" | 319.53' | N38°48'22"W |




## VICINITY MAP

NOT TO SCALE

## LEGEND & SYMBOLS

- SECTION OR SECTION SUBDIVISION LINE
- PARCEL BOUNDARY
- ROADWAY CENTERLINE
- RIGHT OF WAY BOUNDARY
- EASEMENT BOUNDARY
- EXISTING FENCE LINE
- OVERHEAD POWER LINE
- EDGE OF ASPHALT ROAD
- EDGE OF DIRT ROAD
- ONSITE STREAM DETERMINED BY OTHERS
- 10-FOOT CONTOUR LINE
- 100-FOOT CONTOUR LINE
- UTILITY POLE
- FOUND MONUMENT AS NOTED

NOTE:

THIS MAP OR PLAT AND THE SURVEY PROVIDED BY PBS ENGINEERING AND ENVIRONMENTAL INC., BY GREG E. FLOWERS, ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 8, 9, 11, 13, 18, AND 20 OF TABLE A THEREOF. THE FIELD WORK WAS BEGUN ON OCTOBER 25, 2018, AND CONCLUDED ON NOVEMBER 7, 2018. DATE OF PLAT OR MAP: FEBRUARY 1, 2019

300' 150' 0 300'

SCALE: 1" = 300'

THIS DRAWING IS THE PROPERTY OF ECOPLEXUS, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY ECOPLEXUS, LLC. NO PART IS TO BE DISCLOSED TO OTHERS OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM ECOPLEXUS, INC. OR ITS SUBSIDIARIES.

ecoplexus
ECOPLEXUS, Inc.
101 Second Street, Ste. 1250
San Francisco, CA 94105
Ph: 415-629-1802
Fx: 415-449-3466

**PRELIMINARY**

DO NOT USE FOR CONSTRUCTION

# FIGURE C-2B

| REV | DATE | DESCRIPTION |
|---|---|---|
| A | 07/03/2019 | INITIAL LAYOUT |
| B | 07/19/2019 | SETBACK AND ACCESS ROAD REV |
| C | 07/23/2019 | 60' ROAD SETBACK,ADDED RACKS |
| D | 07/31/2019 | MOVED SUB LOCATION & ACCESS RD |
| E | 08/27/2019 | ADDED BATTERY BANKS |

## MADRAS PV1

JEFFERSON COUNTY
OREGON

| | |
|---|---|
| CIVIL REVIEW: | JH |
| DEV. REVIEW: | NR |
| DESIGNED BY: | BAB |
| DRAWN BY: | BAB |
| SCALE: | 1" = 300' |
| DATE: | 10/1/2019 |

DRAWING DESCRIPTION:

CONCEPTUAL SITE PLAN WITH MAXIMUM BATTERY STORAGE

LEVEL C
DRAWING No:

PV1.1

File: G:\My Drive\Projects\OREGON\04 Projects\Madras PV1\02 Design\Civil\CAD\Madras PV1 - Concept Plan Level C PV + STORAGE - 191008.dwg, Layout: ECDP, By: Ben, Plotted: Tue Oct 08, 2019 at 4:01 pm, XREFs Used: , IMAGES Used:

121°20'W
121°10'W
121°0'W
44°40'N

Deschutes River
US Hwy 26
Pelton Regulating Reservoir
Pelton Dam
Lake Simtustus
Adams Solar Center
Madras Muni Airport
NW Warm Springs Hwy
The Dalles-California Hwy
US Hwy 97
MADRAS
Elbe Solar Center
Round Butte Dam
Lake Billy Chinook
Metolius River
METOLIUS
SW US Hwy 97
SW Culver Hwy
Madras Hwy
State Hwy 361
CULVER
SE US Hwy 26
Crooked River National Grassland
Deschutes National Forest
Deschutes River
Crooked River and North Fork

VICINITY MAP




## LEGEND

- Madras Solar Energy Facility Site Boundary
- Scenic and Aesthetic Resources and Public Services Areas (10-mile)
- Energy Generation Facility
- City of Madras City Limits
- Urban Growth Boundary
- Major Highway
- Existing Road
- Watercourse
- Waterbody
- Airport/Heliport
- National Forest
- National Grassland

Coordinate System: NAD 1983 UTM Zone 10N

Data Sources: Site Boundary, City Limits, Urban Growth Boundary: Jefferson County 2018; National Forest/Grassland: US Forest Service 2013; National Wilderness Area: Wilderness Connect; ESRI ArcGIS online; Airport: US Dept of Transportation;

0 1 2 4
Miles

1 inch equals 2.16 miles

**Figure C-3**
Other Permitted Energy Generation Facilities
Application for Site Certificate
Madras Solar Energy Facility
*Jefferson County, OR*

JACOBS

**Attachment B: Index of Revie**wing Agency Comments on preliminary/complete ASC; **Comments Relied upon in DPO**

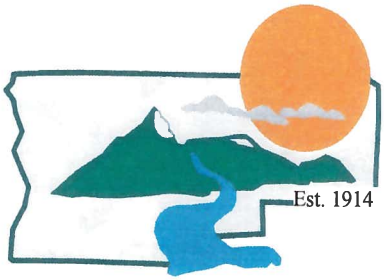
**Index of Reviewing Agency Comments on Preliminary/Complete ASC**

| Commenter Name | Reviewing Agency | Date Received |
|---|---|---|
| Jeff Rasmussen | Jefferson County Board of Commissioners | 08/23/2019 |
| Phil Stenbeck | Jefferson County Community Development Department | 12/16/2019 |
| Christian Nauer | Confederated Tribes of the Warm Springs Reservation of Oregon | 01/29/2020 |
| David Mills | Oregon Office of State Fire Marshall | 02/20/2020 |
| Greg Jackal | Oregon Department of Fish and Wildlife | 03/16/2020 |
| Greg Jackal | Oregon Department of Fish and Wildlife | 12/09/2020 |
| Seth Thompson | Oregon Department of Aviation | 12/09/2020 |
| John Pouley | State Historic Preservation Office | 02/25/2020 |
| Jason McLaughry | Department of Geology and Mineral Industries | 01/05/2021 |

# JEFFERSON COUNTY

## COUNTY ADMINISTRATIVE OFFICER

66 S.E. "D" St., Suite A ● Madras, Oregon 97741 ● Ph: (541) 475-2449 ● FAX: (541) 475-4454
jeff.rasmussen@co.jefferson.or.us


August 23, 2019

Chase McVeigh-Walker (SENT VIA EMAIL)
Oregon Department of Energy
550 Capitol St
Salem, OR 977301

RE: Madras Solar Energy Facility

Dear Chase:

The Jefferson County Board of Commissioners sitting as the Special Advisory Group for the Madras Solar Energy Facility submits this letter in response to the request for comment regarding the Notice of Intent submitted by Madras PV1, LLC. The Board has assigned the work of providing comment to Jeff Rasmussen, County Administrative Officer, 66 SE D Street, Madras, Oregon 97741; 541-475-2449. Aspects of the proposed facility that are within the responsibility or expertise of Jefferson County include zoning restrictions, building code requirements and the statewide goals under the Jefferson County Comprehensive Plan.

All of the area within the site boundary is an appropriate size and location for the analysis area for the proposed facility. Studies that should be conducted to identify potential impacts of the proposed facility and mitigation measures include those identified in the Jefferson County Comprehensive Plan and the Jefferson County Zoning Ordinance, both located at: https://www.jeffco.net/cd/page/comprehensive-plan-and-zoning-ordinance.

Statutes, administrative rules and local government ordinances administered by Jefferson County that might apply to construction or operation of the proposed facility include Sections 301.4, 301.5, 401, 405, and 602 of the Jefferson County Zoning Ordinance (JCZO) and the Jefferson County Comprehensive Plan. For application of permits, a site plan and full set of structural and electrical plans will be required. A value of the structural portions of work (footings, poles, racking system for the solar portion and separate values for any other structures that are not exempt from permitting) will need to be included in the application. A submittal fee is required with the application. The fee/s will be based on the value of structural portion of work.

Jefferson County looks forward to continued involvement in this project. Please feel free to contact me with questions or further requests for information.

Sincerely,

Jeff Rasmussen,
County Administrative Officer

## MCVEIGH-WALKER Chase * ODOE

**From:** Phil Stenbeck <Phil.Stenbeck@co.jefferson.or.us>
**Sent:** Thursday, January 16, 2020 11:49 AM
**To:** MCVEIGH-WALKER Chase * ODOE
**Cc:** ESTERSON Sarah * ODOE
**Subject:** [Fortimail Spam Detected] Proposed Madras Solar Energy Facility - ODOE Point of Contact.
**Attachments:** MadrasSolarJeffCoComments.pdf

Hi Chase,

Here is the letter from Jefferson County that I mentioned to Sarah.
As the "cc" shows on the letter, the comments flow from discussions with the Board of Commissioners, County Counsel, Public Works Director and the County Administrative Officer.
If you have any questions, please contact me.

See you next week.

Cordially,

Phil

JEFFERSON COUNTY OREGON

**Phil Stenbeck, CFM**
Director
Jefferson County Community Development Department
85 S.E. "D" Street Madras, Oregon 97741
Phone: (541) 475-4462

---

**From:** ESTERSON Sarah * ODOE <Sarah.Esterson@oregon.gov>
**Sent:** Thursday, January 16, 2020 10:41 AM
**To:** Phil Stenbeck <Phil.Stenbeck@co.jefferson.or.us>
**Cc:** MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
**Subject:** Proposed Madras Solar Energy Facility - ODOE Point of Contact

Hi Phil,

It was nice talking with you and we look forward to meeting/talking with you on Jan 22.

Chase McVeigh-Walker is the point of contact for the review of the Application for Site Certificate for the proposed Madras Solar Energy Facility. Please email your comments to:

E: Chase.McVeigh-Walker@oregon.gov
P: 503-934-1582

Thanks,
Sarah

**Sarah T. Esterson**
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 503-373-7945
C: 503-385-6128
P (In Oregon): 800-221-8035

OREGON DEPARTMENT OF ENERGY



# JEFFERSON COUNTY

COMMUNITY DEVELOPMENT DEPARTMENT

85 S.E. "D" Street, Madras, Oregon 97741 Phone (541) 475-4462 FAX: (541) 325-5004

Est. 1914

December 18, 2019

Energy Facility Siting Council
Oregon Department of Energy
550 Capitol St. NE, 1st Floor
Salem, OR 97301

Re: Jefferson County comments on Madras Solar Energy Facility Project.

Dear Chair Jenkins,

Thank you for the opportunity to comment on the Madras Solar Energy Facility Project in Jefferson County, Oregon. Jefferson County has reviewed the request to the Energy Facility Siting Council for approval of the Madras Solar Energy Facility Project located on property identified as T10, R13, S31, TL100 and T10, R13, S30, TL600.

Jefferson County submits the following comments on the request.

1) The general location of the site is shown as yellow dashed lines on the map found on page 2.

2) The site is zoned Exclusive Farm Use - A1 and has an Exclusive Farm Use Comprehensive Plan designation.

3) The Confederated Tribe of Warm Springs Reservation is shown on the left side of the map (striped pattern).

4) A private use airport is located southwest of the site.

5) NW Elk Drive crosses the site shown as a white line on the map. *The County requests that the applicant be required to provide a road conditions survey prior to construction and be required to return the road to the condition found in the survey within one year after project completion. The survey and post construction road work to be reviewed and approved by the Jefferson County Public Works Director as well as road access permits.*

6) A County Comprehensive Plan Goal 5 Bird Site is shown on the map (blue circles). A "sliver" of the Bird Site Overlay (Site #26) touches the northeast edge of the site. *The applicant will need to comply with development time frames, February 1 to August 31, for development within the "sliver" of Bird Site habitat. The development time frames are found in the County Comprehensive Plan Policy 5.2 for Goal 5 - Bird Site #26.*

7) Existing address points are shown as red dots on the map with the closest dwelling being located approximately 2377 feet from the site. *The applicant will need to obtain an address for the project from the Jefferson County Community Development Department (CDD).*

8) *Development permits (electrical, etc.) for the project would be available via the County CDD.*

9) The site is in the Jefferson County School District and the North Unit Irrigation District.

The Madras Solar Energy Facility Site is not in:

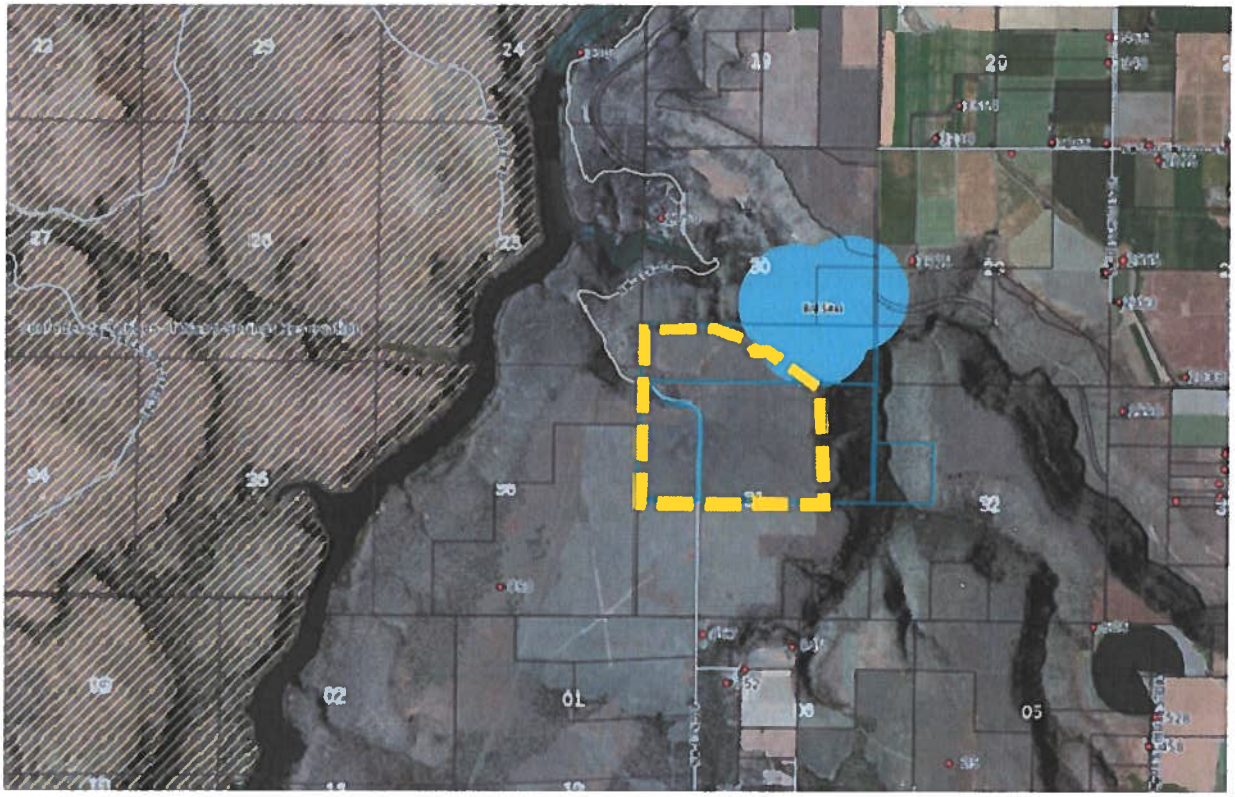
1) The Metolius Area of Critical Concern.

2) The Elk, Deer or Pronghorn Antelope Wildlife Habitat Area Zone in Jefferson County.

3) The National Wetlands Inventory (NWI) or the FEMA NFIP 100 year floodplain.

4) An Enterprise Zone, Urban Reserve Area, or Urban Renewal District.

5) Prime Farm land or Forest land according to the County Comprehensive Plan.



Again, thank you for the opportunity to comment on this request.

Cordially,

Phil

Phil Stenbeck, Director
Jefferson County Community Development Department

c: Kelli Simmelink, Chair
Mae Huston, Commissioner
Wayne Fording, Commissioner
Alexa Gassner, County Counsel
Jeff Rasmussen, Chief Administrative Officer
Matt Powlison, Public Works Director

Oregon
Kate Brown, Governor

OREGON DEPARTMENT OF AVIATION

3040 25th Street, SE
Salem, OR 97302-1125
Phone: (503) 378-4880
Toll Free: (800) 874-0102
FAX: (503) 373-1688

**TO:** Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St N.E., 1st Floor
Salem, OR 97301

**FROM:** Seth Thompson, Aviation Planner
Oregon Department of Aviation
3040 25th Street, SE
Salem, OR 97302-1125
503-378-2529
Seth.Thompson@aviation.state.or.us

**DATE:** December 9, 2020

**RE:** Oregon Department of Aviation Agency Report on the Application for Site Certificate for the Madras Solar Energy Facility

---

Dear Chase McVeigh-Walker:

The Oregon Department of Aviation (ODA) appreciates the opportunity to review and comment on the Application for Site Certificate for the Madras Solar Energy Facility. The ODA has reviewed the site proposal and provides the following report with recommendations.

The proposal seeks approval to construct and operate a photovoltaic solar energy facility and related or supporting facilities that would occupy up to 284 acres. The proposed solar energy facility is located west of the Madras Municipal Airport and directly north of the Bombay Farms Airport.

For these reasons, the Madras Solar Energy Facility may require airspace review by the FAA and ODA subject to the standards in Code of Federal Regulations: Title 14. Aeronautics and Space: PART 77—Safe, Efficient Use, and Preservation of the Navigable Space.

All project elements are subject to compliance with FAA Part 77.9 Construction or alteration requiring notice (a-d), FAA Part 77.17 Obstruction standards (a-b) and Obstruction Standards of OAR 738-70-0100 if they exceed 200 feet in height or are:

- within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
- within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
- within 5,000 ft of a public use heliport which exceeds a 25:1 surface

To make this determination, any supporting facilities or structures more than 200 feet in height or within the distances provided above must undergo airspace analysis through submittal of a completed FAA Form 7460-1, attached for reference.

The ODA provides the following recommendations for this proposal:

- The applicant must file and receive a determination from the Oregon Department of Aviation as required by OAR 738-070-0060 on FAA Form 7460-1 Notice of Proposed Construction or Alteration to determine if any new supporting facilities or structures will pose an obstruction to aviation safety at the Madras Municipal Airport.

- The proposed solar energy facility is also in close proximity to the Bombay Farms Airport, which is a private airport south of the proposed facility's project boundary. Though Bombay Farms Airport is not a public use or military airport as specified in FAA Part 77.9 (a-d) and OAR 738-070-0070, the ODA will evaluate whether the proposed solar energy facility poses an obstruction to aviation safety at the Bombay Farms Airport. The ODA reserves the right to provide mitigation recommendations for aviation safety at the Bombay Farms Airport in accordance with OAR 738-070-0010.

- The height of any new supporting facilities or structures should not penetrate FAA Part 77 Imaginary Surfaces, as determined by the ODA and FAA.

- Shields on any external lights should be designed as to not interfere with aircraft or airport operations.

- Marking Lights, per FAA design, may be needed to identify supporting facilities or structures.

ODA appreciates the opportunity to comment on this proposal. The Department requests to be identified as a party of record for any future land use application. If you have any questions or need clarification on these comments, please feel free to contact me at 503-378-2529 or Seth.Thompson@aviation.state.or.us.

Sincerely,



Seth Thompson
Aviation Planner

CC: Heather Peck
Planning & Projects Manager
Oregon Department of Aviation

| Madras Solar Energy Facility<br>Comments on the Application for Site Certificate (ASC)<br>Oregon Department of Aviation | | | |
|---|---|---|---|
| **Exhibit** | **Rule/ Ordinance/Law Reference** | **Pg. / Para. / Sentence Reference (as needed)** | **Compliance Comment or Condition Language** |
| | FAA Part 77.9, OAR 738-070-0060, FAA Part 77.17 | | The applicant must file and receive a determination from the Oregon Department of Aviation as required by OAR 738-070-0060 on FAA Form 7460-1 Notice of Proposed Construction or Alteration to determine if any new supporting facilities or structures will pose an obstruction to aviation safety at the Madras Municipal Airport. |
| | OAR 738-070-0010 | | The proposed solar energy facility is also in close proximity to the Bombay Farms Airport, which is a private airport south of the proposed facility's project boundary. Though Bombay Farms Airport is not a public use or military airport as specified in FAA Part 77.9 (a-d) and OAR 738-070-0070, the ODA will evaluate whether the proposed solar energy facility poses an obstruction to aviation safety at the Bombay Farms Airport. The ODA reserves the right to provide mitigation recommendations for aviation safety at the Bombay Farms Airport in accordance with OAR 738-070-0010. |
| | | | The height of any new supporting facilities or structures should not penetrate FAA Part 77 Imaginary Surfaces, as determined by the ODA and FAA. |
| | | | Shields on any external lights should be designed as to not interfere with aircraft or airport operations. |
| | | | Marking Lights, per FAA design, may be needed to identify supporting facilities or structures. |
| | | | |
| | | | |
| | | | |
| | | | |

# MEMORANDUM

**TO:** Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St N.E., 1st Floor
Salem, OR 97301

**FROM:** Greg Jackle, District Wildlife Biologist
Oregon Department of Fish and Wildlife
2042 SE Paulina Hwy.
Prineville, OR 97754
541-447-5111 x 26
Greg.s.jackle@state.or.us

**DATE:** December 9, 2020

**RE:** **Oregon Department of Fish and Wildlife** Agency Report on the Application for Site Certificate for the Madras Solar Energy Facility

**General Comments:**

The Oregon Department of Fish and Wildlife (ODFW) provides the following comments on the Application for Site Certificate (ASC) for the Madras Solar Energy Facility. ODFW has specifically reviewed Exhibits P and Q for their consistency with the ODFW statutes and rules referenced in our August 2019 letter on the Madras Solar Energy Facility Notice of Intent. ODFW has also provided comments to Oregon Department of Energy (ODOE) with Memorandum's dated March 16, 2020 and August 3, 2020.

