Attachment 1: Draft Proposed Order

MADRAS SOLAR ENERGY FACILITY – REQUEST FOR AMENDMENT 1

To:	Oregon Energy Facility Siting Council
From:	Chase McVeigh-Walker, Senior Siting Analyst
Date:	October 18, 2024
Re:	Draft Proposed Order on Request for Amendment 1 of the Site Certificate for the Madras Solar Energy Facility

Certificate Holder:	Madras PV1, LLC (certificate holder), a wholly owned subsidiary of Ecoplexus Inc.
Approved Facility [Not yet constructed]:	Up to 63 megawatts (MW) of solar photovoltaic energy generation components and related or supporting facilities within an approximately 284 acre site boundary.
Proposed Amendment:	Three-year extension to both the construction commencement and completion deadlines. This change would make the new construction commencement deadline June 25, 2027, and new completion deadline of 18 months after construction commences.
Facility Site Location:	Jefferson County, Oregon, approximately 5.5 miles west of the City of Madras. 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.
Review Process:	Type A Review
Staff Recommendation:	Certificate holder has adequately evaluated changes in fact or law and demonstrated, through a preponderance of evidence, that the facility, with proposed changes, would continue to comply with applicable Energy Facility Siting Council (EFSC) standards and existing and recommended amended site certificate conditions

A public comment period is now open on the Draft Proposed Order and complete amendment request. The comment deadline for written comments to be submitted to the Department is November 14, 2024 at the close of the public hearing. Section II.B, Council Review Process, of the Draft Proposed Order contains additional information regarding the site certificate amendment review process. The public notice associated with the release of this Draft Proposed Order also contains additional information regarding the comment period and next steps in the EFSC review process.

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of Request for Amendment 1 of the Site Certificate for the Madras Solar Energy Facility	))))	DRAFT PROPOSED ORDER

October 18, 2024

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ABBREVIATIONS AND ACRONYMS

BIA	Bureau of Indian Affairs
BMP	Best Management Practices
CSZ	Cascadia Subduction Zone
CWPP	Community Wildfire Protection Plan
CTWSRO	Confederated Tribes of the Warms Springs of Oregon
DSL	Department of State Lands
DC	Direct Current
DPO	Draft Proposed Order
Parent Company	Ecoplexus Inc.
Council	Energy Facility Siting Council
EFSC	Energy Facility Siting Council
EFU	Exclusive Farm Use
Final Order on ASC	Final Order on Application for Site Certificate
HMP	Habitat Mitigation Plan
HMBP	Hazardous Materials Business Plan
JCCP	Jefferson County Comprehensive Plan
JCFD1	Jefferson County Fire District #1
JCTS	Jefferson County Transfer Station
JCZO	Jefferson County Zoning Ordinance
kV	kilovolt
LLC	Limited Liability Company
certificate holder	Madras PV1, LLC
Facility	Madras Solar Energy Facility
MW	Megawatt
NRHP	National Register of Historic Places
NRCS	Natural Resources Conservation Service
OAR	Oregon Administrative Rule
ORBIC	Oregon Biodiversity Information Center
ODAg	Oregon Department of Agriculture
Department	Oregon Department of Energy
ODOE	Oregon Department of Energy
ODFW	Oregon Department of Fish and Wildlife
LCDC	Oregon Land Conservation and Development Commission
ORS	Oregon Revised Statutes
OWRD	Oregon Water Resources Department
PRB	Pelton Round Butte
POI	point of inter-connection
PCS	power conversion station
pRFA	Preliminary Request for Amendment

ABBREVIATIONS AND ACRONYMS

PWCA	priority wildlife corridor area
RAI	Request for Additional Information
RFA1	Request for Amendment 1
SAG	Special Advisory Group
SPCC	Spill Prevention Control and Countermeasure Plan
T&E	Threatened and Endangered
U.S	United States
WMP	Wildfire Mitigation Plan
WUI	Wildland Urban Interface

I. INTRODUCTION

On June 25, 2024, Madras PV1, LLC (certificate holder), a wholly owned subsidiary of Ecoplexus Inc., filed Request for Amendment 1 of the Site Certificate for the Madras Solar Energy Facility (RFA1).