As a matter of housekeeping, the Exhibit P contains correspondence from ODFW on August 2019, but is missing the attached map **willow creek golden eagle.** If this was done for the protection and sensitivity to not release that map for public distribution, then ODFW understands. Along those same lines, ODFW would request the ability to review portions of this exhibit that may address issues with golden eagle habitat near the project site boundary. Specifically, Attachment P-2, P-3B, P-5, and P-8 (application for incidental eagle take permit).

It appears that the applicant is moving forward with an application for an incidental take permit for golden eagle, therefore ODFW can support the Habitat Category 4 determination for the project area. If the incidental take permit application process were to be abandoned for some reason, ODFW would recommend the EFSC application for site certificate be amended and project area be reclassified as Habitat Category 3.

Generally, the applicant has done a good job describing how they intend to mitigate for impacts to the project site by using a Habitat Mitigation Area (HMA) “option 2”. ODFW has observed the HMA site from the county road and concur that this area could offset impacts to project development. However, further specific details remain with respect to the HMA site which ODFW will address in the specific comment section.

**Specific Comments:**

| Madras Solar Energy Facility<br>Comments on the Application for Site Certificate (ASC)<br>Oregon Department of Fish and Wildlife | | | |
|---|---|---|---|
| **Exhibit** | **Rule/ Ordinance/Law Reference** | **Pg. / Para. / Sentence Reference (as needed)** | **Compliance Comment or Condition Language** |
| P (P-9) | 635-415-0020 8 ( c ) | Page 3, paragraph 2 and 3 | Applicant states the mitigation responsibility will be for 276 acres and the potential mitigation site is 319 acres. What is planned with the 43 additional acres should also be discussed. |
| P (P-9) | 635-415-0020 8 ( C ) | Page 3, 3.1 first bullet | Would strike the word "potentially". Fences and off-highway roads should not be constructed on a HMA. Any discussion of new fences should be related back to how it complies with improving the property for wildlife habitat and should contain references to wildlife friendly standards for barb wire fences. No woven wire or wildlife exclusion fencing should be allowed unless for a specific habitat restoration context and not for the life of the project. |
| P (P-9) | | Page 3, 3.1 Second bullet | Wildlife friendly riparian fencing.<br>Reference Colorado Division of Wildlife "fencing with wildlife in Mind" page 7-8. |
| P (P-9) | 635-415-0020 8 ( c ) | Page 4, 4, first paragraph | "As of July 2020, up to 319 acres of Category 2,3, and 4 shrub steppe habitat have been identified" - references figure 2 which does not break down the parts of the property with respect to each category. ODFW would request a map of the HMA that identifies and characterizes the existing habitat. |
| P (P-9) | 635-415-0020 8 ( b ) | All bullets of 4.1 | This defers all discussion of the types of mitigation until prior construction of the facility. ODFW requests ( 1 ) be completed and submitted with this document – similar to map reference above. ( 2 ) – This report should be submitted to ODFW for review prior to final approval – current grazing management and how that will continue if the property is an HMA is an important detail. ( 3 ) – Enhancement actions can be discussed and agreed to prior to final plan approval. ( 4 ) Specifics on how this relates to above bullets. |

| Madras Solar Energy Facility<br>Comments on the Application for Site Certificate (ASC)<br>Oregon Department of Fish and Wildlife | | | |
|---|---|---|---|
| **Exhibit** | **Rule/ Ordinance/Law Reference** | **Pg. / Para. / Sentence Reference (as needed)** | **Compliance Comment or Condition Language** |
| P (P-9) | | Page 7, bottom of first paragraph | "Applicant is obligated to manage degradation of existing conditions, regardless of the habitat category of the Facility site." - further evidence we need the **current** specific site assessment of the HMA. ODFW has photo's of the site from County road on 10/13/2020. |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

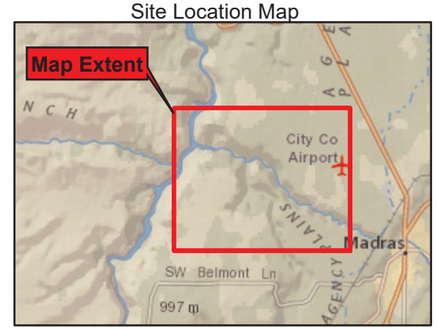
Willow Creek female was tagged in 2011 and was found dead May 2014. Data reflects the study period 2011-2013

This nest was the last successful nest used by the tagged female in 2012

This nest was used and successful in 2018

Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA,

Site Location Map




## Map Features

- GE Nest locations
- Solar Site Rim/Eagle Points (n= 2,301)
- Willow Eagle Points (n= 5,965)
- Multiyear HR
- Solar Site Footprint (410 ac)

**Portland General Electric makes no guarantees on the accuracy of data requested to provide. This map shouldn't be used for navigation.**

The footprint of the solar site is for reference purposes only. For the most accurate footprint contact the organization proposing the solar site.

0 1,000 2,000
Feet

N W E S

Willow GE
Proposed Solar Site

**Willow Creek Golden Eagle**

| Date: | Drawn By: | Rev.: |
|---|---|---|
| 7/29/2019 | | |

Drawing File:

**MEMORANDUM**

**TO:** Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St N.E., 1st Floor
Salem, OR 97301

**FROM:** Sarah Reif, Energy Coordinator
Greg Jackle, Prineville Wildlife District Biologist
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive SE
Salem, OR 97302
503-947-6082
Sarah.j.reif@state.or.us; greg.s.jackle@state.or.us

**DATE:** March 16, 2020

**RE:** **Oregon Department of Fish and Wildlife** Comments on the Preliminary Application for Site Certificate for the Madras Solar Energy Facility

**General Comments:**

The Oregon Department of Fish and Wildlife (ODFW) provides the following comments on the Preliminary Application for Site Certificate (pASC) for the Madras Solar Energy Facility. ODFW has specifically reviewed Exhibits P and Q for their consistency with the ODFW statutes and rules referenced in our August 2019 letter on the Madras Solar Energy Facility Notice of Intent.

ODFW reviewed the habitat assessment in Exhibit P, and concurs with the applicant's Habitat Category 4 determination (as defined in the ODFW Fish and Wildlife Habitat Mitigation Policy OAR 635-415). The grassland and shrub-steppe habitats contained within the project site boundary are in a degraded condition, dominated by non-native plants. The site is outside of big game winter range, both in terms of Jefferson County mapped Goal 5 winter range as well as ODFW's mapped biological winter range (ODFW 2013).

The only significant wildlife concern is the close proximity of historical golden eagle nests to the project boundary (within 0.2 miles according to Exhibit P), and the use of the site boundary as foraging habitat by adult and juvenile birds. During the applicant's agency consultation, ODFW shared location data from a female golden eagle (dated 2011 through 2014) who nested in close proximity to the project (data originated from Portland General Electric biologists). The mapped location data indicated a very high density of point locations for the nesting female within and around the proposed solar facility boundary. ODFW recommended that this information be considered in the project evaluation, however it does not appear to have been

included, unless it is part of the confidential Exhibit P – Attachment 5, which has not been provided to ODFW as of the date of this memo.

While caution must be taken when drawing conclusions from movement data of only one individual eagle, the maps ODFW shared with the applicant demonstrate that despite the degraded condition of the project site, it is providing some function and value for nesting golden eagles. Given the high level of use by the breeding golden eagle female, ODFW contemplated recommending a higher habitat categorization for the project area to better reflect the function and value the project area was serving as foraging habitat for nearby nesting habitat use.

It is ODFW's understanding that the applicant has voluntarily applied for an Incidental Eagle Take Permit from the U.S. Fish and Wildlife Service to address potential disturbance take of eagles during construction (Exhibit P main body, as well as Attachment 8). ODFW supports this voluntary measure as a way of providing net benefit to golden eagles and their habitat, because it will likely include additional conservation measures for avoidance, minimization, mitigation, and monitoring. In combination with the offsets recommended for Habitat Category 4, the outcome could ultimately be 'no net loss plus a net benefit', which would be commensurate with Habitat Category 2 mitigation. Stated differently, ODFW can support the Habitat Category 4 determination for the project area, even with the significant loss of habitat value for golden eagles, because the applicant is pursuing conservation measures in its Incidental Eagle Take Permit application. If the Incidental Eagle Take Permit application process were to be abandoned for some reason, ODFW would recommend the EFSC application for site certificate be amended and the project area be reclassified as Habitat Category 3.

The mitigation goal for Habitat Category 4 is no net loss of habitat quantity and quality, and the offset does not necessarily need to be in-kind or in-proximity, according to the ODFW Fish and Wildlife Habitat Mitigation Policy. The applicant's current Habitat Mitigation Plan (HMP; Exhibit P – Attachment 9) demonstrates a clear understanding of this mitigation goal, and of the associated monitoring and success criteria involved in long-term stewardship of a mitigation site. ODFW understands the applicant is proposing two options, both of which have potential to sufficiently offset impacts, however the plan is largely conceptual at this time.

The HMP does not currently provide specific information that ODFW would need to determine consistency with the ODFW Fish and Wildlife Habitat Mitigation Policy. For example, for the third-party payment option, ODFW recommends the HMP include the following:

- Maps of potential mitigation project areas,
- Detailed descriptions of the parameters that would be used in the payment calculation to the third party (payment amounts do not need to be disclosed),
- Clear demonstration of the roles and responsibilities for the third party including plans for long-term stewardship and habitat maintenance/enhancement,
- Clear demonstration of willingness from the third party,
- Detailed monitoring and reporting plans consistent with OAR 635-415-0020 (8).

And for the other more traditional, protection-enhancement option described in the HMP, ODFW recommends the HMP include a mapped location of the potential mitigation project area as well as all of the other elements listed in OAR 635-415-0020 (8).

Beyond these more general comments, ODFW had one specific comment on the revegetation plan (page 7, 1st paragraph). The revegetation plan reads as though reporting will not occur until year 5. ODFW recommends further discussion to clarify the reasoning for delayed reporting, and otherwise recommends revegetation reporting occur sooner than year 5. Otherwise ODFW finds the proposed revegetation plan satisfactory and appreciates the robust monitoring proposal to include quantitative success criteria and comparison with reference plots.

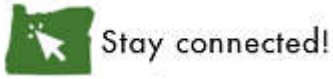
Should you have additional questions or seek additional consultation with ODFW, please do not hesitate to contact Greg Jackle or Sarah Reif.

## MCVEIGH-WALKER Chase * ODOE

**From:** ESTERSON Sarah * ODOE
**Sent:** Wednesday, January 29, 2020 11:00 AM
**To:** MCVEIGH-WALKER Chase * ODOE
**Subject:** FW: Madras Solar Energy - CTWS Review
**Attachments:** IDP_Template_Final.docx; PastedGraphic-1.pdf


OREGON DEPARTMENT OF ENERGY

**Sarah T. Esterson**
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 503-373-7945
C: 503-385-6128
P (In Oregon): 800-221-8035


**From:** Christian Nauer <christian.nauer@ctwsbnr.org>
**Sent:** Wednesday, January 29, 2020 10:16 AM
**To:** ESTERSON Sarah * ODOE <Sarah.Esterson@oregon.gov>
**Cc:** Robert Brunoe <robert.brunoe@ctwsbnr.org>
**Subject:** Re: Madras Solar Energy - CTWS Review

Hi Sarah,

Thank you very much for the opportunity to provide comment on the Madras Solar Energy Project.

General Comment:

As the technical reviewer for NHPA Section 106 and other cultural resource issues for the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), the CTWSRO Tribal Historic Preservation Office (THPO) has concerns with the potential effects to historic properties or cultural resources within the Project Area of Potential Effects (APE). The Project APE is within the territories and areas of concern for the CTWSRO.

Project-specific Comment(s):

This office considers the consultation between the Project proponent and the CTWSRO to have been conducted in a meaningful way, as part of a reasonable and good faith effort to identify, evaluate, and protect historic properties and cultural resources. We appreciate the inclusion of a tribal member on the field crew for the archaeological inventory efforts.

We also appreciate and concur with the report recommendation for explicit Inadvertent Discovery protocols. In order to protect cultural resources that may not have been identified, I would like to take this opportunity to provide you with a template for an Inadvertent Discovery Plan (IDP) for human remains, items of cultural patrimony, and intact

archaeological deposits to be in place in advance of Project implementation. Please have a look, the document is colorful, informative, and customizable, and I would hope that it can be a standard part of pre-work meetings in advance of ground-disturbing Projects, regardless of the results of cultural resources inventory efforts. Construction crews should be trained/briefed on the contents and importance of the IDP.

Please contact me with any questions or concerns.

Thank you for your efforts to protect cultural resources.

Best Regards,

Christian

Christian Nauer, MS
Archaeologist
Confederated Tribes of the Warm Springs Reservation of Oregon
Branch of Natural Resources

christian.nauer@ctwsbnr.org
Office 541.553.2026
Cell 541.420.2758

Standard Disclaimers:

*The Confederated Tribes of the Warm Springs Reservation of Oregon have reserved treaty rights in Ceded Lands, as well as Usual and Accustomed and Aboriginal Areas, as set forth through the Treaty with the Middle Tribes of Oregon, June 25, 1855.

*Please know that review by the Tribal Historic Preservation Office does not constitute Government-to-Government consultation. Please ensure that appropriate Government-to-Government consultation is made with the Confederated Tribes of the Warm Springs Tribal Council.

*The opinions expressed by this author do not necessarily represent those of the Confederated Tribes of the Warm Springs Reservation of Oregon. Information, contents, and attachments in this email are Private and Confidential.

> On Jan 28, 2020, at 4:45 PM, Christian Nauer <christian.nauer@ctwsbnr.org> wrote:
>
> Hi Sarah,
>
> Thanks for contacting me on these subjects!
>
> First off, are we talking about meeting here in Warm Springs, or in Salem…or in La Pine? (I just noticed the La Pine thing in the subject line)…..Bobby said that it was fine for me to travel to see you, he probably won't be able to go. As we talked about before, maybe I should have a short visit in Salem (or wherever), and we should take feedback from that and identify people that would like to come here to Warm Springs for a meet and greet, maybe a month or two down the road. Bobby is in high demand, and if we book him early it's more likely he will have it on his schedule and be present.
>
> On the Madras Solar thing, I am talking with Larry at Geo Visions, and he was the tech on the crew for that survey. He didn't think there were any interviews done, and that is contrary to my recall and expectations. I'll figure it out and get back to you with a comment tomorrow for sure.
>
> It was really good to visit with you the other day, thank you very much for your time.

Cheers,

Christian

Christian Nauer, MS
Archaeologist
Confederated Tribes of the Warm Springs Reservation of Oregon
Branch of Natural Resources

christian.nauer@ctwsbnr.org
Office 541.553.2026
Cell 541.420.2758

<PastedGraphic-1.pdf>

> On Jan 28, 2020, at 1:50 PM, ESTERSON Sarah * ODOE <Sarah.Esterson@oregon.gov> wrote:
>
> Hi Christian,
>
> Hope all is well! Just wanted to follow up on the email below and offer March 13 or 14 as a potential date where you and/or Bobby could present an overview of your role in the Energy Facility Siting Council/Section 106 process – importance/value of an oral history investigation (survey method) – any other important/key topics.
>
> Please let me know if you are available on March 13 or 14th and I can provide more details. If not, we will look at future dates.
>
> As mentioned below – we would like to confirm whether CTWS is satisfied with the consultation completed by Ecoplexis for the Madras Solar Energy Facility. If an oral history investigation was completed, it is not clear, and if this has not been completed and is recommended, it would be ideal to know as soon as possible.
>
> Thangs again,
> Sarah
>
> **Sarah T. Esterson**
> Senior Siting Analyst
> 550 Capitol St. NE | Salem, OR 97301
> <image001.png> P: 503-373-7945
> C: 503-385-6128
> P (In Oregon): 800-221-8035
> <image002.png>

**From:** ESTERSON Sarah * ODOE
**Sent:** Thursday, January 23, 2020 6:48 AM
**To:** 'Christian Nauer' <christian.nauer@ctwsbnr.org>
**Cc:** MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
**Subject:** Madras Solar Energy - CTWS Review

Good morning Christian,

Thanks again for meeting with me yesterday; I really enjoyed our discussion!

Attached is the Word version of the preliminary Exhibit S for the proposed Madras Solar Energy Facility. In this exhibit, it references that a an arch technician from Geo Visions supported the pedestrian survey conducted by Jacobs in Nov 2018. The exhibit does not mention any coordination with CTWS, and does not reference an oral history investigation.

Maybe having an arch tech from Geo visions was the outcome of coordinating with you/CTWS, although, if that is the case, it is not clear in this exhibit.

Please let us know if CTWS is satisfied with the evaluation of potential impacts to tribal resources, based on the attached exhibit and confidential arch report.

We will be in touch soon.

Thanks,
Sarah

**Sarah T. Esterson**
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
<image001.png> P: 503-373-7945
C: 503-385-6128
P (In Oregon): 800-221-8035
<image002.png>

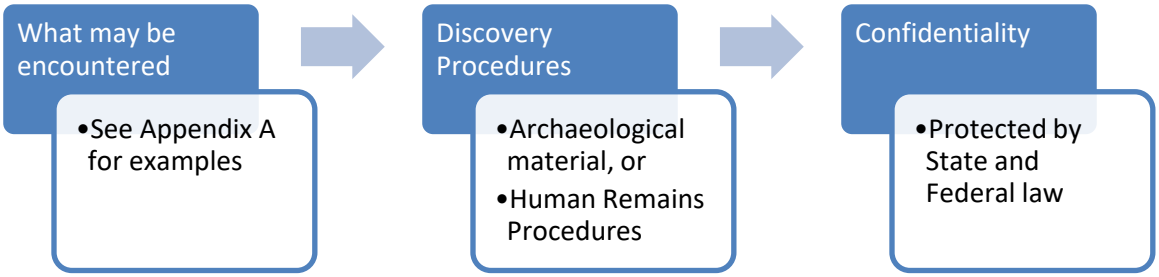
<Madras_Exhibit_S_Cultural_Resources.docx>

# ARCHAEOLOGICAL INADVERTENT DISCOVERY PLAN (IDP)

[Project Name]

[Project Manager] [Date] [SHPO case number]

## HOW TO USE THIS DOCUMENT




Archaeology consists of the physical remains of the activities of people in the past. This IDP should be followed should any archaeological sites, objects, or human remains are found. These are protected under Federal and State laws and their disturbance can result in criminal penalties.

This document pertains to the work of the Contractor, including any and all individuals, organizations, or companies associated with [the project].

### *WHAT MAY BE ENCOUNTERED*

Archaeology can be found during any ground-disturbing activity. If encountered all excavation and work in the area MUST STOP. Archaeological objects vary and can include evidence or remnants of historic-era and precontact activities by humans. Archaeological objects can include but are not limited to:

- **Stone flakes**, **arrowheads**, **stone tools**, **bone or wooden tools**, **baskets**, **beads**.
- Historic building materials such as **nails**, **glass**, **metal** such as cans, barrel rings, farm implements, **ceramics**, **bottles**, **marbles**, **beads**.
- Layers of **discolored earth** resulting from hearth fire
- Structural remains such as **foundations**
- **Shell** Middens
- **Human skeletal remains** and/or **bone fragments** which may be whole or fragmented.

*For photographic examples of artifacts, please see Appendix A. (Human remains not included)*

**If there is an inadvertent discovery of any archaeological objects see procedures below.**

**If in doubt call it in.**

### *DISCOVERY PROCEDURES: WHAT TO DO IF YOU FIND SOMETHING*

1. Stop ALL work in the vicinity of the find
2. Secure and protect area of inadvertent discovery with 30 meter/100 foot buffer—work may continue outside of this buffer

3. Notify Project Manager and Agency Official
4. Project Manager will need to contact a professional archaeologist to assess the find.
5. If archaeologist determines the find is an archaeological site or object, contact SHPO. If it is determined to *not* be archaeological, you may continue work.

## *HUMAN REMAINS PROCEDURES*

1. If it is believed the find may be human remains, stop ALL work.
2. Secure and protect area of inadvertent discovery with 30 meter/100 foot buffer, then work may continue outside of this buffer with caution.
3. Cover remains from view and protect them from damage or exposure, restrict access, and leave in place until directed otherwise. **Do not take photographs. Do not speak to the media**.
4. Notify:
    - Project Manager
    - Agency Official
    - Oregon State Police **DO NOT CALL 911**
    - SHPO
    - LCIS
    - Appropriate Native American Tribes
5. If the site is determined not to be a crime scene by the Oregon State Police, do not move anything! The remains will continue to be *secured in place* along with any associated funerary objects, and protected from weather, water runoff, and shielded from view.
6. Do not resume any work in the buffered area until a plan is developed and carried out between the State Police, SHPO, LCIS, and appropriate Native American Tribes and you are directed that work may proceed.

## *CONTACT INFORMATION*

- Project Manager, [Name]: [555-555-5555]
- Agency Official, [Name]: [555-555-5555]
- Contracted Archaeologist, [Name]: [555-555-5555]
- Oregon State Police, Sgt. Chris Allori: 503-731-4717 Cell: 503-708-6461
- Oregon State Historic Preservation Office (SHPO),
    - [SHPO archaeologist who reviewed submission]: [number]
    - State Archaeologist, Dennis Griffin: 503-986-0674
    - Asst. State Archaeologist, John Pouley: 503-986-0675
- LCIS, Mitch Sparks: 503-986-1086
- Appropriate Tribes
    - [add tribes as provided by LCIS]

## CONFIDENTIALITY

[The project] and employees shall make their best efforts, in accordance with federal and state law, to ensure that its personnel and contractors keep the discovery confidential. The media, or any third-party member or members of the public are not to be contacted or have information regarding the discovery, and any public or media inquiry is to be reported to [lead agency]. Prior to any release, the responsible agencies and Tribes shall concur on the amount of information, if any, to be released to the public.

*To protect fragile, vulnerable, or threatened sites, the National Historic Preservation Act, as amended (Section 304 [16 U.S.C. 470s-3]), and Oregon State law (ORS 192.501(11)) establishes that the location of archaeological sites, both on land and underwater, shall be confidential.*

## APPENDICES AND SUPPLEMENTARY MATERIALS

A. Visual reference and examples of archaeology

[B. Relevant maps such as APE and monitoring areas if relevant]

# APPENDIX A

## VISUAL REFERENCE GUIDE TO ENCOUNTERING ARCHAEOLOGY



**Figure 1: Stone flakes**



**Figure 2: Stone tool fragments**



Figure 3: Cordage



Figure 4: Shell midden




**Figure 5: Historic glass artifacts**




**Figure 6: Historic metal artifacts**



**Figure 7: Historic building foundations**



**Figure 8: 18th Century ship**

## MCVEIGH-WALKER Chase * ODOE

**From:** Mills, David D <DMills@osp.oregon.gov>
**Sent:** Thursday, February 20, 2020 4:13 PM
**To:** MCVEIGH-WALKER Chase * ODOE
**Subject:** RE: Agency comments on the Madras Solar Energy Facility pASC

Good afternoon Chase,

Thank you for the reminder. As our Oregon Fire Code comments in the past have been minimal, here is what I see on this submittal.

1.) We would ask that the design team coordinate with the local responding fire department as to whether they will need fire department access and/or water supply for any fire-fighting purposes.
2.) The 2019 Oregon Fire Code has some construction criteria for the design team to include. See the following section of the OFC.

**1204.1 General.** Solar photovoltaic systems shall be installed in accordance with Sections 1204.2 through 1204.5, and the *International Building Code* or *International Residential Code*. The electrical portion of solar PV systems shall be installed in accordance with NFPA 70.
**1204.2 Solar thermal systems.** For solar thermal systems, see *Oregon Structural Specialty Code*, Section 3111.2.
**1204.3 Building-mounted solar photovoltaic power systems.** For building-mounted solar photovoltaic power systems, see *Oregon Structural Specialty Code*, Section 3111.3.
**1204.4 Ground-mounted photovoltaic panel systems.** Ground-mounted photovoltaic panel systems shall comply with Section 1204.1 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays. A gravel base or other noncombustible base acceptable to the *fire code official* shall be installed and maintained under and around the installation. Fencing, skirting or other suitable security barriers shall be installed where required by the *fire code official.*
**1204.4.1 Fire separation distances.** Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the local fire jurisdiction.

Again, thank you for the opportunity to provide input and comments.

Sincerely,

*David D. Mills*
David D. Mills, C.B.O.
Deputy State Fire Marshal
Codes & Technical Services Unit
Oregon Office of State Fire Marshal
Oregon State Police
503-934-0875

www.oregon.gov/OSP/SFM/




---

**From:** MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
**Sent:** Thursday, February 20, 2020 9:05 AM
**To:** MILLS David <david.mills@state.or.us>
**Subject:** Agency comments on the Madras Solar Energy Facility pASC

**CAUTION: This email originated from outside of OSP. Do not click links or open attachments unless you know the content is safe.**

Good morning David,

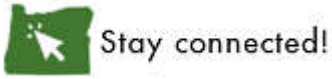
I'm wondering if the Office of the Oregon State Fire Marshal's office was planning on submitting comments on the preliminary application for site certificate (pASC) for the Madras Solar Energy Facility, an Energy Facility Siting Council (EFSC) jurisdictional solar PV proposed facility. On December 10, 2019, you should have received my initial request (via email) for review and comments on the pASC.
The review request is associated with the "completeness" of the pASC, and ODOE requests comments on whether the information in the pASC is complete with respect to statutes, rules, regulations or ordinances administered by your agency. In short, does the Office of the State Fire Marshal have any comments or information requests about information that is sufficient, missing, insufficient or incorrect?

An electronic copy of the pASC is available on ODOE's website per the following hyperlink: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MSE.aspx.

The comment deadline identified in the December request was January 17, however, we value your comments and would be open to extending the deadline a few more days, if that meant we would hear from you. Please let me know if you have any questions, and/or would require additional time for review and commenting. I know you're busy and really appreciate your time!

Regards,
Chase

**Chase McVeigh-Walker**
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 503-934-1582
P (In Oregon): 800-221-8035



Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

February 25, 2020

Mr. Chase McVeigh-Walker
Oregon Dept of Energy
550 Capitol St N.E., 1st Fl
Salem, OR 97301

RE: SHPO Case No. 19-1001
ODOE, Madras Solar Energy Facility
Proposed solar battery facility
, Jefferson County

Dear Mr. McVeigh-Walker:

Oregon SHPO recently received a report of archaeological investigations for the project referenced above. The report has been assigned SHPO Report# 30878 and added to the SHPO Library. We have reviewed the report and concur that a good faith effort has been implemented and the project will likely have no effect on any significant archaeological objects or sites. Based on the information provided, additional archaeological research is not anticipated for this project.

In the unlikely event an archaeological object or site (i.e., historic or prehistoric) is encountered during project implementation, all ground disturbance at the location should cease immediately until a professional archaeologist can be contacted to evaluate the discovery. Under state law (ORS 358.920 & ORS 97.745) archaeological sites, objects and human remains are protected on both public and private land in Oregon. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. If you have any questions regarding any future discovery or this letter, feel free to contact me at your convenience.

Sincerely,

John D. Pouley

John Pouley, M.A., RPA
Assistant State Archaeologist
(503) 986-0675
john.pouley@oregon.gov

Comments on Madras Solar Energy Facility, Exhibit H
12/30/2020

Jason D. McClaughry, Oregon RG#2087
Oregon Department of Geology and Mineral Industries|Baker City Field Office
1995 3rd Street, Suite 130 | Baker City, Oregon 97814
Cell: (541) 519-3419
jason.mcclaughry@oregon.gov| https://www.oregongeology.org

General comments on Exhibit H.

- A quality report that addresses the necessary geotechnical aspects and mitigations. Oly a few minor comments or suggestions for additional sources of information in the area.
- Minor. Page H-2, section H.3.3.2 Bedrock Geologic Units. The paragraph describes the Deschutes Formation as consisting primarily of basalt flows with interbedded volcanic sediments. At the Madras location the Deschutes Formation is dominated by volcaniclastic sedimentary rocks and silicic tuff. The basalt of Tetherow Butte is interbedded with these sedimentary rocks and tuff. Lava flows are a dominant part of the formation closer to the Cascade Range crest and in intrabasinal vent areas south of Madras.

  Also note OGDC has recently been re-released as an updated 2020 version. The new release does not show any changes to your specific area of interest but the Ma and others (2009) reference is out of date. You can find OGDC-7 here.
  https://www.oregongeology.org/pubs/dds/p-OGDC-7.htm

Reference to the OGDC-7 is

Franczyk, J. J., Madin, I. P., Duda, C. J. M., and McClaughry, J. D., 2020, Oregon geologic data compilation, release 7 [OGDC-7] (statewide): Oregon Department of Geology and Mineral Industries Digital Data Series OGDC-7, Esri geodatabase. https://www.oregongeology.org/pubs/dds/p-OGDC-7.htm

- Minor. Groundwater conditions of the Deschutes basin, including the general area of the sir were discussed by Gannett and others (2001) and Lite and Gannett (2002). These would be the best references to review for this section.

Lite, K.E., Jr., and Gannett, M.W., 2002, Geologic framework of the regional ground-water flow system in the upper Deschutes Basin, Oregon: U.S. Geological Survey Water Resources Investigation Report 02-4015, 44 p. https://pubs.er.usgs.gov/publication/wri024015

Gannett, M.W., and Lite, K.E., Jr., 2004, Simulation of regional groundwater flow in the upper Deschutes Basin, Oregon: U.S. Geological Survey Water Resources Investigation Report 03-4195, 84 https://pubs.usgs.gov/wri/wri034195/pdf/wri034195.pdf

- Minor. Another source of Geologic Hazard information to consult is DOGAMI's Haz Vu site. https://gis.dogami.oregon.gov/maps/hazvu/
- Minor. Page H-9. Behavior of subsurface materials. Landslides are unlikely at the site as the authors note. However, Hurbers Canyon has moderate to high potential for landslides. Worth noting evne if a very small part of the site. There are landslide deposits present along parts of the Deschutes and Willow Creek drainages. Ensuring adequate setback from basalt rim rock areas will lessen landslide hazard. Basalt rimrock in the area is prone to calving and toppling along tension cracks and columnar joint fractures.
- Minor. Page h-9. SLIDO has been updated as of October 2020. **Updates:**
  October 30, 2020: SLIDO-4.2 released. SLIDO-4.2 includes data from DOGAMI Open-File Report O-20-13, Landslide hazard and risk study of Tillamook County, Oregon. SLIDO-4.2 has 53,311 landslide

polygons in the Deposits feature class dataset from 359 studies, 14,326 historical landslide point locations, and 72 locations of detailed studies.
https://www.oregongeology.org/slido/data.htm

**Attachment C: Draft Proposed Order Index/Comments**

| Commenter Name | Organization | Date | Comment Description |
|---|---|---|---|
| Jason McLaughry | Oregon Department of Geology and Mineral Industries | 4/19/2021 | Structural Standard Conditions 2 and 6 |
| Seth Thompson | Oregon Department of Aviation | 4/22/2021 | Public Services Condition 2 |
| Phil Stenbeck | Jefferson County, Community Development Director | 4/22/2021 | General, support |
| Scott Piscatello | Ecoplexus, applicant | 4/22/2021 | General, support |

**From:** MCCLAUGHRY Jason * DGMI
**Sent:** Monday, April 19, 2021 8:46 AM
**To:** MCVEIGH-WALKER Chase * ODOE
**Cc:** ESTERSON Sarah * ODOE; CLIFFORD Katie * ODOE
**Subject:** RE: Public Notice Issued for Draft Proposed Order on Madras Solar Energy Facility

---

Dear Chase:

I have carefully reviewed the draft proposed order for the Madras PV1 solar energy facility. I only have a brief comment in regards to Page 32 of the main document and Attachment A page 7 where the document refers to the structural standard.

1. In recommended structural standard 1, the last sentence says "The site-specific geotechnical investigation shall include a site-specific probabilistic seismic hazards assessment to inform Site Class design (see Structural Standard Condition 2)". In recommended structural standard 2 it states that "the certificate holder shall design, engineer and construct facility components for Site Class B, unless site class changes as a result of the site-specific geotechnical investigation (Structural Standard Condition 1)". These two statements appear to be at odds. Why say in 1 that site class will be determined by further investigation and then in the next statement interpret that the site is "class B" pending further investigation? Site class determined on the basis of the geotechnical investigation should be sufficient.

*Best Regards,*
*Jason*

**Jason D. McClaughry, RG**
**Eastern Oregon Regional Geologist|**
**National Cooperative Geologic Mapping Program (STATEMAP) Coordinator for Oregon**
**Oregon Department of Geology and Mineral Industries|Baker City Field Office**
1995 3rd Street, Suite 130 | Baker City, Oregon 97814
Cell: (541) 519-3419
jason.mcclaughry@oregon.gov| https://www.oregongeology.org

*Unless otherwise indicated, all information in this correspondence is classified as Level 1, "Published" according to State of Oregon statute and administrative policy.*

---

**From:** MCVEIGH-WALKER Chase * ODOE <Chase.McVeigh-Walker@oregon.gov>
**Sent:** Tuesday, March 23, 2021 5:51 PM
**To:** BLEAKNEY Leann <lbleakney@nwcouncil.org>; cityhall@cityofculver.net; lvattimo@ci.madras.or.us; metolius1911@gmail.com; SHEERAN Kristen * GOV <Kristen.SHEERAN@oregon.gov>; MINER Jason * GOV <Jason.MINER@oregon.gov>; MILLS David <david.mills@state.or.us>; JOHNSON Jim * ODA <jjohnson@oda.state.or.us>; rmeinke@oda.state.or.us; Brownj@science.oregonstate.edu; Matthew.A.LAWYER@aviation.state.or.us; jeff.caines@aviation.state.or.us; Seth.THOMPSON@aviation.state.or.us; heather.peck@aviation.state.or.us; MUIR Jonathan D <Jonathan.D.Muir@state.or.us>; BREUNER Nancy <Nancy.Breuner@state.or.us>; NIGG Eric <Eric.Nigg@state.or.us>; HAYES-GORMAN Linda <Linda.HAYES-GORMAN@state.or.us>; NADLER Carl * DEQ <carl.nadler@deq.state.or.us>; STERGER Justin * DEQ <justin.sterger@deq.state.or.us>; SVELUND Greg * DEQ <greg.svelund@deq.state.or.us>; BAILEY Mark <Mark.Bailey@state.or.us>;

DRUBACK Lissa <Lissa.DRUBACK@state.or.us>; DOUGHTEN Ron A * DEQ <ron.a.doughten@deq.state.or.us>; REIF Sarah J <Sarah.J.Reif@state.or.us>; JACKLE Greg S <Greg.S.Jackle@state.or.us>; JTokarczyk@ODF.state.or.us; MCCLAUGHRY Jason * DGMI <Jason.MCCLAUGHRY@oregon.gov>; WANG Yumei * DGMI <Yumei.WANG@oregon.gov>; dgmi_accounts.payable@agency.gov; JININGS Jon <jon.jinings@state.or.us>; timothy.murphy@state.or.us; Daniel.Evans@state.or.us; RYAN Peter; TAYLOR Trevor * OPRD <Trevor.Taylor@oregon.gov>; MULDOON Matt <matt.muldoon@state.or.us>; CANE Jason <jason.cane@state.or.us>; BJORK Mary F * WRD <Mary.F.Bjork@oregon.gov>; CLEARANCE ORSHPO * OPRD <ORSHPO.Clearance@oregon.gov>
**Subject:** Public Notice Issued for Draft Proposed Order on Madras Solar Energy Facility

Good afternoon,

Madras PV1, LLC, a wholly owned subsidiary of Ecoplexus Inc. (applicant) filed a complete Application for Site Certificate (ASC) on November 9, 2020; the ASC and additional information submitted by the applicant may be viewed via hyperlinks provided below or in hard copy at the Oregon Department of Energy Salem office. On March 23, 2021, the Department issued its Draft Proposed Order (DPO) on the ASC, and its Notice of a Public Hearing on the DPO and of an opportunity to provide comments on the DPO. The Department is now seeking written comments on the DPO, with an opportunity to provide in-person testimony at the hearing described below. All comments on the DPO must be received by the close of the public hearing on **Thursday, April 22, 2021**.

Written comments must be submitted in writing by mail, email, hand delivery or fax (see below):

Chase McVeigh-Walker, Senior Siting Analyst
Oregon Department of Energy
550 Capital Street NE
Salem, OR 97301
Email: chase.mcveigh-walker@oregon.gov

The Department will hold a public hearing on the Draft Proposed Order, and below are details on the Hearing:

**Date**: Thursday, April 22, 2021
**Start Time**: 5:30 p.m.
**End Time**: 6:15 p.m., or later based on public participation.
**Location**: Inn at Cross Keys Station
66 NW Cedar St,
Madras, OR 97741

**Teleconference/Webinar Presentation**:
https://odoe.webex.com/odoe/onstage/g.php?MTID=e0ebc91c43e1c6ac636a5f452ebc65a4f
**Call-in**: (408) 418-9388
**Code**: 129 873 5625

*ODOE strongly recommends joining the hearing via Webex, if possible. When you join, please use your full name to sign in to help staff manage public comments. Additional information will be provided at the hearing about how to provide an oral comment using Webex features.*

**Written or oral comments must be received by the close of the Public Hearing to be eligible to participate in a contested case on this ASC.**

More information about the proposed facility including the ASC and DPO, the public notice, and updates on the review process, are available at no cost online at: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MSE.aspx

Please feel free to contact me if you have any questions.

Thanks,
-Chase

OREGON DEPARTMENT OF ENERGY

**Chase McVeigh-Walker**
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 503-934-1582
P (In Oregon): 800-221-8035



Oregon
Kate Brown, Governor

OREGON DEPARTMENT OF AVIATION

**TO:** Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St N.E., 1st Floor
Salem, OR 97301

**FROM:** Seth Thompson, Aviation Planner
Oregon Department of Aviation
3040 25th Street, SE
Salem, OR 97302-1125
503-378-2529
Seth.Thompson@aviation.state.or.us

**DATE:** April 22, 2021

**RE:** Oregon Department of Aviation Agency Comments on the Draft Proposed Order for the Madras Solar Energy Facility

---

Dear Chase McVeigh-Walker:

The Oregon Department of Aviation (Aviation) has reviewed the Madras Solar Energy Facility Draft Proposed Order and provides the following report, request and recommendations:

**Aviation Report**
Aviation has expressed concerns with recommended Public Services Condition 2. As written, the condition omits the opportunity for Aviation to review the final location of aboveground facility components to determine whether those components would be an obstruction to air navigation, as defined in OAR 738-070-0110. Aviation's obstruction evaluation of facility components is an important consideration for the Energy Facility Siting Council under its Public Services standard and the evaluation of impacts to air traffic service providers.

As noted in the DPO and ASC, the applicant obtained FAA determinations of no hazard. However, these FAA determinations only identify the facility boundary using fixed points with a maximum structure height of 40 feet. These FAA determinations imply that facility components are unlikely to be obstructions to navigable airspace. However, these determinations do not account for all aboveground facility components such as the 230 kV transmission line, which includes 80-foot structures.

Aviation acknowledges that ORS 836.535(2) precludes Aviation from issuing hazard determinations for structures that are part of an EFSC ASC or have received prior approval from the FAA, both of which apply to the proposed

facility. However, this statute does not preclude Aviation from implementing its rules under OAR Chapter 738, nor does it preclude applicants from demonstrating compliance with OAR Chapter 738.

**Aviation Request**
Aviation performs obstruction evaluations on proposed structures near public-use airports and private airports in an effort to protect the airspace of all airports in Oregon. Aviation also examines future projects and land use actions related to aviation in accordance with state law. In contrast, the FAA only includes public-use airports in its review when performing obstruction evaluations.

For this reason, Aviation requests that the Department amend its recommended Public Services Condition 2 to result in a two-step process. The two-step process would require that the applicant initiate obstruction review with Aviation first, then be followed by the FAA's review. Allowing Aviation to complete its obstruction review first affords Aviation an opportunity to notify its stakeholders that the same proposal will soon be evaluated by the FAA. Early notification of the proposal allows stakeholders to provide comment to the FAA. However, it is important to note that the FAA does not open a public comment period for all obstruction reviews.

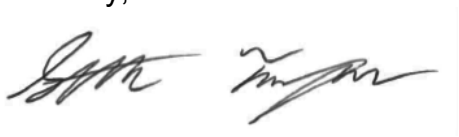
**Aviation Recommendation**
Aviation's proposed changes to the recommended condition are presented below:

**Recommended Public Services Condition 2**: The certificate holder shall:
a. First, submit to and receive responses from the Oregon Department of Aviation (Aviation) of 7460-1 Notice of Proposed Construction or Alteration Forms for all aboveground facility components. Certificate holder shall provide copies of Aviation responses, which must be consistent with ORS 836.535(2), to the Department and shall respond to Aviation marking and lighting recommendations, if applicable.
b. Second, once Aviation responses on 7460-1 forms are received, submit to and receive an extension of the Federal Aviation Administration's (FAA) September 3, 2019 Determination of No Hazard to Air Navigation for facility components; or, if the FAA determinations have expired, submit to and receive determinations from the FAA for all aboveground facility components. Certificate holder shall provide copies of FAA determinations to the Department.
c. Within 5-days of construction, certificate holder shall submit 7460-2 forms to FAA and Aviation and shall report both timing of submission and any results to the Department.
[GEN-PS-02]

**Aviation Conclusion**
Aviation acknowledges that the FAA determinations received by the applicant, as provided in ASC Exhibit E, demonstrate a reasonable likelihood that the proposed facility would not result in an obstruction for the Bombay Airport, a private airport adjacent to the proposed facility site boundary, and that there are no other private or public-use airports that would be impacted. Nonetheless, as with many site certificate conditions, Aviation requests that the above condition be implemented to allow for a preconstruction evaluation/validation of facility components to confirm that structures are not obstructions or are appropriately mitigated.

Aviation also requests that if the Department has any questions about the above-recommended changes to the condition or reasoning provided in this letter, it consult with Aviation staff prior to issuance of the proposed order, as is authorized in OAR 345-015-0230(2). Please contact Aviation at 503-378-2529 or Seth.Thompson@aviation.state.or.us.