As described below, the Madras Solar Energy Facility (facility), is an approved but not yet-constructed 63 megawatts (MW) solar photovoltaic energy generation facility to be located in Jefferson County, within an approximately 284 acre site boundary.

As described in Section II of this Order, the certificate holder seeks Energy Facility Siting Council (EFSC or Council) approval for its first extension of the construction commencement deadline, from June 25, 2024 to June 25, 2027, which would then also extend the completion deadline 18 months from the date of commencement.[1]

In accordance with Oregon Administrative Rule (OAR) 345-027-0365, the Oregon Department of Energy (Department), as staff to the Council, issues this Draft Proposed Order recommending approval of RFA1, subject to the existing and recommended new and amended conditions set forth in this Draft Proposed Order. This Order, and the analysis and recommendations contained therein do not constitute a final determination by the Council.

I.A. SITE CERTIFICATE PROCEDURAL HISTORY

On June 25, 2021, the Council approved its Final Order on Application for the Site Certificate (Final Order on ASC) for the Madras Solar Energy Facility and issued the Site Certificate for the facility.

I.B. NAME AND ADDRESS OF CERTIFICATE HOLDER

Certificate Holder
Madras PV1, LLC
600 Park Offices Drive, Ste. 285
Durham, NC 27709

Parent Company of the Certificate Holder
Ecoplexus Inc.
600 Park Offices Dr, Ste. 285
Durham, NC 27709

[1] OAR 345-027-0385(4) limits the number of construction deadline extensions that may be approved by Council to two. If the construction deadline extension is approved, Council may only approve one additional construction deadline extension in the future.

I.C. APPROVED FACILITY

The facility is an approved but not yet constructed 63 megawatt (MW) solar photovoltaic energy generation facility to be located within an approximately 284 acre site boundary (see Figure 1 below). Specifications and details of the approved facility, including related or supporting facilities, are presented in Table 1 below.

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Site Boundary		
Site Boundary	284	acres
Micrositing Area	284	acres
Maximum Area within Fenceline	270.18	acres
Solar Components		
PV Solar Modules		
Approx. total number	137,673	modules
Max Height at full-tilt	8-10	feet
Posts		
Approx. total number (assumes ballasted design for foundations)	114,000	posts
Cabling		
Combiner Boxes	274	each
Inverter Step Up Transformer Units (Power Conversion Station – PCS)		
Approx. total number	19	each
Noise level	92	dBA
Transformer oil-containing capacity	550	Gallons/each
Related or Supporting Facility Components		
34.5 kilovolt (kV) Collection System[1]		
Collector line length with Cable Tray	4	miles
Collector Substations		
Substations w SCADA; Generator step-up transformers, each	1	each
Site size (approx.)	1	acre
Transformer oil-containing capacity	8,000	gallons/each
Transformer noise level	86	dBA
Max height of structures	34	feet
Switching Station (POI)		
Stations; transformers, each	1	each
Site size (with foundation and graveled areas)	0.06	acres
230 kV Transmission Line		
Length (total; northern line; southern line)	200	feet

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Structures: Type (H frame); quantity	4	each
Height of structures	80	feet
Battery Energy Storage System (Lithium-ion/Zinc)		
Zinc		
Approx. total batteries/containers on foundations with fans/heating systems; SCADA	120	each
Site size	0.088	acres
Approx. container dimensions	9.5 x 8 x 40	H x W x L; feet
Noise level (broadband)	87	dBA
Lithium-ion		
Approx. total batteries/containers on foundations with HVAC and fire suppression systems; SCADA	120	each
Site size	0.088	acres
Approx. container dimensions	9.5 x 8 x 40	H x W x L; feet
Noise level (broadband)	87	dBA
O&M Building		
Quantity	1	each
Site size	320	Sq. ft.
Height	8.5	feet
Appurtenances	Portable toilets, fencing	
Facility Roads		
Length (main access roads/service roads)	5,000	feet
Width (main access/service)	24/16-20	feet
Perimeter Fence		
Length	23,306	miles
Height	6-8	feet
Access/gates	3	each
Temporary Concrete Batch Plant		
Quantity	1	each
Temporary Construction Areas		
Quantity	1	each
Site size	6.77	acres
Description	Graveled	