Sincerely,



Seth Thompson
Aviation Planner

CC: Heather Peck
Planning & Projects Manager
Oregon Department of Aviation

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

# ENERGY FACILITY SITING COUNCIL (EFSC)

4/22

Date: _____ Location: _____

REGISTRATION FOR ~~PUBLIC COMMENT~~ Madras DPO Hearing

Name: Scott Piscatello, Sr. Vice President, Ecoplexis

Address: _____

I represent (if applicable) Applicant

*Print your name OR your organization/business name.*

☐ Send me future notifications about Council meetings via email.
My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

- Thank staff for the efforts on project
- Clean project, benefits to community

*PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.*

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

# ENERGY FACILITY SITING COUNCIL (EFSC)

4/22

Date: _____ Location: _____

REGISTRATION FOR ~~PUBLIC COMMENT~~ → Madras DPO Hearing

Name: Phil Sterbeck, Community Development Director, Jefferson County Land use

Address: _____

I represent (if applicable) Jefferson County

*Print your name OR your organization/business name.*

☐ Send me future notifications about Council meetings via email.
My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

_____

_____

_____

_____

_____

_____

_____

_____

*PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.*

# Attachment D: Draft Outline of Spill Prevention, Control and Countermeasure Plan

# Proposed Outline of Spill Prevention, Control, and Countermeasure Plan

**Plant Information Page**

**SPCC Plan Certification Page**

**Engineer Certification**

**Plan Review and Revision**

**1. Introduction**

1.1 Objectives and Scope of Plan

1.2 Plan Format and Content

**2. Plant Description**

2.1 Plant Area

2.2 Solar Array

2.3 O&M Building and Substation

2.4 Summary of Oil Containers and Equipment

**3. Plan Requirements and Activities**

3.1 Fault Analysis and Containment Measures

3.2 Inspections

3.3 Spill Response

3.4 Recordkeeping

3.5 Training

3.6 Security

**Appendix A** Site Map

**Appendix B** Container/Equipment Data Sheets

**Appendix C** Substantial Harm Certification Determination

# Attachment E: Draft Erosion and Sediment Control Plan and Best Management Practices

# Erosion and Sediment Control Plan

# ESCP PARTS I THROUGH III FORMS

The information that is required in the ***Part I, and Part II ESCP Narrative Forms*** could be included on the required ***ESCP Drawings*** instead of submittal of the ***Narrative Forms.*** The ***Narrative Part III Section 1*** form is a checklist for use in making sure that all of the required information is provided in the submittal documents and as such does not need to be submitted to DEQ.

***Narrative Part III Section 2*** must be included on the ***ESCP Drawings***. The set of ***Example Construction Plan Drawings*** (examples to be used as an alternative to the Narrative Forms) are provided at: http://www.deq.state.or.us/wq/stormwater/constappl.htm.

# PART 1: ESCP NARRATIVE FORM

## 1. Permit Registration Information

Date: 11/18/2019

Project Name: Madras PV1

Prepared By: Brad Ostapkowicz

Company Name: Jacobs

E-mail Address: brad.ostapkowicz@jacobs.com

Please answer the following questions as indicated. If needed, additional space is provided for you at the end of this form. You may also attach any information you feel is pertinent to the project.

## 2. Oregon Professional Certification Information

Is your Erosion and Sediment Control Plan (ESCP) for an activity that covers 20 acres or more of disturbed land (Schedule A.12.a.i)

☒ Yes ☐ No

Does your Erosion and Sediment Control Plan require engineered facilities such as settling basins and/or diversion structures? (Schedule A.12.a.ii)

☐ Yes ☒ No

If you answered "Yes" to question #1, the ESCP must be prepared and stamped by an Oregon Registered Profession Engineer, Oregon Registered Landscape Architect, Oregon Certified Engineering Geologist, or Certified Professional in Erosion and Sediment Control (Soil and Water Conservation Society). If you answered "Yes" to question #2, the ESCP must be prepared and stamped by an Oregon Registered Professional Engineer. Please provide the following information and use the space provided to imprint your seal.

Name: Brad Ostapkowicz

Address: 202 SW 4th Ave Suite 300

Telephone: 503-235-5022




**Imprint Seal Above**

## 3. Inspector Qualification Information

Provide the following information on the Erosion and Sediment Control Inspector. This is a person that works for the applicant and not a government employee. The consultant, general contractor, project manager, or person who prepared the ESCP may be designated with their agreement as the initial or final ESC Inspector. Upon designating an inspector(s), submit to DEQ or Agent their name(s), and contact information. All designated ESC Inspectors must be qualified through certification, training, and/or experience in erosion and sediment control. Please provide the number of hours of training, days, months, and/or years of experience in erosion and sediment control design, installation, maintenance, and/or inspection (specify which or all). (NPDES 1200-C Permit Schedule A.12.b.iii).

The inspector is a person with training and experience in erosion prevention and sediment controls and best management practices and should have one of the following levels of skill. A copy of a certification, training, or level/hours of experience should be provided to DEQ or Agent in the form below:

Acceptable Certification (Schedule A.12.b.iii.2):

a. Certified Professional in Erosion and Sediment Control (CPESC),
b. Certified Professional in Storm Water Quality (CPSWQ),
c. Washington Department of Ecology's Certified Erosion and Sediment Control Lead (CESCL) Certification,
d. Rogue Valley Sewer Services Erosion and Sediment Control Certification.

*After January 1, 2017, for projects that are five or more acres, inspectors must have at least one of these acceptable certifications.

Acceptable Training:

a. Certification/training program designed for persons involved in any phase of erosion and sediment control work. Areas covered must include information on soils, the erosion process, sedimentation process, standards and specifications for vegetative and structural erosion control practices, laws, regulations, construction inspection and field investigation; or

b. Attendance at a seminar or training class in Erosion and Sediment Control Best Management Practices (BMPs).

Qualified Experience:

a. Designing Erosion and Sediment Control Plans and/or

b. Installation of erosion and sediment controls and/or

c. Maintenance of erosion and sediment controls and/or

d. Inspection of erosion and sediment controls

Name: Shannon Bartow Telephone: 503-872-4813

Address: _____ E-mail: _____

Certificate Program and number: _____

Training: _____

Experience: _____

**4. Narrative Site Description**

a. Describe the nature of the construction activity and the final use of the site, that is, what will the site be used for at the completion of the construction. (Schedule A.12.b.iv):

b. Describe the origin and nature of fill material to be used and soils prior to disturbance. (Schedule A.12.b.iv.4):

**5. Water Quality Requirements for TMDL and 303(d) Listed Waterbodies (skip if not applicable)**

If there is a potential for discharge of stormwater to directly discharge or discharge through a conveyance system to a portion of a waterbody that is listed for turbidity or sedimentation or that has an established Total Maximum Daily Load (TMDL) for sedimentation or turbidity from the construction site, then one or more of the BMPs listed below must be implemented. Identify the selected BMP(s) in the ESCP as one that addresses this condition of the permit, and provide the rationale for choosing the selected BMP(s). (Schedule A.11.) The 303 (d) list can be found at: http://www.deq.state.or.us/wq/assessment/rpt2010/search.asp. Search under Category 5 (303(d)) and Category 4a (TMDL approved).

Will implement one or more of the following BMPs to control and treat sediment and turbidity:

i. Compost berms, compost blankets, or compost socks;
ii. Erosion control mats;
iii. Tackifiers used in combination with perimeter sediment control BMPs;
iv. Established vegetated buffers sized at 50 feet perpendicular to the slope plus an additional 25 feet perpendicular to the slope per 5 degrees of slope full width of the disturbed slope
v. Water treatment by electro-coagulation, flocculation, filtration; or
vi. Other substantially equivalent sediment or turbidity BMP approved by DEQ or Agent.

| **BMP** | **Rationale** |
|---|---|
| N/A | |
| | |
| | |

**6. Natural Buffer Zone**

a. If a waters of the state is within the project site or within 50 feet of the project boundary, and a natural buffer exists within 50 feet of the water of the state, the ESCP must delineate and protect this area with orange fencing or flagging and maintain existing buffer until completion of project. All discharge must be filtered prior to entering the natural buffer to avoid sediment build up. If scour is an issue, an energy dissipater may need to be installed.

***Natural Buffer*** means, for the purposes of this permit, an area of undisturbed natural cover surrounding surface waters within which construction activities are restricted. Natural cover includes the natural vegetation, exposed rock, and barren ground that existed prior to commencement of earth-disturbing activities.

b. If project will reduce natural buffer zone under 50 feet of waters of the state, the ESCP must include one or more of the following BMPs to control and treat sediment and turbidity:

i. Compost berms, compost blankets, or compost socks;
ii. Erosion control mats;
iii. Tackifiers used in combination with perimeter sediment control BMPs;
iv. Water treatment by electro-coagulation, flocculation, filtration; or
v. Other substantially equivalent sediment or turbidity BMP approved by DEQ or Agent.

| **BMP** | **Rationale** |
|---|---|
| N/A | |
| | |
| | |

c. The Natural Buffer Zone requirements do not apply if:
   *(1)* No natural buffer exists due to development that occurred prior to the initiation of planning for the current project; or
   *(2)* There is no discharge of stormwater to the water of the state through the area between the disturbed portions of the site and the surface water located within the project site or within 50 feet of the site. This includes situations where the permit registrant has implemented control measures, such as a berm or other barrier, that will prevent such discharges; or
   *(3)* There is a CWA Section 404 permit and 401 WQC issued for the project; or
   *(4)* Construction is for a water-dependent structure or water access areas (for example, pier, boat ramp, or trail).

## PART II: BMPS WITH ESCP IMPLEMENTATION SCHEDULE FORM

The following controls and practices (BMPs), if appropriate for the site, are required in the ESCP. Submission of all ESCP revisions to DEQ are not required. ESCP revisions must be submitted in 10 days for specific conditions. See 1200-C permit (Schedule A.12.c.iv).

| YEAR: | 2021-2022 | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BMPs** **MONTH #:** | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | | | | | | | | | |
| Biobags | | | | | | | | | | | | | | | | | | | |
| Bioswales | | | | | | | | | | | | | | | | | | | |
| Check Dams | | | | | | | | | | | | | | | | | | | |
| Compost Berm | | | | | | | | | | | | | | | | | | | |
| Compost Blankets | | | | | | | | | | | | | | | | | | | |
| Compost Socks | | | | | | | | | | | | | | | | | | | |
| Concrete Truck Washout | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Construction Entrance | X | X | X | X | X | X | X | X | X | X | | | | | | | | | |
| Dewatering (treatment location, schematic, & sampling plan required) | | | | | | | | | | | | | | | | | | | |
| Drainage Swales | | | | | | | | | | | | | | | | | | | |
| Earth Dikes (Stabilized) | | | | | | | | | | | | | | | | | | | |
| Energy Dissipaters | | | | | | | | | | | | | | | | | | | |
| Erosion Control Blankets & Mats (Specify type) - Jute | X | X | X | X | X | X | X | X | X | X | | | | | | | | | |
| Hydroseeding | X | X | X | X | X | X | X | X | X | X | | | | | | | | | |
| Inlet Protection | | | | | | | | | | | | | | | | | | | |
| Mulches (Specify Type) - Straw | X | X | X | X | X | X | X | X | X | X | | | | | | | | | |
| Mycorrhizae/ Biofertilizers | | | | | | | | | | | | | | | | | | | |
| Natural Buffer Zone | | | | | | | | | | | | | | | | | | | |
| Orange fencing (protecting sensitive/preserved areas) | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Outlet Protection | | | | | | | | | | | | | | | | | | | |
| Permanent Seeding and Planting | | | | | | | | X | X | X | | | | | | | | | |
| Pipe Slope Drains | | | | | | | | | | | | | | | | | | | |
| Plastic Sheeting | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Preserve Existing Vegetation | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Sediment Fencing | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Sediment Barrier | | | | | | | | | | | | | | | | | | | |
| Sediment Trap | | | | | | | | | | | | | | | | | | | |
| Sodding | | | | | | | | | | | | | | | | | | | |
| Soil Tackifiers | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Storm Drain Inlet Protection | | | | | | | | | | | | | | | | | | | |
| Straw Wattles (or other materials) | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Temporary Diversion Dikes | | | | | | | | | | | | | | | | | | | |
| Temporary or Permanent Sedimentation Basins | | | | | | | | | | | | | | | | | | | |
| Temporary Seeding and Planting | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Treatment System (O & M plan required) | | | | | | | | | | | | | | | | | | | |
| Unpaved roads graveled or other BMP on the road | X | X | X | X | X | X | X | | | | | | | | | | | | |
| Vegetative Buffer Strips | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

## GENERAL PROJECT INFORMATION

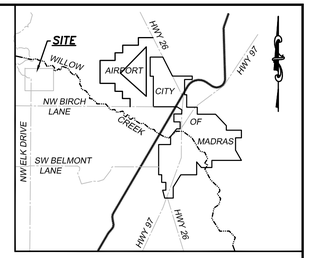
| | |
|---|---|
| PROJECT NAME: | MADRAS PV1 |
| PROJECT ADDRESS: | LAT.: 44.65°, LON.:-121.25° |
| DEVELOPER NAME: | ECOPLEXUS |
| DEVELOPER ADDRESS: | 101 2ND ST., STE. 1250, SAN FRANCISCO, CA 94105 |

## PROJECT LOCATION

THE PROPOSED PROJECT IS LOCATED ON AN UNCULTIVATED SITE IN AN UNINCORPORATED AREA OF JEFFERSON COUNTY, OREGON.

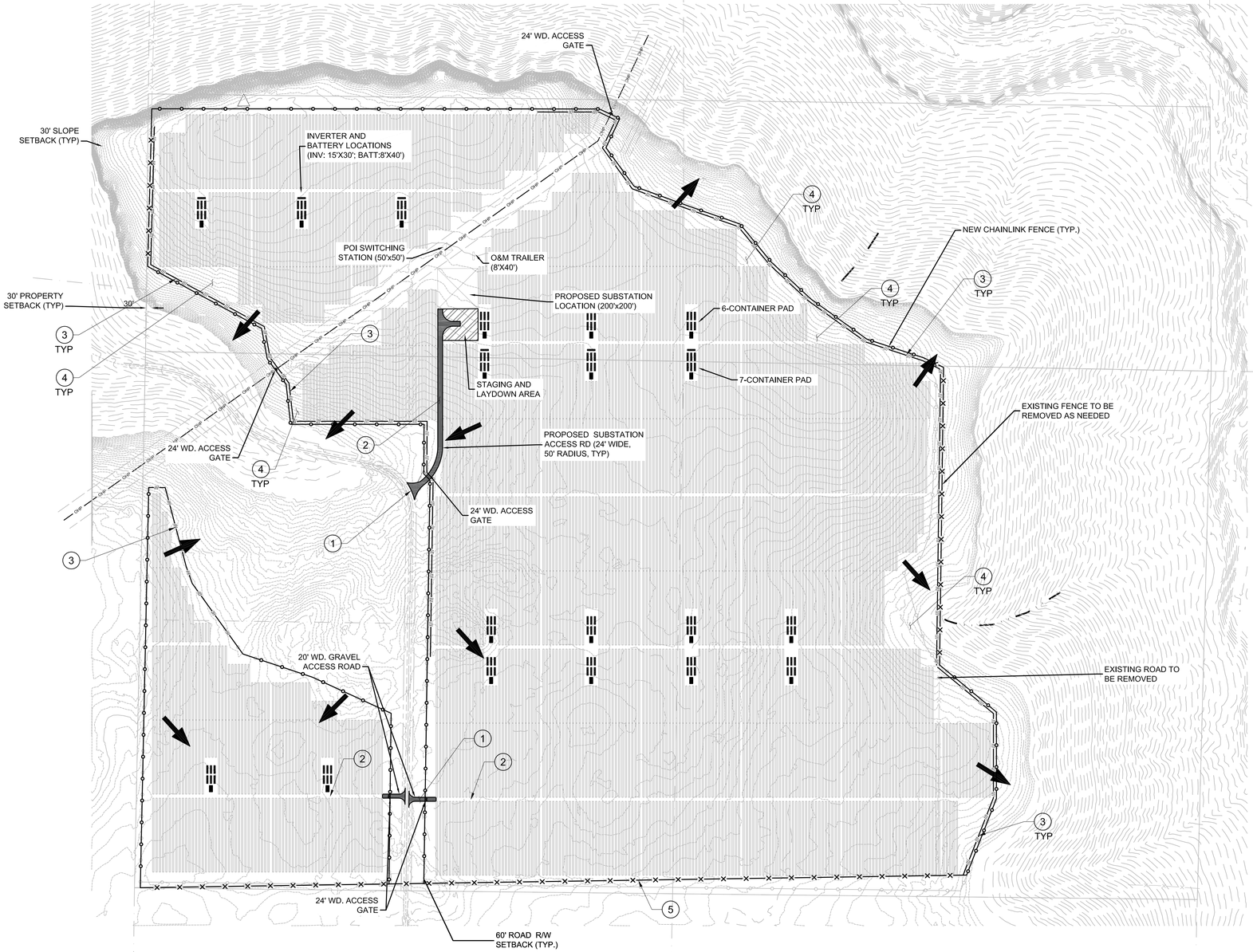
## NARRATIVE DESCRIPTION

THE PROPOSED PROJECT INCLUDES THE CONSTRUCTION OF A 63-MEGAWATT PHOTOVOLTAIC (PV) SOLAR POWER GENERATION FACILITY. THE FACILITY WILL GENERATE ELECTRICITY USING SOLAR PV MODULES CONNECTED TO INVERTERS, TRANSFORMERS, AND A SUBSTATION. CONSTRUCTION ACTIVITIES INCLUDE GRADING, CLEARING, AND CONCRETE SLAB PRODUCTION.




**VICINITY MAP**

NOT TO SCALE




## KEYED NOTES

1. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
2. WHERE PERMANENT ACCESS ROADS OR IMPROVED TEMPORARY CONSTRUCTION ACCESS ROADS ARE REQUIRED, CLEAN ANGULAR ROCK WILL BE USED AND MAINTAINED THROUGHOUT CONSTRUCTION DURATION TO PREVENT ROADS FROM BECOMING A SOURCE OF SEDIMENTATION. RESTORATION OF TEMPORARY CONSTRUCTION ACCESS ROADS WILL INCLUDE EITHER SPREADING MULCH, USING A TACKIFIER AND SEEDING, AND WILL OCCUR FOLLOWING CONSTRUCTION ACTIVITIES.
3. INSTALL SILT FENCE ON CONTOUR, ON AREAS DOWNGRADE OF AND PRIOR TO LAND DISTURBING ACTIVITIES.
4. STABILIZE STEEPER SLOPES DISTURBED DURING CONSTRUCTION WITH SOIL ROUGHENING, STRAW WATTLES OR JUTE MATTING (SEE DETAILS ON SHEET EC-03). WATTLES WILL BE INSTALLED PERPENDICULAR TO FLOW AND PARALLEL TO THE SLOPE CONTOUR.
5. MAINTAIN EXISTING FENCE AS BOUNDARY FOR CONSTRUCTION AND LAND DISTURBING ACTIVITIES. SILT FENCE MAY FOLLOW FENCE WHERE APPLICABLE.

## LEGEND & SYMBOLS

- SECTION OR SECTION SUBDIVISION LINE
- PARCEL BOUNDARY
- ROADWAY CENTERLINE
- RIGHT OF WAY BOUNDARY
- EASEMENT BOUNDARY
- EXISTING FENCE TO BE USED AS CONSTRUCTION FENCE
- SILT FENCE
- CONSTRUCTION FENCE
- OVERHEAD POWER LINE
- EDGE OF ASPHALT ROAD
- EDGE OF DIRT ROAD
- ONSITE STREAM DETERMINED BY OTHERS
- 10-FOOT CONTOUR LINE
- 10-FOOT CONTOUR LINE
- 100-FOOT CONTOUR LINE
- UTILITY POLE
- FOUND MONUMENT AS NOTED
- DRAINAGE FLOW DIRECTION

NOTE:

THIS MAP OR PLAT AND THE SURVEY PROVIDED BY PBS ENGINEERING AND ENVIRONMENTAL INC., BY GREG E. FLOWERS, ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 8, 9, 11, 13, 18, AND 20 OF TABLE A THEREOF. THE FIELD WORK WAS BEGUN ON OCTOBER 25, 2018, AND CONCLUDED ON NOVEMBER 7, 2018. DATE OF PLAT OR MAP: FEBRUARY 1, 2019

300' 150' 0 300'

SCALE: 1" = 300'

THIS DRAWING IS THE PROPERTY OF ECOPLEXUS, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY ECOPLEXUS, LLC. NO PART IS TO BE DISCLOSED TO OTHERS OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM ECOPLEXUS, INC. OR ITS SUBSIDIARIES.

ecoplexus
ECOPLEXUS, Inc.
101 Second Street, Ste. 1250
San Francisco, CA 94105
Ph: 415-629-1802
Fx: 415-449-3466

| REV | DATE | DESCRIPTION |
|---|---|---|

MADRAS PV1

JEFFERSON COUNTY OREGON

| | |
|---|---|
| APPROVED BY: | BO |
| DESIGNED BY: | SB |
| DRAWN BY: | BG |
| SCALE: | 1" = 300' |
| DATE: | 11/5/2019 |

DRAWING DESCRIPTION:

ESCP PLAN

LEVEL C

DRAWING No:

EC-01

## INSPECTION FREQUENCY

| SITE CONDITION | MINIMUM FREQUENCY |
|---|---|
| 1. ACTIVE PERIOD | DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOW MELT, IS OCCURRING.<br><br>AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING. |
| 2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY | ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURE ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE. |
| 3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS | ONCE EVERY MONTH. |
| 4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER | IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION. |
| 5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS. | MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY. |

## SOIL TYPES

FOUR PREDOMINANT SOIL TYPES ARE FOUND AT THE SITE: CULLIUS LOAM (0 TO 3 PERCENT SLOPES, UNIT 30A), CULLIUS LOAM (3 TO 8 PERCENT SLOPES, UNIT 30B), MADRAS LOAM (0 TO 3 PERCENT SLOPES, UNIT 87A), AND MADRAS LOAM (3 TO 8 PERCENT SLOPES, UNIT 87B).

## RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S 1200-C PERMIT APPLICATION AND ESCP GUIDANCE DOCUMENT HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMPS WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS, TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS. AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESCP, AN ACTION PLAN WILL BE SUBMITTED.

THE SITE SPECIFIC EROSION CONTROL NOTES ARE THE BMPS THAT WERE CHOSEN FOR THIS SITE, AND REPRESENT THE BMPS THAT SHOULD BE FOLLOWED.

_________ INITIAL

## ATTENTION EXCAVATORS

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BEFORE COMMENDING AN EXCAVATION. CALL 503-246-6699.

THIS DRAWING IS THE PROPERTY OF ECOPLEXUS, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY ECOPLEXUS, LLC. NO PART IS TO BE DISCLOSED TO OTHERS OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM ECOPLEXUS, INC. OR ITS SUBSIDIARIES.

## STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES

1. HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
2. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SCHEDULE A.12.B AND SCHEDULE B.1)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SCHEDULE B.1.C AND B.2)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, THE ABOVE RECORDS MUST BE RETAINED BY THE PERMIT REGISTRANT BUT DO NOT NEED TO BE AT THE CONSTRUCTION SITE. (SCHEDULE B.2.C)
5. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A 8.A)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SCHEDULE A.12.C.I)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SCHEDULE A.12.C.IV. AND V)
8. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.7.A.III)
9. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) AND (2))
10. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.A.V)
11. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SCHEDULE A.7.B.I.AND (2(A)(B))
12. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SCHEDULE A.8.C.I.(5))
13. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SCHEDULE A.7.C)
14. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SCHEDULE A.7.D.I
15. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
16. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS.(SCHEDULE A.8.C.II.(3))
17. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
18. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A 7.D.II AND A.8.C.I(4))
19. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(5))
20. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SCHEDULE A.6)
21. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
22. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCHEDULE A. 7.E.III.)
23. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A 7.A.IV)
24. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.III)
25. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
26. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B)
27. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.II.(2))
28. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND BARE GROUND ACTIVITIES DURING WET WEATHER. (SCHEDULE A.7.A.I)
29. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
30. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.I)
31. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III& IV)
32. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
33. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
34. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
35. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
36. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. (SCHEDULE A.8.C.III(1) AND D.3.C.II AND III)

## GENERAL NOTES

1. THE PREDOMINANT SOIL TYPE IN THIS AREA HAS MODERATE TO HIGH SUSCEPTIBILITY TO WIND EROSION AND IS MODERATELY PRONE TO WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED, AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE EROSION CONTROL FACILITIES OR MEASURES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
4. THE EROSION CONTROL FACILITIES OR MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
5. PRIOR TO CONSTRUCTION A PRE-CONSTRUCTION MEETING WILL BE HELD TO DISCUSS ALL EROSION CONTROL FACILITIES OR MEASURES WITHIN THIS ESCP AND CONSTRUCTION LIMITS.
6. PRIOR TO ANY LAND DISTURBING ACTIVITIES EACH SITE MUST HAVE GRAVELED, PAVED, OR CONSTRUCTED ENTRANCES, EXITS AND PARKING AREAS TO REDUCE THE TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS.
7. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
8. LIMIT EXTENT OF TEMPORARY ACCESS ROAD IMPROVEMENT/CONSTRUCTION TO MINIMIZE LAND DISTURBING ACTIVITIES REQUIRING RESTORATION.
9. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
10. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT IN TO THE GROUND WITH A DISC OR A HYDROSEEDER. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. A SOIL BINDER OR TACKIFIER MAY BE INCORPORATED INTO STRAW OR MULCH. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE SEED MIXTURE APPROVED FOR USE ON SITE. SEED MIXTURE WILL GENERALLY BE THAT APPROVED BY ODFW AND THE COUNTY, HOWEVER SPECIFIC SEED MIXTURES WILL BE APPLIED WHERE ADDITIONAL AGREEMENTS APPLY. EXAMPLE SEED MIXTURES FOR PERMANENT AND TEMPORARY SEEDING ARE AS FOLLOWS:

| BOTANICAL NAME | COMMON NAME | % BY WEGHT | ACTUAL % BY SEED SIZE | REQUESTED % |
|---|---|---|---|---|
| *LOLIUM PERENNE* | PERENNIAL RYEGRASS | 39% | 9.07% | 30% |
| *FESTUCA RUBRA* | CREEPING RED FESCUE | 25% | 11.9% | 20% |
| *LOLIUM MULTIFLORUM* | ANNUAL RYEGRASS | 25% | 11.24% | 20% |
| *AGROSTIS CAPILLARIS VAR HIGHLAND* | HIGHLAND COLONIAL BENTGRASS | 7% | 64.41% | 20% |
| *TRIFOLIUM REPENS* | WHITE CLOVER | 4% | 3.38% | 10% |
| TOTALS | | 100% | 100% | 100% |
| SEEDING RATE:<br>1 PLS LBS. PER 1000 SQ. FT.<br>40 PLS LBS. PER ACRE IF APPLIED VIA HYDROSEEDING | | | | |

11. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY TEMPORARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES, SILT FENCE SHALL BE INSTALLED ON THE DOWNSLOPE SIDE OF ALL DISPOSAL AREAS ON CONTOUR. SEE DETAIL SHEET EC-03. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE TEMPORARY DISPOSAL SITES, THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
12. TEMPORARY STABILIZATION MEASURES WILL BE TAKEN TO ENSURE THAT SEDIMENT-LADEN STORMWATER DOES NOT IMPACT WATER QUALITY STANDARDS OF RECEIVING WATER BODIES. TEMPORARY STABILIZATION WILL INCLUDE MULCHING AND SEEDING OF DISTURBED AREAS, PERIMETER CONTROL OF STOCKPILE AREAS, AND COVERING TEMPORARY STOCKPILES WITH PLASTIC OR STABILIZING TEMPORARY STOCKPILES WITH STRAW MULCH.
13. WASHOUT CONCRETE TRUCK CHUTES AT DESIGNATED CONCRETE WASHOUT FACILITIES AWAY FROM PERMANENT STORM WATER MANAGEMENT FACILITIES AND ALLOW TO HARDEN FOR OFFSITE DISPOSAL (DETAIL SHEET EC-03).
14. WATTLES SHALL BE INSTALLED ALONG SLOPE CONTOURS OF DISTURBED SLOPES TO DECREASE RUNOFF VELOCITY. WATTLES WILL BE INSTALLED PERPENDICULAR TO FLOW AND PARALLEL TO THE SLOPE CONTOUR.
15. A COMPREHENSIVE LIST OF AVAILABLE BMP OPTIONS BASED ON THE ODEQ 1200-C PERMIT APPLICATION AND ESCP GUIDANCE DOCUMENT HAVE BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE BMPS THAT WILL BE UTILIZED ARE NOT DETAILED ON THIS PRELIMINARY EROSION AND SEDIMENT CONTROL PLAN. AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE EROSION AND SEDIMENT CONTROL PLAN THESE DETAILS WILL BE PROVIDED.
16. BMPS WILL FOCUS ON EROSION PREVENTION RATHER THAN SEDIMENT CONTROL.

ecoplexus
ECOPLEXUS, Inc.
101 Second Street, Ste. 1250
San Francisco, CA 94105
Ph: 415-629-1802
Fx: 415-449-3466

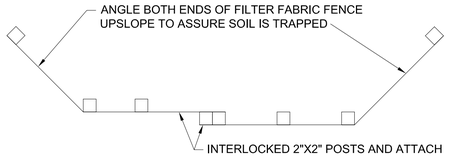
| REV | DATE | DESCRIPTION |
|---|---|---|

MADRAS PV1
JEFFERSON COUNTY
OREGON

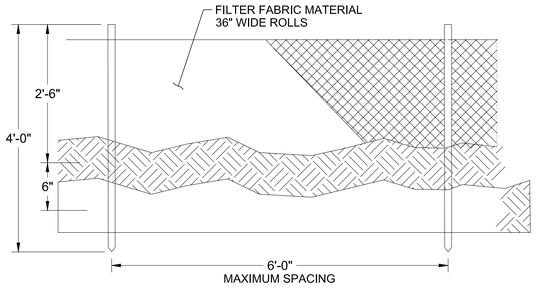
| | |
|---|---|
| APPROVED BY: | BO |
| DESIGNED BY: | SB |
| DRAWN BY: | BG |
| SCALE: | NTS |
| DATE: | 11/5/2019 |

DRAWING DESCRIPTION:
ESCP NOTES

LEVEL C
DRAWING No:
EC-02




*TOP*

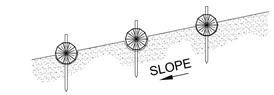



*FRONT*

NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2" x 2" FIR, PINE, OR STEEL FENCE POSTS.
3. STITCHED LOOPS TO BE INSTALLED UP HILL SIDE OF SLOPE.
4. COMPACT ALL AREAS OF FILTER FABRIC TRENCH.

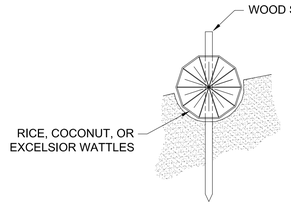
| INSTALL ALONG CONTOURS AS FOLLOWS | |
|---|---|
| % SLOPE | MAXIMUM SPACING |
| 10% OR FLATTER | 300 |
| 10% TO 15% | 150 |
| 15% TO 20% | 100 |
| 20% TO 30% | 50 |
| 30% TO 50% | 25 |

## FIELD FABRICATED SILT FENCE
NTS

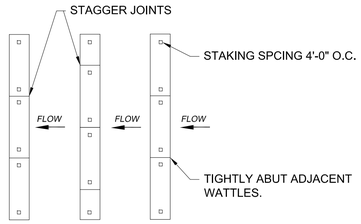



PLACE WATTLES ALONG SLOPE CONTOURS.

*PROFILE*



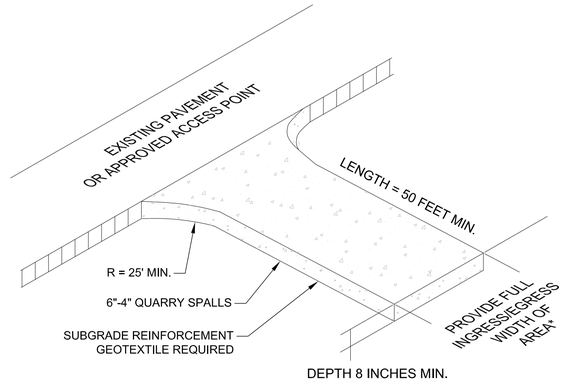

*SECTION*




*PLAN VIEW*

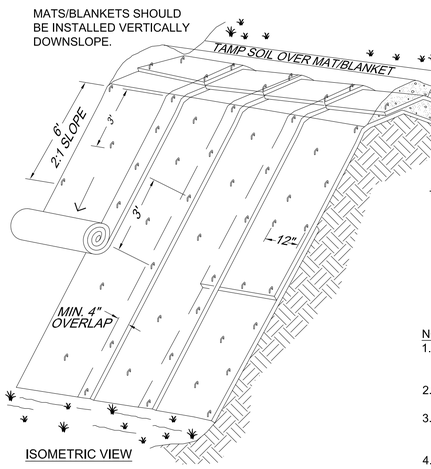
NOTES:
1. STAKING SPECIFICATIONS
   A. 1"X2" WOODEN STAKES
   B. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 940.

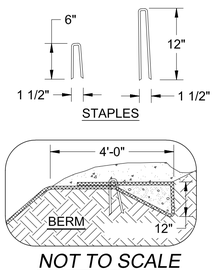
## WATTLES
NTS




*20' MIN. FOR SINGLE FAMILY AND DUPLEX RESIDENTIAL

## CONSTRUCTION ENTRANCE
NTS



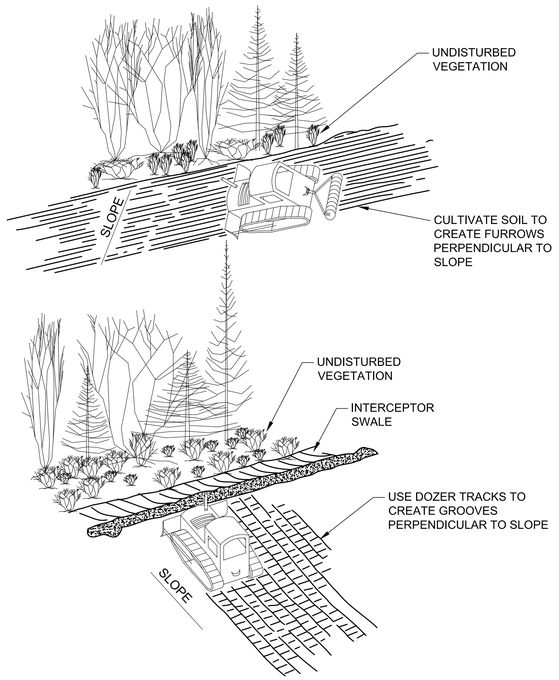




*NOT TO SCALE*

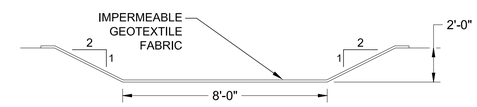
*TYPICAL SLOPE*
*SOIL STABILIZATION*

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

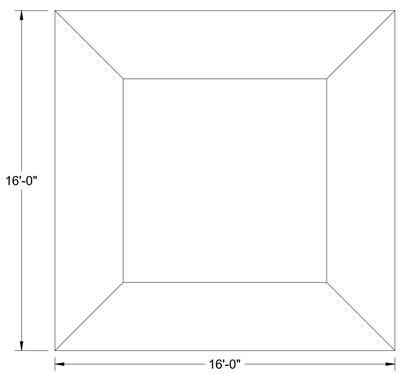
## MATTING SLOPE INSTALLATION
NTS




## SURFACE ROUGHENING - CAT TRACKING
NTS




*PROFILE VIEW*




*PLAN VIEW*

NOTES:
1. PLACE IMPERMEABLE GEOTEXTILE FABRIC IN WASHOUT AREA.
2. ALLOW CONCRETE TO HARDEN AND WATER TO EVAPORATE IN WASHOUT AREA.
3. REMOVE IMPEREABLE GEOTEXTILE FABRIC WHEN WASHOUT AREA IS 2/3 FULL OF CONCRETE AND REPLACE WITH NEW FABRIC.

## CONCRETE WASHOUT AREA
NTS

THIS DRAWING IS THE PROPERTY OF ECOPLEXUS, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY ECOPLEXUS, LLC. NO PART IS TO BE DISCLOSED TO OTHERS OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM ECOPLEXUS, INC. OR ITS SUBSIDIARIES.

ecoplexus
ECOPLEXUS, Inc.
101 Second Street, Ste. 1250
San Francisco, CA 94105
Ph: 415-629-1802
Fx: 415-449-3466

| REV | DATE | DESCRIPTION |
|---|---|---|

MADRAS PV1
JEFFERSON COUNTY
OREGON

| | |
|---|---|
| APPROVED BY: | BO |
| DESIGNED BY: | SB |
| DRAWN BY: | BG |
| SCALE: | NTS |
| DATE: | 11/5/2019 |

DRAWING DESCRIPTION:
ESCP
DETAILS

LEVEL C
DRAWING No:
EC-03

FILE: L:\Drawings\Active\Madras\Drawings\PV1 - Details.dwg LAYOUT: ESCP - DETAILS PLOTTED: Wednesday, November 06, 2019 08:31:08 AM BY: Brian Gray

# Attachment F: Draft Revegetation Plan

# Madras Solar Energy Facility: Revegetation Plan

**[NOVEMBER 2019]**

## I. Introduction

This plan describes methods, success criteria, monitoring, and reporting requirements for restoration of areas temporarily disturbed during the construction of the Madras Solar Energy Facility (Facility), excluding areas occupied by permanent Facility components (the "footprint"). The objective of revegetation is to restore the disturbed areas to predisturbance conditions or better. The evaluation of predisturbance conditions is based upon evaluation of the revegetated area conditions compared to conditions of approved, fixed-point reference sites, which serve as a proxy for predisturbance conditions. Restoration of disturbed areas is required to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060).

Where Facility activities result in damage to or removal of existing vegetation, the certificate holder must restore suitable vegetation. In addition, the certificate holder shall maintain erosion and sediment control measures put in place during construction until the affected areas are restored as described in this plan and the revegetation efforts have succeeded enough to control erosion. When there is enough grass in place to hold the soil the control measures can be removed. The plan specifies monitoring procedures to evaluate revegetation success of disturbed wildlife habitat areas. Remedial action may be necessary for wildlife habitat areas that do not show revegetation progress. Compensatory mitigation may be necessary if revegetation is unsuccessful.

## II. Description of the Facility Site

The Facility site encompasses approximately 284 acres of land in the center of Jefferson County, just west of the City of Madras. The site is on a plateau about one-half mile east of the Deschutes River Canyon. The rim of Dry Canyon occurs along the eastern site boundary and the rim of Willow Canyon occurs along the northern site boundary. Elevation of the study area ranges from 2,370 feet to 2,400 feet near the northwest study area boundary. The topography of the study area is nearly level (0 to 1 percent). Steep slopes occur along the northwest, north, and eastern edge of the study area as the topography transitions into the adjacent canyons.

The Facility is in the Deschutes River Valley physiographic province, a Level IV ecoregion designated by the U.S. Environmental Protection Agency (Thorson et al., 2003). This ecoregion is influenced by the Columbia Plateau to the north and Eastern Cascades slopes and foothills to the east. A basalt cap found in the southern region is absent in the northern region and the terrain is more rolling and dissected. The climate is somewhat less arid than the similarly high lava plains of the northern basin and range ecoregion to the southeast.

The Facility is in the shrub-steppe and *Juniperus occidentalis* vegetation zone of the Columbia Basin as described by Franklin and Dyrness (1988). Specifically, the Facility site boundary is in the part of that zone characterized by the *Artemisia tridentata-Agropyron spicatum* (big sagebrush-bluebunch wheatgrass) plant association (Franklin and Dyrness, 1988; Chatters, 1998). This association occurs in the driest settings of the Columbia Basin (Chatters, 1998) and conforms to the eastside shrubland and grassland wildlife habitat area defined by Vander Haegen et al. (2001). Potential natural vegetation includes Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), antelope bitterbrush (*Purshia tridentata*), basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) , mountain big sagebrush (*Artemisia tridentata*

ssp. *vaseyana*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), and needle-and-thread (*Hesperostipa comata*) on the sagebrush steppe, with western juniper (*Juniperus occidentalis*) on shallow, rocky soils. However, vegetation within the Facility area has been altered by past and present land use practices such as grazing, range fire, and agricultural cultivation, which have affected native vegetation such that no sagebrush species occur within the Facility area. Review of historic aerial imagery indicates the vegetation on the flat portion of the Facility study area was previously modified by dryland wheat or ranching/grazing activities. A recent fire in August 2018 left much of the northern portion of the study area burned and void of vegetation.

Two soil types are present within the Facility area. On the upper flat portions, the soils consist of Madras loam, an Aridic Argixerolls. Argixerolls consist of material displaced across a soil profile through illuviation in xeric (dry) environments. Typical soil profiles for these soils suggest that the A horizon consists of a brown (10YR 5/3) loam and the B horizon consists of a 10YR 5/4 yellowish brown loam. Below the B horizon is the 2Crk horizon (from 23 to 27 inches) consisting of consolidated gravels and cobbles of the Deschutes Formation. Below this layer of sand and gravel, basalt bedrock is generally encountered. The sloped portions along drainages consist of Simas-Ruckles-Rock Outcrop complexes, which show no soil development. Annual precipitation in the region averages approximately 10.38 inches with an average snowfall of approximately 9.4 inches (NRCS, 2018).

## 1. Description of the Wildlife Habitat Types

Habitat types within the site boundary include non-native grassland, shrub-steppe, and developed as shown 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 |
|---|---|---|---|
| Developed (D) | Paved Roads (DX) | Includes NW Pelton Dam Road and NW Elk Drive | 0.36 |
| Grassland (G) Steppe dominated by non-native grasses (<10% shrub cover) | Exotic Annual Grassland (GA) | Includes areas that burned in August 2018 and were planted with non-native crested wheatgrass (*Agropyron cristatum*) in spring of 2019. Other dominant grass species include cheatgrass (*Bromus tectorum*) and medusahead rye (*Taeniatherum canput-medusae*). | 150.03 |
| Shrub-steppe (SS) dominated by native and/or non-native grasses and forbs (<20% shrub cover) | Rabbitbrush Shrub-steppe (SSR) | Dominated by early successional gray rabbitbrush (*Ericameria nauseosa*). Understory was dominated by cheatgrass, crested wheatgrass, and some native forbs and is regularly grazed. | 133.74 |
| Total | | | 284.13 |

The habitats within the Facility site boundary were categorized as 4 or 6. Table 2 shows the areas of disturbance in each habitat category and subtype. The permanently disturbed acres represent maximum impacts that could occur during operations and the temporarily disturbed acres represent additional maximum impacts during construction, which will be restored following construction.