Acronyms: dBA = A-weighted decibels; HVAC = heating, ventilation and air conditioning; kV = kilovolt; OH = overhead; O&M = operations and maintenance; SCADA = supervisory, control and data acquisition

Notes:

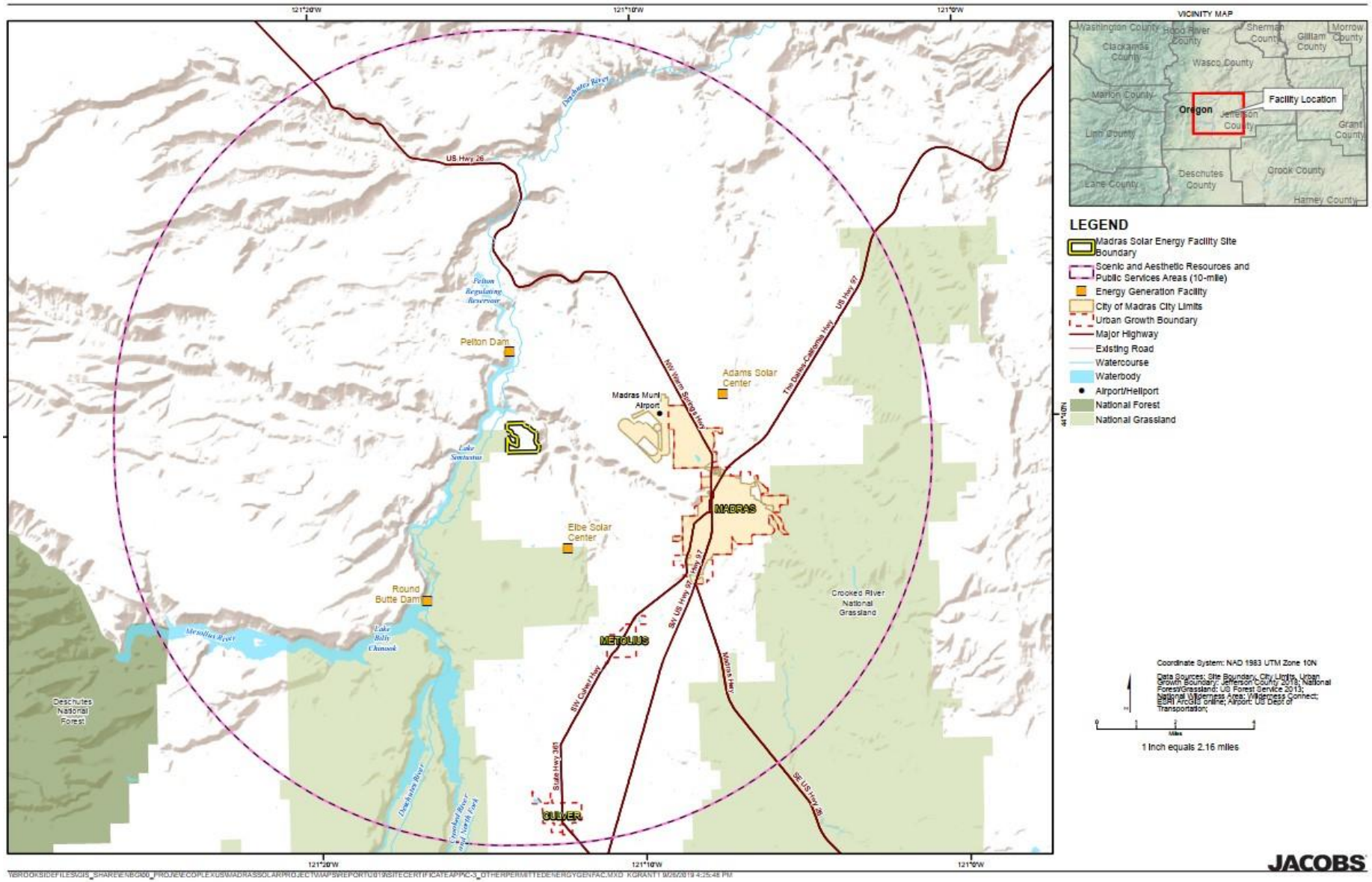
1. The electrical collection system, or portions thereof, may be aboveground. If aboveground, there would be up to 50 wood monopoles. Disturbance would be greater from underground system, which is represented in the table above.

I.D. APPROVED SITE DESCRIPTION

As presented in Figure 1: *Approved Site Boundary and Vicinity* below, the facility is located within an approximately 284 acre site boundary in Jefferson County, Oregon. The facility site is located on private land approximately 5.5 miles west of the City of Madras, 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.

The approved site boundary is considered a "micrositing area" with temporary and permanent disturbance within the site boundary of approximately 7 and 277 acres, respectively.

Figure 1: Approved Site Boundary and Vicinity



II. AMENDMENT PROCESS

With some exceptions, an amendment to a site certificate is required for any change in the design, construction, or operation of a facility when different from that described in the site certificate, if the proposed change (1) 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; (2) Could impair the certificate holder's ability to comply with a site certificate condition; or (3) Could require a new condition or a change to a condition in the site certificate. OAR 345-027-0350(3). In addition, a site certificate is required to extend the construction beginning or completion deadlines specified in the site certificate. OAR 345-027-0350(4).

The Type A amendment review process (consisting of OARs 345-027-0359, -0360, -0363, -0365, -0367, -0371 and -0375) is the default amendment review process and shall apply to the Council's review of a request for amendment proposing a change described in OAR 345-027-0350(2), (3), and (4).[2]

Council rules describe the differences in review processes for the Type A and Type B review paths at OAR 345-027-0351.[3] The Type A review is the standard or "default" amendment review process for changes that require an amendment. A key procedural difference between the Type A and Type B review process is that the Type A review requires a public hearing on the Draft Proposed Order (DPO) and provides an opportunity to request a contested case proceeding on the Department's proposed order. Another difference between the Type A and Type B review process relates to the time afforded to the Department in its determination of completeness of the amendment and issuance of the DPO. Council rules authorize the Department to adjust the timelines for these specific procedural requirements, if necessary.

A certificate holder may submit an amendment determination request to the Department for a written determination of whether a request for amendment justifies review under the Type B review process. The certificate holder has the burden of justifying the appropriateness of the Type B review process as described in OAR 345-027-0351(3). The Department may consider, but is not limited to, the factors identified in OAR 345-027-0357(8) when determining whether to process an amendment request under Type B review.

On June 25, 2024, the certificate holder submitted preliminary RFA1 inclusive of a Type B Review amendment determination request (Type B Review ADR), requesting the Department's review and determination of whether, based on evaluation of the OAR 345-027-0357(8) factors,

[2] OAR 345-027-0351(2).

[3] OAR 345-027-0351(1) designates the amendment process that applies to Council's review of a request for amendment to a site certificate to transfer a site certificate under OAR 345-027-0400, and OAR 345-027-0351(4) designates the pathway for a type c amendment under OAR 345-027-0380 which applies to a request for amendment when the change proposed in the request for amendment relates to the facility, or portion/phase of the facility, not yet in operation, but approved for construction in the site certificate or amended site certificate.

the amendment request could be reviewed under the Type B review process. On July 19, 2024, the Department issued its determination on the Type B Review ADR, affirming that the Type A process be maintained based on the complexity of the proposed change including potential changes in facts and laws, such as the new evaluation required to address the Council's Wildfire Prevention and Risk Mitigation standard adopted after Council's last review of the facility. The Department's determination was made available to the public via a courtesy electronic notification, posting to the Department's project webpage and announcement at the July 19, 2024 Council meeting.