**Table 2. Temporary and Permanent Disturbance by Habitat Category and Subtype**

| Habitat Category | Habitat Subtype | Permanently Disturbed | Temporarily Disturbed | Total Disturbed |
|---|---|---|---|---|
| 4 | Grassland | 142.19 | 5.56 | 147.84 |
| | Shrub-steppe | 127.99 | 1.10 | 129.09 |
| | **Subtotal** | 270.18 | 6.66 | 276.93 |
| 6 | Paved roads | 0 | 0.02 | 0.02 |
| | **Subtotal** | 0 | 0.02 | 0.02 |
| **Total** | | **270.18** | **6.68** | **276.95** |

Signs of common wildlife species identified during site visits included deer, pronghorn, coyote, rabbit, and a variety of birds. Higher concentrations of birds and signs of wildlife were identified in areas that were not recently burned.

## III. Revegetation Methods

The certificate holder shall consult with ODFW, ODOE, and Jefferson County Weed Control Authority prior to construction to discuss the area(s) to be restored, habitat category and habitat subtype conditions, reference plot location and conditions, topsoil restoration and revegetation methods, erosion and sediment control measures, and implementation schedule. During construction, the certificate holder will implement site stabilization measures, including seeding of temporarily disturbed areas according to its NPDES permit.

To the extent practicable, existing vegetation will be preserved and open areas will be revegetated or placed with stable ground cover. When practicable, open areas will be revegetated or stabilized before and after grading or construction. Erosion and sediment control and perimeter sediment control measures will be in place before vegetation is disturbed and will remain in place and be maintained, repaired, and promptly implemented for the duration of construction.

The certificate holder shall restore temporarily disturbed areas by preparing the soil and seeding using common application methods. The certificate holder may implement topsoil salvage and restoration methods as recommended by ODFW, the Jefferson County Weed Control Authority, and the contractor, and could include measures such as scraping and stockpiling the upper 6 inches of topsoil containing the fertile nutrients, to be segregated in windrows and kept intact and protected for use as the top-dressing for the area of disturbance. Additional site-specific soil preparation and seeding methods may be determined during the agency consultation period. The certificate holder may use mulching and other appropriate practices to control erosion and sediment during both construction and revegetation work. The

certificate holder shall select the seed mixes to apply based on the preconstruction land use, as described below.

The certificate holder shall consult with ODFW, Jefferson County Weed Control Authority, the landowner, and the contractor to determine the appropriate seed mix and application rate for these areas based on the characteristics of the affected area. At the recommendation of ODFW, the grass seed mix will be comprised of grasses only in order to maximize flexibility for weed control. The mix should contain native or native like species selected based on relative availability and compatibility with local growing conditions. Seed mix selection should consider soil erosion potential, soil type, seed availability, and the need for using native or native-like species. The certificate holder shall obtain approval of the composition of the seed mix from the Department. The certificate holder shall use seed provided by a reputable supplier and complying with the Oregon Seed Law.

## 1. Revegetation Seed Mix

In order to reestablish plant communities of most value to wildlife, only native species are used. Species were selected based on their tolerance to xeric conditions, the availability of their seed, and as representative species of natural vegetation communities in the region. As recommended by ODFW, the grass seed mix comprises grasses only in order to maximize flexibility for weed control. Tables 3 and 4 show the recommended seed mix (these species may by updated based on input from Jefferson County staff).

**Table 3. Revegetation Seed Mix #1: Grassland - Native**

| Specified Seed Mix | | Minimum lbs/acre Pure Live Seed (PLS) |
|---|---|---|
| Needle and Threadgrass | *Hesperostipa comata* | 7 |
| Secar Bluebunch Wheatgrass | *Pseudoroegneria spciata* ssp. *spicata* | 7 |
| Sherman Big Bluegrass | *Poa ampla (secunda)* | 6 |
| Whitmar Beardless Wheatgrass | *Pseudoroegneria spicata* ssp. *inermis* | 6 |
| Critana Thickspike Wheatgrass | *Elymus lanceolatus* | 6 |
| Sandberg's Bluegrass | *Poa secunda* | 1 |
| | **Total:** | **33 lbs/acre** |

**Table 4. Revegetation Seed Mixture #2: Shrub-Steppe – Rabbitbrush**

| Specified Seed Mix | | Minimum lbs/acre Pure Live Seed (PLS)* |
|---|---|---|
| Common Name | Scientific Name | |
| Gray rabbitbrush | *Ericameria nauseosa* | 1.2 |
| Secar Bluebunch Wheatgrass | *Pseudoroegneria spciata* ssp. *spicata* | 6 |
| Sherman Big Bluegrass | *Poa ampla (secunda)* | 6 |
| Critana Thickspike Wheatgrass | *Elymus lanceolatus* | 6 |
| Whitmar Beardless Wheatgrass | *Pseudoroegneria spicata* ssp. *inermis* | 6 |
| Squirreltail | *Elymus elymoides* | 4 |
| Sandberg's Bluegrass | *Poa secunda* | 0.4 |
| Appar Lewis Blue Flax | *Linum perrene* | 0.5 |

| | | |
|---|---|---|
| Fernleaf desert parsley | *Lomatium dissectum* | 0.5 |
| Shaggy fleabane | *Erigeron pumilis* | 0.5 |
| Silky lupine | *Lupinus sericeus* | 0.5 |
| Western yarrow | *Achillea millefolium* var. *occidentalis* | 0.5 |
| | **Total:** | **32.1 lbs/acre** |

## 2. Seed Planting Methods

Planting should be done based on ODFW and Jefferson County Weed Control Authority recommendations and in consultation with the seeding contractor at the appropriate time of year to facilitate seed germination, based on weather conditions and the time of year when construction-related ground disturbance occurs. The certificate holder shall choose planting methods based on site-specific factors such as slope, erosion potential, and the size of the area in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed. Two common application methods are described as follows.

(a) Broadcasting

Broadcast the seed mix at the specified application rate. Where feasible, apply half of the total mix in one direction and the second half of mix in the direction perpendicular to first half. Apply weed-free straw from a certified field or sterile straw at a rate of two tons per acre immediately after applying seed. Crimp straw into the ground to a depth of two inches using a crimping disc or similar device. As an alternative to crimping, a tackifier may be applied using hydroseed equipment at a rate of 100 pounds per acre. Prior to mixing the tackifier, visually inspect the tank for cleanliness. If remnants from previous hydroseed applications exist, wash tank to remove remnants. Include a tracking dye with the tackifier to aid uniform application. Broadcasting should not be used if winds exceed 5 miles per hour.

(b) Drilling

Using an agricultural or range seed drill, drill seed at 70 percent of the recommended application rate to a depth of ¼ inch or as recommended by the seed supplier. Where feasible, apply half of the total mix in one direction and the second half of mix in the direction perpendicular to first half. If mulch has been previously applied, seed may be drilled through the mulch provided the drill can penetrate the straw resulting in seed-to-soil contact conducive for germination.

## I. Noxious Weed Prevention and Control

The certificate holder shall implement weed prevention and control measures prior to and during revegetation efforts. The construction contractor will take the following measures to avoid, minimize, or reduce the impacts of noxious weeds:

- Use weed-free Facility staging areas.
- Clean equipment prior to entry into revegetation areas.
- Existing infestations of noxious weed shall be treated prior to revegetation.

- Infestation of noxious weeds that appear during revegetation efforts shall be spot treated immediately to prevent expansion.
- Ground application of herbicides will be with a dripless wand applicator carried over the site either on foot in a backpack sprayer or in a tank on a rubber-tired all-terrain vehicle. Herbicide(s) used will be limited to types that do not move through the soil and whose affect is immediate but short-lived. Herbicide(s) used within 200 feet of waterbodies will be approved for use near or in wetlands to avoid unintentional affects to aquatic species.
- Herbicide mixes will be colored with dye to aid in post-application monitoring.
- Following completion of revegetation, weed monitoring and any necessary control efforts will be completed annually.

## IV. Monitoring

### 1. Revegetation Record

The certificate holder shall maintain a record of revegetation work for wildlife habitat areas. In the record, the certificate holder shall include the date that construction activity was completed in the area to be restored, a description of the affected area and supporting figures representing the location (location, acres affected and predisturbance condition), the date that revegetation work began, and a description of the work done within the affected area. The certificate holder shall report restoration activities to the Department for the first 5 years after the completion of facility construction. After 5 years, any restoration actions will be described in the annual report per OAR 345-026-0080(e).

### 2. Monitoring Procedures

The certificate holder shall identify reference sites in consultation with ODFW. Reference sites shall be chosen to represent each of the revegetated habitat types. Once the reference sites are approved by ODFW, the certificate holder shall monitor those sites to establish baseline conditions as they relate to the success criteria for the Facility. Documentation of baseline conditions at reference sites shall occur prior to commencement of revegetation efforts. The certificate holder shall monitor the revegetation of wildlife habitat areas as described in this section, unless the landowner has converted the area to a use inconsistent with the success criteria. The certificate holder shall employ a qualified investigator (a botanist or revegetation specialist) to examine all revegetation areas to assess vegetation cover of the reference sites prior to construction (species, structural stage, etc.); and following completion of construction, the qualified investigator shall assess the progress of disturbed areas toward meeting the success criteria described below.

*Weed Control*

A qualified investigator shall inspect each revegetation area on an annual basis during the first 5 years following initial seeding to assess weed growth and to recommend weed control measures. The investigator shall report to the certificate holder, the Department, and ODFW in the semiannual revegetation monitoring report following each inspection, describing weed growth and the success of control measures. If control measures are ineffective, the certificate holder will confer with the Department, ODFW, and the Jefferson County Weed Control Authority to develop alternative control measures.

*Wildlife Habitat Recovery*

After the first growing season following initial seeding (Year 1), a qualified investigator shall inspect each revegetation area to assess revegetation success based on the success criteria and to recommend remedial actions, if needed. The qualified investigator shall reinspect these areas annually for the first 5 years following the completion of construction. The certificate holder shall submit, electronically, to the Department and ODFW the investigator revegetation inspection report in the semiannual revegetation monitoring report following each inspection. The report shall include the investigator's assessment of whether the revegetated areas are trending toward meeting the success criteria; assessment of factors impacting the ability of the revegetated area to trend towards meeting the success criteria; description of appropriate weed control measures as recommended by the Department, ODFW and Jefferson County Weed Control Authority; and, any remedial actions recommended.

Following the Year 5 revegetation monitoring the certificate holder shall confer with the Department and ODFW to develop an action plan for subsequent years. If an area is not trending toward meeting the success criteria at Year 5 and has not been converted by the landowner to an inconsistent use, the certificate holder may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability. As an alternative, the certificate holder or the Department may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity. The certificate holder shall implement the action plan, subject to the approval of the Department.

The certificate holder's qualified investigator shall evaluate whether a wildlife habitat area is trending toward meeting the success criteria by comparing the revegetation area to an approved reference area. In consultation with the Department and ODFW, prior to construction, the investigator shall choose reference sites near the revegetation area to represent the target conditions for the revegetation effort. The investigator shall select one or more reference sites that closely resemble the predisturbance characteristics of the revegetation area as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation, and species diversity of desirable vegetation. "Desirable vegetation" means those species included in the seed mix or native or native-like species, excluding noxious weeds. "Noxious weeds" are defined as non-native species as identified as noxious on state or county noxious weed lists. The investigator shall consider land use patterns, soil type, local terrain, and noxious weed densities in selecting reference sites. It is likely that different reference sites will be needed to represent different predisturbance habitat conditions of the disturbed areas. Once reference sites are selected by the certificate holder and approved by the Department and ODFW, the reference site shall remain in the same location unless approval for use of a differing reference site is obtained by the Department and ODFW. In the first semiannual revegetation monitoring report submitted to the Department, the certificate holder shall provide a map and table presenting the latitude and longitude of the reference sites.

During the initial 5 years of annual monitoring, the certificate holder's qualified investigator shall compare the revegetation area to the selected reference sites, unless some event (such as wildfire, tilling, or intensive livestock grazing) has changed the vegetation conditions of a reference site so that it no longer represents undisturbed conditions of the revegetation area. If such events have eliminated all suitable reference sites for a revegetation area, the investigator, in consultation with the Department and ODFW, shall select one or more new reference sites. Following the selection of a new reference site, an updated table and latitude/longitudinal data

shall be provided to the Department within the semiannual monitoring report or annual compliance report, whichever report is submitted first.

The certificate holder will submit its vegetation monitoring methodology to ODFW and ODOE for approval prior to assessing baseline conditions and prior to annual monitoring. Within each revegetation area, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (both within the revegetation area and within the reference sites):

- Degree of erosion due to disturbance activities (high, moderate, or low).
- Vegetation density.
- Relative proportion of desirable vegetation as determined by a visual scan of the area, noting overall recovery status.
- Species diversity of desirable vegetation.
- Presence/absence of noxious weeds

The certificate holder shall report the investigator's findings and recommendations regarding wildlife habitat recovery and revegetation success in the semiannual revegetation monitoring report to the Department and to ODFW.

### 3. Success Criteria

In each revegetation monitoring report to the Department, the certificate holder shall provide an assessment of revegetation success for all previously-disturbed wildlife habitat areas. A wildlife habitat area is successfully revegetated when its habitat quality is equal to, or better than, the habitat quality of the reference site as follows:

- Vegetation density is equal to or greater than that of the reference site.
- Relative proportion of desirable vegetation is equal to or greater than that of the reference site.
- Species diversity of desirable vegetation is equal to or greater than that of the reference site.

When the Department finds that the condition of a wildlife habitat area satisfies the criteria for revegetation success, the Department shall conclude that the certificate holder has met its restoration obligations for that area. If the Department finds that the landowner has converted a wildlife habitat area to a use that is inconsistent with these success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses.

### 4. Remedial Action

After each monitoring visit, the certificate holder's qualified investigator shall report to the certificate holder regarding the revegetation progress of each wildlife habitat area. The investigator shall make recommendations to the certificate holder for reseeding, weed control or other remedial measures for areas that are not showing progress toward achieving revegetation success based upon consultation with the Department, ODFW, the Jefferson County Weed Control authority, and the contractor. The investigator shall provide a description of causal factors that may be contributing to the lack of revegetation success. The certificate holder shall

take appropriate action to meet the objectives of this revegetation plan. The certificate holder shall report the investigator's recommendations and the remedial measures taken to the Department in the semiannual revegetation monitoring report. The Department may require reseeding, weed control, or other remedial measures in those areas that are not trending towards meeting the success criteria by year 5.

If a wildlife habitat area is damaged by wildfire during the first 5 years following initial seeding, the certificate holder shall work with the landowner to restore the damaged area. The certificate holder shall continue to report on revegetation progress during the remainder of the 5-year period. The certificate holder shall report to the Department and ODFW the area impacted by the fire (map or figure), damage caused by wildfire (including acreage and facility components impacted), and the cause of the fire, if known.

## V. Amendment of the Plan

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

## VI. References

Franklin, J. F., and C. T. Dyrness. 1988. *Natural Vegetation of Oregon and Washington*. Oregon State University Press, Corvallis, Oregon.

Natural Resources Conservation Service (NRCS). 2018. WETS Madras, Oregon Precipitation: 1909-02-01 to 2018-12-07. Accessed November 2018. http://agacis.rcc-acis.org/?fips=41031

Thorson, T. D., S. A. Bryce, D. A. Lammers, A. J. Woods, J. M. Omernik, J. Kagan, D. E. Pater, and J. A. Comstock. 2003. Ecoregions of Oregon (color poster with map, descriptive text, summary tables, and photographs). U.S. Geological Survey, Reston, VA. (map scale 1:1,500,000).

Vander Haegen, W. M., Scott M. McCorquodale, Charles R. Peterson, Gregory A. Green, and Eric Yensen. 2001. "Wildlife of Eastside Shrubland and Grassland Habitats." *Wildlife-Habitat Relationships in Oregon and Washington.* D. H. Johnson and T. A. O'Neil, managing directors. Corvallis: Oregon State University Press.

# Attachment G: Draft Noxious Weed Control Plan

JACOBS®

# Madras Solar Energy Facility

## Noxious Weed Control Plan for Madras Solar Energy Facility in Jefferson County, Oregon

November 2019

Madras PV1, LLC

## Madras Solar Energy Facility

| | |
|---|---|
| Project No: | 709202CH |
| Document Title: | Noxious Weed Control Plan for Madras Solar Energy Facility in Jefferson County, Oregon |
| Document No.: | GES0923191628PDX |
| Date: | November 2019 |
| Client Name: | Madras PV1, LLC |
| Project Manager: | Paul Seilo/Jacobs |
| Author: | Peggy O'Neill/Jacobs |

Jacobs Engineering Group Inc.

2020 SW Fourth Avenue
Portland, Oregon 97201
United States
T +1.503.235.5000
F +1.503.736.2000
www.jacobs.com

© Copyright 2019 Jacobs Engineering Group Inc. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This document has been prepared on behalf of, and for the exclusive use of Jacobs' client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party.

# Contents

**Acronyms and Abbreviations** ..... **iv**

**1. Introduction** ..... **1**
1.1 Background Information ..... 1
1.2 Weed Control Goals ..... 1

**2. Weed Species of Concern** ..... **1**

**3. Weed Control Plan** ..... **4**
3.1 Overview ..... 4
3.2 Best Management Practices ..... 4
3.3 Treatment of Disturbed Areas ..... 5

**4. Monitoring** ..... **5**

**5. References** ..... **5**

**Table**

1 Noxious Weed Species Potentially Occurring in the Vicinity of the Facility Site Boundary. ..... 2

# Acronyms and Abbreviations

| | |
|---|---|
| Applicant | Madras PV 1, LLC |
| Facility | Madras Solar Energy Facility |
| ODA | Oregon Department of Agriculture |
| Plan | Noxious Weed Control Plan |

# 1. Introduction

The purpose of this Noxious Weed Control Plan (Plan) is to provide clear measures to prevent, control, and mitigate the introduction or spread of designated noxious weeds within the Madras Solar Energy Facility (Facility) area during and following construction of the Facility. Madras PV 1, LLC (Applicant) and its contractors will be responsible for implementing the measures described in this Plan. This Plan is applicable to the preconstruction, construction, and future retirement and restoration phases of the Facility major components and related or supporting facilities, yards, access roads, or staging areas.

Noxious weed control measures described in this plan have been developed in consultation with the following sources or agency contacts:

- Oregon Department of Agriculture (ODA) – Noxious Weed Control Program
- Jefferson County Weed Control Program

The measures described in this Plan are designed to prevent the introduction of new noxious weed species to the Facility area and to control existing populations of noxious weeds. Existing populations should be prevented from growing in size and density and should not be allowed to spread to new sites. Where possible and feasible, existing populations of noxious weeds should be eradicated. Weed prevention and control measures should be implemented in all Facility areas. In addition, if it is determined that noxious weeds have invaded areas immediately adjacent to Facility areas (e.g., areas visible just beyond the Facility site boundary or along access roads) as a result of construction, the Applicant would contact the landowner and seek approval to treat those weed populations.

## 1.1 Background Information

The Jefferson County Weed Department works to keep noxious weeds at a minimum on roadways and throughout the county, assists area landowners with land maintenance needs, and follows the ODA noxious weed policy and classification system as part of ODA's Noxious Weed Control Program (ODA, 2019). Noxious weeds are identified on the State of Oregon noxious weed list and mapped by ODA as occurring in Jefferson County. "A" listed weeds are economically important, non-native species with limited distribution in the county. "B" listed weeds are economically important, non-native species that are regionally abundant. At the County level, eradication is required for "A" listed weeds at an intensive level, with containment being the goal for "B" listed weeds. "T" listed weeds are a designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority.

For the purposes of this weed control plan, the term "weed" refers to any species on the Jefferson County weed list regardless of its status. Noxious weeds may be present within the site boundary, and construction activities could spread these weeds. This plan outlines the measures the Applicant will implement to control weeds within areas disturbed by Facility construction and operation. The Facility will temporarily disturb approximately 5.56 acres of Category 4 Grassland habitat and approximately 1.10 acres of Category 4 Shrub-steppe habitat during Facility construction. Temporarily disturbed areas will be revegetated as described in the site *Revegetation Plan* (ODOE, 2019).

## 1.2 Weed Control Goals

Weed species can adversely affect the structure and composition, and therefore the inherent values of the revegetation and habitat mitigation areas. Overarching goals of post-construction operations are prevention, identification, and control of weeds. Guidance and best management practices to accomplish these goals are provided in Section 3.

# 2. Weed Species of Concern

Noxious weeds are opportunistic and often nonindigenous plant species that readily colonize disturbed areas and can prevent or inhibit native plant species from reestablishing. Many invasive weeds have significant adverse effects on agricultural operations and on natural resources, including soil and water,

natural vegetation communities, and wildlife habitat. Designated noxious weeds are those invasive weed species that are of elevated economic or environmental concern to the State of Oregon or local jurisdictions and receive priority during weed management planning and operations. The ODA lists 44 Class A species and 93 Class B species for 2019, class A being the highest priority. In addition, ODA lists 44 of these Class A and B species as Target species for focused management efforts (ODA, 2019). Jefferson County specifically recognizes 24 Class A, 21 Class B, and 8 Class C species of noxious weeds (Jefferson County, 2019). Class C indicates that species eradication is not likely and the species needs control.

Table 1 lists designated noxious weeds that have been identified and documented in Jefferson County.