II.A. REQUESTED AMENDMENT

The certificate holder seeks approval to extend the construction commencement and completion deadlines. The extension is needed because development planning and permitting is not yet complete. The certificate holder has not yet secured an agreement to interconnect to the Pelton-Round Butte 230 kV transmission line which is co-owned by PGE and CTWS. PGE and/or CTWS would have to apply to FERC for the approval to interconnect to the line, which has not occurred.[4] On September 5, 2024, the certificate holder submitted a petition for a declaratory judgment to FERC on the matter and is awaiting response. If a favorable resolution is received, certificate holder would be able to enter into construction by the new requested deadline and would enter construction as soon as practicable.[5] The requested deadline extensions are discussed throughout this order and in Section III.A., *General Standard of Review*.

II.B. SCOPE OF COUNCIL REVIEW

Under OAR 345-027-0375, in making a decision to grant or deny issuance of the amended site certificate for construction deadline extensions, the Council must determine whether the preponderance of evidence on the record supports the following conclusion:[6]

- After considering any changes in facts or law since the date the current site certificate was executed, the facility complies with all laws and Council standards applicable to an original site certificate application.[7]

[4] OAR 345-027-0385(1) requires that a preliminary request for amendment include an "explanation of the need for an extension.."

[5] MSEFAMD1 RAI 1 Applicant Response 2024-09-09.

[6] In making findings under OAR 345-027-0375(2), the Council must apply the applicable laws and Council standards in effect on the following dates:
(a) For the applicable substantive criteria under the Council's land use standard, as described in OAR 345-022-0030, the date the request for amendment was submitted; and
(b) For all other applicable laws and Council standards, the date the Council issues its final order on the request for amendment.

[7] OAR 345-027-0375(b)(A)-(D), outlines circumstances in which Council may waive findings of compliance under its standards or laws, which has not been requested by the certificate order or recommended in this order.

For other changes included in an RFA, such as changes to site certificate conditions, the Council must determine whether the preponderance of evidence on the record supports the following conclusion:

- The facility, with the proposed change, complies with the applicable laws or Council standards that protect a resource or interest that could be affected by the proposed change.[8]

For all requests for amendment, Council must determine whether the preponderance of evidence on the record supports whether the amount of the bond or letter of credit required under OAR 345-022-0050 is adequate.[9]

The recommended findings of fact and conclusions of law provided in this order in Section III., *Evaluation of Council Standards*, support the recommendations under OAR 345-027-0375.

II.C. COUNCIL REVIEW PROCESS

II.C.1. Request for Amendment

On June 25, 2024, the certificate holder submitted preliminary Request for Site Certificate Amendment 1 (pRFA1). On July 3, 2024, the Department issued Public Notice that pRFA1 had been received as required by OAR 345-027-0360(2). The notice was issued to all persons on the general mailing list, special mailing list, reviewing agencies as defined in OAR 345-001-0010(51), and property owners within 500 feet of the property which is the subject of the amendment request.[10] Reviewing agency comments received on pRFA1 are summarized in Table 2 below.

Table 2: Summary of Reviewing Agency Comments

Agency	Comments
ODFW (Greg Jackle, Jessica Clark, Jeremy Thompson)	OAR 345-022-0060 Fish and Wildlife Habitat Evaluation: The facility site's northern boundary runs along an ODFW designated priority wildlife corridor area (PWCA), but generally is sited to avoid the PWCA and therefore would not impact the site's habitat categorization or associated mitigation obligation/Habitat Mitigation Plan (HMP). There have been no updates to ODFW deer and elk winter range maps that are relevant or that would impact the prior characterization of the site. ODFW concurs that the prior habitat categorization of Category 4 with current Incidental Take Permit (ITP) remains valid. Recent fire does not impact habitat categorization.

[8] OAR 345-027-0375(c).

[9] OAR 345-027-0375(e).

[10] MSEFAMD1Doc2 pRFA1 Public Notice 2024-06-02.