**Table 1. Noxious Weed Species Potentially Occurring in the Vicinity of the Facility Site Boundary**

*Madras Solar Energy Facility, Jefferson County, Oregon*

| Common Name | Scientific Name | State Weed Designation[a] | County Weed Designation[b] |
|---|---|---|---|
| Buffalobur | *Solanun rostratum* | B | A |
| Canada Thistle | *Cirsium arvense* | B | B |
| Canadian Goldenrod | *Solidago canadensis* | | B |
| Catchweed bedstraw | *Galium aparine* | | B |
| Common Groundsel | *Senecio vulgaris* | | B |
| Common Mullein | *Verbascum thapsus* | | C |
| Common St. Johnswort | *Hypericum perforatum* | B | C |
| Curly Dock | *Rumex crispus* | | B |
| Dalmation Toadflax | *Linaria dalmatica* | B, T | A |
| Diffuse Knapweed | *Centaurea diffusa* | B | B |
| Eurasian Watermilfoil | *Myriophyllum spicatum* | B | A |
| Field Bindweed | *Convolvulus arvensis* | B, T | B |
| Field dodder | *Cuscuta campestris* | B | B |
| Flixweed | *Descurainia sophia* | | B |
| Henbit | *Lamium amplexicaule* | | C |
| Iberian Starthistle | *Centaurea iberica* | A, T | A |
| Japanese Knotweed | *Polygonum cuspidatum* | B | A |
| Jointed Goatgrass | *Aegilops cylindrica* | B | A |
| Kochia | *Kochia scoparia* | B | B |
| Leafy Spurge | *Euphorbia esula* | B, T | A |
| Marestail | *Conyza canadensis* | | B |
| Meadow Knapweed | *Centaurea debeauxii* | B | A |
| Mediterranean sage | *Salvia aethiopis* | B | A |
| Medusahead | *Taeniatherum caput-medusae* | B | C |
| Musk Thistle | *Carduus nutans* | B | A |
| Myrtle Spurge | *Euporbia myrsinites* | B | B |
| Perennial Pepperweed | *Lepidium latifolium* | B,T | A |
| Puncturevine | *Tribulus terrestris* | B | B |
| Purple Loosestrife | *Lythrum salicaria* | B | A |

**Table 1. Noxious Weed Species Potentially Occurring in the Vicinity of the Facility Site Boundary**

*Madras Solar Energy Facility, Jefferson County, Oregon*

| Common Name | Scientific Name | State Weed Designation[a] | County Weed Designation[b] |
|---|---|---|---|
| Purple Mustard | *Choripora tenella* | | C |
| Purple starthistle | *Centaurea calcitrapa* | A, T | A |
| Quack Grass | *Elymus repens* | | B |
| Rattail Fescue | *Vulpia myuros* | | C |
| Ribbongrass[1] | *Phalaris arundinaceae var. picta* | B, T | A |
| Rush Skeletonweed | *Chondrilla juncea* | B, T | A |
| Russian Knapweed[4] | *Acroptilon repens* | B | B |
| Russian Thistle | *Salsola tragus* | | B |
| Scotch Broom | *Cytisus scoparius* | B | A |
| Scotch Thistle | *Onopordum acanthium* | B | A |
| Slender false brome[1] | *Brachypodium sylvaticum* | B | A |
| Spotted Knapweed | *Centaurea stoebe ssp. micranthos* | B, T | A |
| Squarrosa Knapweed | *Centaurea virgata ssp. squarrosa* | A, T | A |
| Tansy Ragwort | *Senecio jacobaea* | B, T | A |
| Tumble Mustard | *Sisymbrium altissimum* | | B |
| Ventanata[2] | *Ventenata dubia* | | A, B |
| Water hemlock | *Cicuta douglasii* | | B |
| Western salsify | *Tragopogon dubius* | | B, C |
| White Top | *Cardaria draba* | B | B |
| Wild Carrot | *Daucus carota* | | A |
| Wild Oats | *Avenua fatua* | | C |
| Yellow flag iris[3] | *Iris pseudacrorus* | B | A, B |
| Yellow Starthistle | *Centaurea solstitialis* | B | A |
| Yellow Sweet Clover[5] | *Melilotus officinalis* | | C |

[a] ODA, 2019

**A-List** - A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future occurrence in Oregon seem imminent. Recommended action: Infestations are subject to eradication or intensive control when and where found.

**B-List -** A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties. Recommended action: Limited to intensive control at the state, county or regional level as determined on a site specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.

**T-List -** A designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority. T-designated noxious weeds are determined by the Oregon State Weed Board, which directs ODA to develop and implement a statewide management plan. T-designated noxious weeds are species selected from either the A or B list.

[b] Jefferson County, 2019

**A-List** - Highest priority for eradication
**B-List** - Found in abundance, need to be localized

**Table 1. Noxious Weed Species Potentially Occurring in the Vicinity of the Facility Site Boundary**

*Madras Solar Energy Facility, Jefferson County, Oregon*

| Common Name | Scientific Name | State Weed Designation[a] | County Weed Designation[b] |
|---|---|---|---|
| **C-List** - Eradication not likely, needs control | | | |

[1] False brome and ribbongrass are A-rated weeds outside an ornamental site.
[2] Ventenata is an A-rated weed within the North Unit Irrigation Boundary.
[3] Yellow flag iris is an A-rated weed when north of Haystack Reservoir and Round Butte Dam.
[4] A-rated weed when found north of Madras, west of Highway 26.
[5] Yellow sweetclover is only a noxious weed when on the road right-of-way.

# 3. Weed Control Plan

## 3.1 Overview

Long-term weed control will be accomplished through the seeding of perennial grasses known to compete well with noxious weeds, such as thickspike wheatgrass (*Elymus lanceolatus*) and Sherman big bluegrass (*Poa secunda*), or by maintaining the existing cover in the buffers. Short-term weed control will be through herbicide use. However, it will be important to ensure that the short-term herbicide use does not affect the establishment of the perennial grass cover intended to provide long-term control. Early detection and management of small populations before they can expand into larger populations is extremely important for successful control.

Weed control will continue until the disturbed areas meet the success criteria described above with respect to the designated reference sites. Supplemental seeding may be needed to achieve this goal. Subsequent fertilizer application will be limited in areas treated for weeds, and the timing of the seeding will need to be coordinated with any herbicide applications.

The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (knapweeds and thistles, field bindweed, whitetop), or (2) annual grasses or monocots (goatgrass and medusahead). Appropriate herbicides differ substantially between dicots and monocots.

## 3.2 Best Management Practices

The Applicant will implement best management practices during Facility construction and operation to help prevent the invasion and spread of noxious weeds onsite. These may include the following:

- Information regarding target weed species will be provided at the operations and maintenance enclosure.
- Weed prevention and control measures, including Facility inspection and documentation, will be included in operations plans.
- Temporary ground-disturbing operations in weed-infested areas will be inspected and documented in accordance with Facility monitoring plan (see Section 4 Monitoring).
- Vehicles and equipment will be cleaned prior to entry into revegetation areas to help minimize introduction of noxious weed seeds to the site.
- To prevent conditions favoring weed establishment, temporarily disturbed areas will be revegetated as soon as possible.
- The site will be revegetated with appropriate, locally-collected native seed or native plants; when these are not available, noninvasive and nonpersistent non-native species may be used.

Seed and straw mulch to be used for site rehabilitation will be inspected and certified free of weed seed and propagules.

### 3.3 Treatment of Disturbed Areas

Before the initial weed treatment begins, the herbicide applicator personnel will meet with a botanist for a ½-day session to review the target species and their identification and to identify native species to be avoided, such as the native thistle (*Cirsium undulatum*) onsite. Following the initial meeting between the botanist and herbicide applicators, the applicators will be responsible for identifying and treating the target species.

Control will be accomplished through use of herbicides targeted to the individual weed species. The herbicide is to be applied by a licensed applicator, using appropriate best management practices. Herbicide application will occur twice in year 1, in the spring (knapweeds, thistles, bindweed) and fall (other species), and once a year thereafter during the spring (mid to late May), if necessary, until the success criteria are met. Herbicide will be applied with a spreader sticker surfactant (e.g., Dynamic Green Concepts, Phase). Rush skeletonweed will be treated throughout the growing season as it occurs. Information on identification of this and other target weed species will be included in the environmental training materials to be provided to Facility operations staff. If rush skeletonweed is observed during routine operations activities at any time during the growing season, the licensed applicator will be contacted to treat this species as soon after it is observed as practicable. Tables 3 and 4 in the *Revegetation Plan* (ODOE, 2019) provides a summary of recommended treatment by target species.

## 4. Monitoring

Monitoring will be conducted on an annual basis by a qualified botanist for the first 5 years following initial seeding to assess weed growth and to recommend weed control measures. The weed monitoring will consist of two general components:

- Site survey to identify weed species that have established within the disturbed areas
- Inspections of treated areas to assess the success of the weed treatments

The site survey will be a pedestrian survey of disturbed areas in mid to late May. The survey will be scheduled to be initiated slightly before the herbicide application to identify any weed species. The focus will be on weed species observed prior to construction on the site (knapweed, starthistle, field bindweed, whitetop, jointed goatgrass, medusahead rye), as well as any other species on the Jefferson County weed list that might require different control methods.

The results of the site survey will be summarized in a short memorandum in which (1) any new weed species observed and treatment protocols are identified, (2) the location and weed species within the buffers are described, and (3) reference plot cover values are listed.

Subsequent monitoring results will be summarized in short memorandums in which the treatment success is described, any recommendations to improve treatment success (if necessary) are made, and any new weed species or emergence are noted.

## 5. References

Jefferson County. 2019. *Jefferson County Weed Control Ordinance. Ordinance No. 0-091-12.* Jefferson County, Oregon. https://www.jeffco.net/publicworks/page/jefferson-county-weed-control-ordinance.

Oregon Department of Agriculture (ODA). 2019. *Noxious Weed Policy and Classification System.* Noxious Weed Control Program, Salem, Oregon. February. http://www.oregon.gov/ODA/shared/Documents/Publications/Weeds/NoxiousWeedPolicyClassification.pdf.

Oregon Department of Energy (ODOE). 2019. *Madras Solar Energy Facility: Revegetation Plan.* December.

# Attachment H: Draft Habitat Mitigation Plan

# Madras Solar Energy Facility – Draft Habitat Mitigation Plan

**October 22, 2020**

## 1. Introduction

This draft *Habitat Mitigation Plan* (Plan) describes a preliminary strategy that Madras PV1, LLC (Applicant) will follow to mitigate potential adverse impacts to wildlife habitat from the construction and operation of the Madras Solar Energy Facility (Facility).

The Applicant proposes to construct and operate the Madras Solar Energy Facility (Facility) in Jefferson County, Oregon. The Facility is proposed on approximately 284 acres of privately-owned land and will generate electricity using solar photovoltaic (PV) modules (also known as "panels") connected to inverters, transformers, and a substation. The existing Portland General Electric (PGE) Pelton Dam to Round Butte 230-kilovolt (kV) transmission line crosses over the Facility site, and the Facility will interconnect into this existing transmission line within the Facility site boundary.

PV modules contain solar cells that generate electricity by means of the PV effect, in which the semiconductor materials found inside the solar cells interact with photons from the sun to generate an electrical current that can be collected and supplied to the power grid. The Facility solar modules will be mounted onto a metal racking structure and grouped into arrays (i.e., modules wired in series and in parallel). The electric output of each array is "stepped up" in voltage to 34.5 kV, before being conveyed to the proposed onsite Facility substation via direct buried cables. At the Facility substation, the voltage will again be stepped up to 230 kV for delivery to the utility-owned, point of interconnection (POI) switching station. The POI switching station will serve as the location of common coupling with the existing transmission line.

This Plan addresses mitigation for the permanent and temporal impacts of Facility components.[1] The Plan identifies a framework option ("Option 1"), which is not approved as part of the Plan pending additional evidence necessary from the Applicant demonstrating consistency with the Council's Fish and Wildlife Habitat standard; and, a developed option ("Option 2"), which is recommended for Council approval. The framework option includes a payment-in-lieu to a third party for habitat acquisition and maintenance (third party), in which the Applicant would contribute funds to a third party such as a qualified state agency, land trust, nongovernmental organization (NGO), or nonprofit that would use the funds for habitat conservation and maintenance. The developed option includes direct implementation of habitat mitigation actions by the Applicant, in which the Applicant would acquire eligible habitat and be responsible for monitoring and maintenance of a mitigation area, including monitoring procedures to evaluate the success of those actions.

The Facility site boundary encompasses portions of Sections 030 and 031 in Township 10 South and Range 13 East. The site is located on private land just east of Lake Simtustus, south and west of Willow Creek, and approximately 0.5 mile from the eastern boundary of the Warm Springs Reservation.

## 2. Description of the Impacts Addressed by the Plan

As described in Section P.3.2.3 of Exhibit P, Applicant biologists familiar with the Blue Mountains ecoregion, including its habitat types and wildlife, used a combination of historical land cover data, color aerial image interpretation, topographic maps, and onsite verification to characterize habitat types within the Facility site boundary from the perspective of wildlife use. Both general assemblages (for example,

[1] Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes identified within the site boundary include rabbitbrush shrub-steppe, which is reasonably expected to require a longer restoration timeframe (5+ years) and therefore would be expected to result in temporal loss requiring compensatory mitigation beyond the applicant's revegetation obligation.

shrub-steppe obligates) and specific species of individual taxa (for example, special-status species) were examined.

During the October 9, 2018, field survey, an Applicant biologist familiar with regional flora and fauna ground-truthed habitat occurrence and quality. Habitat boundaries were delineated and distinct habitats were categorized according to the habitat definitions in the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025), based on a combination of vegetative structure, habitat functionality, and overall ecological condition for wildlife, in particular for special-status species.

Approximately 270.18 acres of Category 4 habitat consisting of exotic annual grasslands and rabbitbrush shrub-steppe will be permanently occupied by Facility components (the "footprint"). In addition to the footprint impacts, construction of the Facility could temporarily disturb approximately 6.66 acres of similar Category 4 habitat, resulting in a loss of habitat during construction that will be restored following construction. Habitat Category 4 is important habitat for fish and wildlife species, but not considered limited or essential [OAR 635-415-0025(4)]. The Applicant will obtain an Incidental Eagle Take Permit (ITP) from the U.S. Fish and Wildlife Service prior to the start of any ground disturbing activities within the site boundary to address potential disturbance of nesting eagles during construction. The ITP will include conservation measures that provide a net benefit to eagle habitat. The Applicant has developed a revegetation plan to offset temporary construction-related impacts that occur within the Facility site boundary. 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, before construction begins.

The Applicant commits to mitigating permanent and temporal impacts to Category 4 grassland and shrub-steppe habitat that cannot be avoided or minimized with reliable in-kind or out-of-kind habitat mitigation measures in proximity or off-proximity to the Facility site boundary with input from ODOE in consultation with ODFW. Permanent impacts will be fully mitigated by including 1 acre in the mitigation area for every 1 acre of Category 4 habitat permanently impacted from the use, cover or occupation of habitat by facility components (1:1 acre mitigation ratio). Temporal impacts will be fully mitigated by including 0.5 acre in the mitigation area for every 1 acre of Category 4 habitat temporarily disturbed during construction (0.5:1 acre mitigation ratio). Temporary impacts will also be mitigated through successful implementation of the Revegetation Plan (see Attachment P-6 to Exhibit P). Habitat impacts are summarized in Table 1.

**Table 1. Temporary and Permanent Disturbance by Habitat Category and Subtype within the Site Boundary**

| Habitat Category (per ODFW Designation) | Habitat Subtype | Permanently Disturbed (acres) | Temporarily Disturbed (acres) | Total Disturbed (acres) |
|---|---|---|---|---|
| 4 | Grassland | 142.19 | 5.56 | 147.84 |
| | Shrub-steppe | 127.99 | 1.10 | 129.09 |
| | **Subtotal** | 270.18 | 6.66 | 276.93 |
| 6 | Paved Roads | 0 | 0.02 | 0.02 |
| | **Subtotal** | 0 | 0.02 | 0.02 |
| **Total** | | **270.18** | **6.68** | **276.95** |

# 3. Mitigation

The mitigation goals for Category 4 habitat impacts require "no net loss of either habitat quantity or quality." For unavoidable permanent impacts to Category 4 habitat, the Applicant or its designated third party will use reliable in-kind or out-of-kind habitat mitigation measures in-proximity or off-proximity to the Facility to effectively offset impacts. The Applicant or a third party will select measures to be used in

consultation with ODOE and consistent with ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025). Based on the information provided on the record of the ASC, Applicant explains that a third party has not been identified at this time and a payment to provide program is not yet available through a state agency. As such, Applicant may only utilize Option 2. In order for Applicant to implement Option 1 under the Plan, amendment of the Plan, subject to ODOE and Council approval, is required, as described in Section 6 of this Plan.

The Applicant has identified an up-to-319-acre habitat mitigation area (HMA) that will either be managed by a third party, or will be leased or purchased by the Applicant. The HMA is private property owned by the same party as the Facility site. It is located in the same home range and physiographic province (Blue Mountains ecoregion) as the Facility.

The Applicant or a third party proposes to arrange protection and enhancement of 1 acre for every 1 acre of Category 4 habitat that is permanently impacted (1:1 acre mitigation ratio) and 0.5 acre for every 1 acre of Category 4 habitat that is temporally impacted (0.5:1 acre mitigation ratio) to meet the ODFW goal of "no net loss" for Category 4 habitat. The offsite HMA selected for the Facility will be large enough to achieve the ODFW habitat mitigation goals and standards described in OAR 635-415-0025.

## 3.1 Preliminary Enhancement Actions

To meet ODFW's goal of "no net loss in habitat quantity or quality," the Applicant or third party will implement actions to protect habitat within the HMA from degradation and improve the habitat quality. These actions include the following:

- Except as may be provided in the legal instrument for ongoing activities that are consistent with conservation and enhancement strategies, the Applicant or third party will ensure that the legal instrument (see Section 5 of the Plan) clearly restricts development of structures (potentially including fences and off-highway roads).
- The Applicant or third party will install fencing to restrict livestock grazing practices along portions of the waterbody and associated wetland riparian areas that traverse the HMA, to benefit wildlife habitat.
- The Applicant or third party will remove western juniper (*Juniperus occidentalis*) that occurs within the HMA and treat stumps with herbicide. Juniper removal and thinning is consistent with the Oregon Conservation Strategy's recommended approaches for conservation of sagebrush habitats, which include controlling encroaching junipers by cutting, while maintaining juniper trees with old-age characteristics, which are important nesting habitat for birds and other wildlife. Applicant will develop a Juniper Treatment Plan including: a protocol to monitor pre- and post-treatment conditions; schedule of pre-treatment monitoring; description of treatment activities; post-treatment monitoring; and weed treatment and monitoring.

In addition to any other information that may be required by law, this Plan submitted to ODOE and ODFW includes the following:

- Description and map of the location of the HMA
- Description of protocols and methods, and a reporting schedule for monitoring the effectiveness of mitigation measures
- Description of future modifications of mitigation measures if the goals and standards of OAR 635-415-0025 are not met within a reasonable time

More specifically, the Plan contains the following mitigation plan performance measures:

- Success criteria: the mitigation plan will clearly define the methods to meet the mitigation goals and standards and list the criteria for measuring success.
- Annual review of mitigation goals and standards for the first 10 years of facility operation and every 3 years thereafter.
- Provisions for long-term protection and management of the site.

- A reporting schedule for identifying progress toward demonstrating consistency with the mitigation goals and standards and any modification of mitigation measures. Consistency with ODFW's mitigation goals and standards must be achieved annually for the first 10 years of facility operation to benefit the affected fish and wildlife species.

The Applicant or a third party will implement habitat mitigation actions as described in the final approved version of this Plan prior to Facility construction.

# 4. Description of the Potential Mitigation Area

The potential HMA contains suitable habitat to achieve the ODFW goal of no net loss of Category 4 habitat. The subject parcel is located approximately 5 miles northeast of Ashwood, Oregon, and entirely within the Blue Mountains ecoregion (Figure 1). The HMA is private property owned by the same landowner as the Facility site. The Applicant has had direct conversations with the landowner regarding the potential to use it as the HMA for the Facility. As of July 2020, up to 319 acres of Category 2, 3, and 4 shrub steppe habitat have been identified as available for conservation easement and enhancement (Figure 2). A professional biologist completed a baseline survey within the HMA on June 11, 2020. The entire parcel is gently rolling, shrub-steppe habitat dominated by rabbitbrush and native bunchgrasses interspersed with some areas containing cheatgrass and early to mid-successional juniper trees. An unnamed, intermittent tributary of Trout Creek traverses the parcel from south to north. Riparian wetlands occur along most of the creek and a stock pond in the northwest corner of the parcel provides a perennial water source for wildlife. Current land use includes moderate cattle grazing.

Shrub-steppe habitat that occurs within the parcel is important to wildlife because native shrubs and grasses are dominant and this habitat type contributes to sustaining wildlife populations. Several Oregon Conservation Strategy species are associated with native shrub-steppe habitats in the Blue Mountains ecoregion. Wetlands, streams, and riparian areas within the parcel are essential habitat for some wildlife species that rely on water and are considered limited habitats within the arid portions of the Blue Mountains ecoregion. Building fencing around wetland and riparian areas will reduce grazing and allow riparian vegetation to grow. Fencing will be designed to exclude cattle but not mule deer. Woody vegetation in riparian areas is used by wildlife for nesting and foraging and provides cover for insulation and hiding. Juniper removal within the parcel will increase the amount of sunlight, moisture, and nutrients available for shrubs and forbs used by wildlife, including mule deer.

## 4.1 HMA Pre-Construction Requirements

Prior to construction of the Facility, Applicant shall complete the following steps.

1) HMA Habitat Assessment: Applicant shall conduct a desk-top or field survey, as determined appropriate by ODOE, in consultation with ODFW, of the HMA. Applicant shall submit a report or memo, including maps and tables, identifying the habitat sub-type/vegetation characteristics of all acreage within the HMA, including juniper.
2) Grazing Assessment: Applicant shall submit a report or memo to ODOE and ODFW describing the current grazing management practices within the HMA, including information such as Animal Unit Months (AUMs) and pasture rotation schedule; and shall describe measures Applicant intends to employ to track and monitor changes in grazing practices within the HMA for the life of the Facility.
3) Enhancement Action Review: Following review of the HMA Habitat Assessment, Applicant shall seek input from ODOE and ODFW on enhancement action opportunities at the HMA. Enhancement actions may be based on review of the HMA Habitat Assessment or HMA site visit conducted by Applicant, ODOE and ODFW, or both. The final Plan shall include a detailed description of final enhancement actions to be implemented and monitored at the HMA.
4) Success Criteria: Following identification of final list of enhancement actions, Applicant shall propose, for ODOE and ODFW review and approval, success criteria appropriate for tracking the success of enhancement actions to be implemented and monitored at the HMA.

5) Legal Instrument: Prior to construction of the Facility, the Applicant or third party will acquire the legal right to create, maintain, and protect the HMA for the life of the Facility by means of an outright purchase, conservation easement, or similar conveyance and will provide a copy of the documentation to ODFW and ODOE. The legal instrument shall, at a minimum, adhere to the requirements outlined in Section 5 of the Plan.

# 5. Legal Instrument

Applicant will enter into an enforceable and recordable legal instrument, such as a landowner agreement, memorandum of understanding, conservation easement, or other similar conveyance that demonstrates reliability and durability of the habitat mitigation and Plan.

The legal instrument shall reference and be consistent with the Plan. In the event of ownership transfer of the HMA, if not owned by Applicant, the Applicant shall notify ODOE and ODFW, and shall enter into a new agreement with the new landowner.

The legal instrument shall include a map and description of all existing structures, existing impervious surfaces and access road networks within the HMA.

Prior to construction, the applicant shall provide a draft of the legal instrument to ODOE for review and approval, in consultation with ODFW.

# 6. Monitoring

The following sections outline examples of typical monitoring procedures and success criteria that will be implemented in the HMA, either by a designated third party or directly by the Applicant.

## 6.1 Monitoring Procedures

The Applicant or designated third party will protect, enhance, and maintain the HMA for the useful life of the Facility (estimated 40 years) or duration of impacts (including reclamation), whichever is greater.

Monitoring of the HMA will be conducted by a qualified investigator (e.g., independent botanist, wildlife biologist, or revegetation specialist) to ensure that final Plan mitigation goals and standards are achieved for the duration of Facility operation, as necessary, to benefit the affected fish, wildlife, and plant species. The investigator will evaluate habitat conditions and the results of any enhancement actions. Monitoring will occur annually for the first 5 years; following the first 5 years, the Applicant or designated third party will submit an annual memorandum with photo-documentation summarizing conditions and enhancement actions at the HMA, with long-term monitoring and inspections conducted at a minimum every 5 years, as determined appropriate by ODOE in consultation with ODFW.

The Applicant is proposing two options for monitoring success of the HMA. One option involves the Applicant identifying paired monitoring and reference sites. The Applicant shall monitor those sites to establish baseline conditions as they relate to the success criteria. Documentation of baseline conditions at reference sites shall occur prior to implementation of enhancement actions. The Applicant shall monitor changes in native vegetation cover (e.g., species and structural stage) and progress toward meeting the success criteria in HMA enhancement areas and compliance with terms of the legal instrument within the HMA (i.e. restricted uses are not occurring on the property such as unauthorized grazing practices, off-highway vehicle trespassing, and construction of dwellings or fences). Reference sites shall be identified, in consultation with ODFW, near the enhancement areas to represent pre-enhancement conditions. One or more reference sites shall be identified that closely resembles the pre-enhancement characteristics of the identified enhancement areas The Applicant shall consider land use patterns, soil type, local terrain, and noxious weed densities in selecting reference sites. Once reference sites are selected by the Applicant and approved by ODOE in consultation with ODFW, the reference site shall remain in the same location unless approval for use of a differing reference site is obtained by ODOE in consultation with

ODFW. Prior to construction of the Facility or any phase of the Facility, the Applicant shall provide to ODOE and ODFW a map and table presenting pre-enhancement habitat category/vegetation characteristics and latitude and longitude of the reference sites; enhancement areas; and designated monitoring sites within enhancement areas in proximity to the reference sites.

Alternatively, a second option involves use of baseline conditions at the Facility site as the reference site if approved by ODOE in consultation with ODFW. The baseline conditions at the Facility site prior to construction will be used to determine if better quality habitat is maintained at the HMA. Again, under this approach, the Applicant shall monitor changes in native vegetation cover (e.g., species and structural stage) and progress toward meeting the success criteria in HMA enhancement areas and compliance with terms of the legal instrument within the HMA (i.e. restricted uses are not occurring on the property such as unauthorized grazing practices, off-highway vehicle trespassing, and construction of dwellings or fences).

In addition, the investigator may monitor the following conditions:

1) Annually record environmental factors (such as precipitation at the time of surveys and precipitation levels for the year).
2) Annually record any wildfires that occur within the mitigation area and any remedial action taken to restore habitat quality in the damaged area.
3) Annually assess the success of any weed control programs and recommend remedial action, if needed. See the Noxious Weed Control Plan (Attachment P-7 to Exhibit P) for details on weed control.
4) Assess the recovery of vegetation resulting from any removal or reduction of livestock grazing or post-fire recovery by comparing the quality of vegetation cover at the time of each monitoring visit with the quality observed in previous monitoring visits and as observed when the mitigation area was first established. The investigator would determine the extent of successful recovery of native vegetation based on measurable indicators (such as structural growth and signs of more abundant seed production) and would report on the progress of recovery within the HMA. The investigator would report on the timing and extent of any livestock grazing disturbance that has occurred within the mitigation area since the previous monitoring visit.
5) Annually evaluate the condition of fencing installed around riparian areas to determine if new fencing or repairs are needed for successful habitat protection.

The Applicant or third party will report its findings and recommendations regarding the monitoring of the HMA to ODOE and ODFW, annually by December 31, after the first growing season, for the first 5 years, and then annually using photo-documentation and every 5 years based on long-term monitoring. The report will describe the habitat mitigation actions carried out within the HMA during the reporting year.

If the Applicant or third party cannot demonstrate that the HMA is trending toward meeting the final Plan goals and standards within 5 years after the date construction of the Facility begins, then remedial action will be proposed. ODOE may require corrective measures, which could include replanting or increasing the size of the HMA.

The Applicant or designated third party will report the investigator's findings and recommendations regarding the monitoring of the mitigation area to ODOE and ODFW annually. In the mitigation area report, the Applicant or third party will describe all habitat mitigation actions carried out during the reporting time period. The mitigation area report may be included as part of other reporting on the Facility that will be required by the site certificate.

## 6.2 Success Criteria

Mitigation of the permanent and temporal habitat impacts of the Facility may be considered successful if the Applicant or third party protects or enhances sufficient habitat within the mitigation area to meet the ODFW goal of no net loss of Category 4 habitat for the duration of Facility operation. The Applicant or

third party may demonstrate success based on evidence that the habitat quality at the HMA has not degraded compared to baseline conditions and enhancement actions consistently met the success criteria. If the quality of the HMA habitat has degraded from baseline conditions, as determined during regular monitoring or at any time the Applicant or third party becomes aware of degradation, the Applicant or third party shall describe why the maintenance actions were not effective and then propose and implement remedial action. If the HMA contains better quality habitat than the Facility site, Applicant is obligated to manage degradation of existing conditions, regardless of the habitat category of the Facility site.

Success criteria will be developed prior to ground disturbing activities, and in consultation with ODOE and ODFW, as described in Section 4.1 Step 4 of the Plan. The mitigation measures, as presented in this Plan, ensure that the Facility's permanent and temporal impacts will not result in a net loss of habitat quantity or quality and result in a net benefit of habitat quality because the mitigation area includes acreage for both permanent impacts and impacts associated with temporal loss. The Applicant or third party will protect the quantity and quality of habitat within the HMA area for the life of the Facility or the life of impacts, whichever is greater. Measuring success of the Plan at the HMA may include or be based on the following indicators:

- Increase in herbaceous cover (shrubs and forbs) within the HMA, compared to reference sites based on soil characteristics (sunlight, moisture, and nutrients), structural growth, and signs of more abundant seed production;
- Increase in potential wildlife foraging, including mule deer (understanding that for biological reasons mule deer and other species may not find the site amenable for foraging, regardless of other success criteria);
- Maintenance of efforts to control and limit juniper encroachment or overstory;
- Response of rabbitbrush and native bunchgrasses interspersed with some areas containing cheatgrass; and
- Successful weed control (weed monitoring and treatment) within the HMA for the life of the Facility.

The Applicant or third party will protect a sufficient quantity of habitat to meet the HMA requirements (1:1 acre mitigation ratio) based on the final configuration of the Facility. The Applicant or third party will determine the actual HMA requirements for the Facility, subject to ODOE approval, in consultation with ODFW, before beginning ground disturbing activities at the Facility. If the land selected for the HMA does not already contain sufficient habitat to meet these requirements, then the Applicant or third party will demonstrate improvement of habitat quality sufficient to change lower-value habitat to a higher value (for example, to convert Category 5 or 6 habitat to Category 4). The Applicant or third party may demonstrate preservation or improvement of habitat quality based on evidence of indicators described in the monitoring procedures (e.g., vigorous, healthy herbaceous layers that have a typical stature for the species and show no stresses resulting from environmental conditions, pests, or disease and evidence of reproduction visible from mature plants). If the Applicant or third party cannot demonstrate that the HMA is trending toward the habitat quality goals within 5 years, the Applicant or third party will propose and implement remedial action. ODOE may require additional corrective measures.

# 7. Plan Amendment

This Plan may be amended from time to time by agreement of the Applicant and the Oregon Energy Facility Siting Council (EFSC) or ODOE, acting within its delegated authority of EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this Plan. ODOE will notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this Plan agreed to by ODOE.

121°10'W 121°0'W 120°50'W 120°40'W

44°50'N

44°40'N

44°30'N

T07S R12E T07S R13E T07S R14E T07S R15E T07S R16E T07S R17E T07S R18E

T08S R12E T08S R13E T08S R14E T08S R15E T08S R16E T08S R17E T08S R18E

T09S R12E T09S R13E T09S R14E T09S R15E T09S R16E T09S R17E T09S R18E

T10S R12E T10S R12.5E T10S R13E T10S R14E T10S R15E T10S R16E T10S R17E T10S R18E

T11S R12E T11S R13E T11S R14E T11S R15E T11S R16E T11S R17E T11S R18E

T12S R12E T12S R13E T12S R14E T12S R15E T12S R16E T12S R17E T12S R18E

Blue Mountains

Columbia Plateau

WASCO COUNTY

JEFFERSON COUNTY

CROOK COUNTY

97 26 293 218

Ashwood

Madras

Madras City County Airport

Deschutes River

Lake Billy Chinook

SW Belmont Ln SW Cem Ln SW Tris Ln NW Ch Dr NW Fir Ln NE Park Ln

VICINITY MAP




## LEGEND

- Madras Solar Energy Facility Site Boundary
- Proposed Habitat Mitigation Area 44.759641, -120.651262
- US Level III Ecoregion
- County Boundary
- City of Madras City Limits
- Location of Ashwood, Oregon
- Township Range
- Section

Section Numbering

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

N

0 1.5 3 6

Miles

1 inch equals 3 miles

**Figure 1**
Proposed Habitat Mitigation Area
Madras Solar Energy Facility
*Jefferson County, OR*

JACOBS

\\DC1VS01\GISPROJ\E\ECOPLEXUS\MADRASSOLARPROJECT\MAPS\REPORT\2020\MITIGATION_AREA_200610.MXD KGRANT1 7/10/2020 3:04:55 PM

120°40'W

NE Gosner Rd

120°40'W

VICINITY MAP




## LEGEND

- Proposed Habitat Mitigation Area (318 acres)
- Shrub Steppe Habitat

**National Wetlands Inventory**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

N

0 250 500 750 1,500 Feet

1 inch equals 750 feet

**Figure 2**
Proposed Habitat Mitigation Area
Madras Solar Energy Facility
*Jefferson County, OR*

JACOBS

\\DC1VS01\GISPROJ\E\ECOPLEXUS\MADRASSOLARPROJECT\MAPS\REPORT\2020\MITIGATION_AREA_DETAIL_200812.MXD KGRANT1 8/12/2020 8:20:21 PM

# Attachment I: Inadvertent Discovery Plan

# Inadvertent Discovery Plan

PLAN AND PROCEDURES FOR THE INADVERTENT DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS FOR THE MADRAS SOLAR ENERGY FACILITY, JEFFERSON COUNTY, OREGON

## 1.0 Introduction

Madras PV1, LLC (Applicant) proposes to construct the Madras Solar Energy Facility (Facility) in Jefferson County, Oregon. This Inadvertent Discovery Plan outlines procedures to follow, in accordance with state and federal laws, if cultural resources or human remains are discovered during construction.

## 2.0 Recognizing Cultural Resources

A cultural resource is an item of historical, traditional, or cultural importance. The item could be prehistoric or historic. Examples are as follows:

- A multispecies accumulation of shell (shell-midden) with associated bone, stone, antler, or wood artifacts, burned rocks, or charcoal
- Bones that appear to be human or animal bones associated with a shell-midden (i.e., with associated artifacts or cooking features)
- An area of charcoal or very dark, stained soil with associated artifacts
- Artifacts made of chipped or ground stone (i.e., an arrowhead, adze, or metate) or an accumulation (more than one) of cryptocrystalline stone flakes (lithic debitage)
- Items made of botanical materials
- Clusters of tin cans or bottles, agricultural, or military equipment that appears to be older than 50 years

## 3.0 Onsite Responsibilities

STEP 1: STOP WORK IMMEDIATELY. If the contractor or subcontractor believes that he or she has uncovered any cultural resource during construction of the Facility, all work adjacent to (within 100 feet) the discovery must stop. The discovery location should not be left unsecured at any time.

STEP 2: NOTIFY CONSTRUCTION PROJECT MANAGEMENT IMMEDIATELY. Contact the construction project manager or cultural resources specialist for the Madras Solar Energy Facility, as listed below.

**Construction Project Manager**

To be determined.

**Cultural Resources Specialist**

If the construction project manager cannot be reached, contact one of the designated Cultural Resources Specialists:

David Sheldon, M.S., RPA
Jacobs
Cell: (360) 219-6953
david.sheldon@Jacobs.com

Matt Steinkamp, M.S., RPA
Jacobs
Cell: (503) 358-9499
matt.steinkamp@jacobs.com

STEP 3: NOTIFY THE STATE HISTORIC PRESERVATION OFFICE IMMEDIATELY. The construction project manager or cultural resources specialist will contact the Oregon State Historic Preservation Office (SHPO) immediately.

Note: If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call 911 or speak with the media.

STEP 4: PARTICIPATE IN CONSULTATION AND DOCUMENTATION. The construction project manager will participate in consultations with Oregon SHPO and affiliated Tribes. After consultation, the construction project manager will complete a written plan of action describing the disposition of cultural resources pursuant to 43 *Code of Federal Regulations* (CFR) Part 10 and will execute his or her prescribed duties within that plan of action.

# 4.0 Further Contacts and Consultations

## Construction Project Manager

The construction project manager's responsibilities as follows:

- Secure the Site: The construction project manager is responsible for taking appropriate steps to protect and secure the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material in consultation with the affiliated Tribe(s).
- Direct Construction Elsewhere Onsite: The construction project manager will direct construction to resume away from cultural resources where appropriate and in communication with the affiliated Tribe(s).
- Contact Project Cultural Resources Specialist: If the cultural resources specialist has not yet been reached in earlier attempts, the construction project manager will do so.

## Cultural Resources Specialist

The cultural resources specialist's responsibilities are as follows:

- Notify Tribes: If not already notified, the cultural resources specialist will notify the Tribe(s) of the discovery.
- Identify Find: The construction project manager will consult with the Tribes and will ensure that a qualified individual examines the find to determine if it is a cultural resource, as follows:
  - If it is determined to not be a cultural resource, work may proceed with no further delay.
  - If it is determined to be a cultural resource, the cultural resources specialist will send a certified letter to the Tribal Historic Preservation Offices, notifying them that a cultural resource has been discovered and requesting further consultation.
  - If the find may be human remains or funerary objects, the cultural resources specialist will follow the procedures described in Section 5.0.

- Notify State Agencies: The construction project manager will contact Oregon SHPO, Oregon Department of Energy (ODOE), and affiliated Tribes.
- Formulate Plan: The construction project manager, affiliated Tribes, ODOE, and Oregon SHPO will consult to determine a plan for disposition of the cultural resources.

Any required excavation or removal of cultural resources will be carried out under the requirements of 43 CFR Part 10.3 and 16 *United States Code* 470 aa, and will require a permit from the Oregon SHPO. The activity that resulted in the inadvertent discovery may resume thirty (30) days after certification of receipt of notification.

## Oregon Historic Preservation Office

State Archaeologist
Dennis Griffin, Ph.D.
e-mail: Dennis.Griffin@oregon.gov

(503) 986-0674

-or-

Assistant State Archaeologist
John Pouley
E-mail: john.pouley@oregon.gov
(503) 986-0675

## Oregon Department of Energy

Chase McVeigh-Walker
550 Capitol Street N.E.
Salem, OR 97301
Chase.McVeigh-Walker@Oregon.gov
(503) 934-1582

## Tribes

Confederated Tribes of the Warm Springs Reservation of Oregon
Robert Brunoe, Tribal Historic Preservation Officer
THPO@ctwsbnr.org
PO Box 460
Warm Springs, Oregon 97761
(541) 553-3555

Klamath Tribes
Perry Chocktoot
Perry.chocktoot@klamathtribes.com
PO Box 436
Chiloquin, OR 97624
(541) 783-2219 x159

Burns Paiute Tribe
Diane Teeman
dlteeman.burns.paiute@gmail.com
100 Pasigo Street, Burns, OR 97220
(541) 413-1190 or (541) 573-8096

# 5.0 Special Procedures for the Discovery of Human Skeletal Material

Any human skeletal remains will at all times be treated with the utmost dignity and respect. The attached document titled *Tribal Position Paper on the Treatment of Human Remains* (Government to Government Cultural Resources Cluster Group, September 2006) describes the appropriate protocol on the treatment of Native American human remains.

STEP 1: STOP WORK. In the event that human remains are discovered, stop all work in the area and secure the site.

STEP 2: NOTIFY APPROPRIATE PARTIES. Notify the construction project manager, law enforcement, and the coroner, immediately. The coroner (with the assistance of law enforcement personnel) will determine if the remains are human and whether the discovery site constitutes a crime scene, and will notify Oregon SHPO and the Tribes.

- Medical Examiner, Jefferson County

  Gary Plant, MD
  Madras Medical Group
  76 NE 12th Street
  Madras, OR 97741
  (541) 475-3874

- Jefferson County Sheriff's Department

  675 NW Cherry Lane
  Madras, OR 97741
  (541) 475-6520

STEP 3: PROTECT THE REMAINS. There shall be no photography or drawings and sketches made of the human remains or funerary objects found with the human remains without written permission signed by the affiliated Tribes. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Remains should not be removed from the site prior to identifying the remains as Native American or not. If the remains are determined to be Native American, final disposition will be decided through consultation with the affiliated Tribes, Oregon SHPO, and the Applicant.

STEP 4: CONSULTATION. If the coroner determines the remains are nonforensic, and if it is determined that the remains constitute a cultural resource, the construction project manager or appointed representative will participate in consultation with the affiliated Tribes and Oregon SHPO. The construction project manager or appointed representative will complete a written plan of action describing the disposition of cultural resources pursuant to 43 CFR Part 10 and will execute its prescribed duties within that plan of action. If the remains are determined to be Native American, final disposition will be decided through consultation with the affiliated Tribes, Oregon SHPO, and the Applicant. If the medical examiner is not able to make a determination of Native American, a qualified forensic anthropologist from the State, Tribe, or contracted archaeological firm will need to be consulted for final determination.

# 6.0 Proceeding with Construction

Facility construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. The construction project manager and a qualified archaeologist or

Tribal representative must determine the boundaries of the discovery location. Construction may continue at the discovery location only after the process outlined in this plan is followed and the Oregon SHPO (and the federal agencies, if any) determines that compliance with state and federal laws is complete.

# Attachment
# Tribal Position Paper on the Treatment of Human Remains

**Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Non-Federal Public 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 Sgt. Chris Allori, Department of State Police, office phone 503-731-4717, cell 503-708-6461, or Dispatch 503-731-3030)
    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 contact= John Pouley, Asst. State Archaeologist, office phone 503-986-0675, cell phone 503-480-9164.

3. Commission on Indian Services (CIS)
   - Current contact= Karen Quigley, Director, office phone 503-986-1067. Karen will provide the list of appropriate Native American Tribes.
4. All appropriate Native American Tribes provided by CIS.

   - Burns Paiute Tribe- Diane Teeman 541-417-1986
   - Confederated Tribes of Coos, Lower Umpqua and Siuslaw- Stacy Scott 541-888-9577 X7513
   - Confederated Tribes of Grand Ronde- Briece Edwards 503-879-2084
   - Confederated Tribes of Siletz- Robert Kentta 541-444-2532
   - Confederated Tribes of the Umatilla Indian Reservation- Teara Farrow 541-276-3629, secondary contact; Catherine Dickson 541-429-7231
   - Confederated Tribes of Warm Springs- Bobby Bruno 541-553-2002
   - Coquille Indian Tribe- Kassie Rippee 541-756-0904 X1216
   - 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.