Table 2: Summary of Reviewing Agency Comments

Agency	Comments
	ODFW accepts the proposal to incorporate 6.7 acres of what was previously identified as temporary habitat impacts into the HMP, and to apply general revegetation requirements to the 6.7 acres. This results in a lessor monitoring obligation for the certificate holder while still requiring revegetation consistent with the surrounding environment, and increased area for the long-term habitat mitigation area. No other comments or concerns. <u>OAR 345-022-0070: Threatened and Endangered Species Evaluation</u>: There is no suitable habitat or potential for state-listed T&E species to occur within the site. No concerns.
Notes: 1. Copies of written comments are included in Attachment C to this order.	

On August 22, 2024, the Department notified the certificate holder that pRFA1 was incomplete and requested additional information. On September 9 and 23, 2024, the certificate holder responded to the Department's Request for Additional Information 1 (RAI1). On September 26, 2024, the Department issued a second request for additional information (RAI2). The certificate holder provided RAI2 responses on October 3 and 9, 2024. On October 17, 2024 the Department notified the certificate holder that Request for Amendment was Complete. On October 18, 2024, the Department issued Public Notice of the Complete Request for Amendment and Draft Proposed Order as required by OAR 345-027-0365.

II.C.2. Draft Proposed Order

A Public Notice of the Draft Proposed Order was issued concurrently with this Order. The Public Notice of the Draft Proposed Order initiates a public comment period on the Request for Amendment and the Draft Proposed Order. To raise an issue on the record of the DPO, a person must raise the issue in a written comment submitted between the date of the Public Notice of the DPO and the written comment deadline established in the Public Notice or in person at the public hearing on the DPO. The Council will not accept or consider public comments on RFA1 or on the DPO received after the written comment deadline, which is November 14, 2024 at the close of the public hearing, unless extended by Council.

To properly raise an issue in a request for a contested case proceeding for an amendment (discussed further in the following section), the issue must be within the jurisdiction of the Council, and, as noted above, the person must have raised the issue in person or in writing on the record of the public hearing of the DPO. If a person has not raised an issue before the close of the record with sufficient specificity to afford the Council, Department and certificate holder an adequate opportunity to respond to the issue, the Council may not grant a contested case

proceeding for that issue.[11] To have raised an issue with sufficient specificity, the person must have presented facts that support that person's position on the issue.[12, 13]

II.C.3. Proposed Order

Under OAR 345-027-0371(1), no later than 30 days after the Council has reviewed the DPO and considered all comments received on the record of the DPO public hearing under OAR 345-027-0367, the Department must issue a Proposed Order recommending approval, modification or denial of the request for amendment to the site certificate. The Department must consider any oral comments made at the public hearing, written comments received before the close of the record of the public hearing, agency consultation, and any Council comments. The Department may issue the Proposed Order at a later date, but the Department must, no later than 30 days after the Council has reviewed the DPO and considered all comments received on the record of the public hearing, notify the certificate holder in writing of the reasons for the delay.

Concurrent with issuing the Proposed Order, the Department must send notice of the Proposed Order to Council's general mailing list, any special mailing list for the facility, reviewing agencies, as well as property owners under OAR 345-027-0360(1)(f). Under OAR 345-027-0371(4), on the same date as the notice of Proposed Order, the Department must send a notice of the opportunity to request a contested case by mail or email to the certificate holder, and to all persons who commented in person or in writing on the record of the DPO public hearing.

If there are no requests for a contested case proceeding, the Council may adopt, modify or reject the proposed order based on the considerations described under the Scope of Council Review in OAR 345-027-0375. In a written order, the Council must either grant or deny issuance of an amended site certificate.[14]

II.C.4. Council Evaluation of Requests for Contested Case Proceeding

Only those persons, including the certificate holder, who commented in person or in writing on the record of the DPO public hearing (October 18 through November 14, 2024, unless extended by Council) may request a contested case proceeding on the Proposed Order for an amendment to the site certificate. Council's evaluation or whether to hold a contested case is described in OAR 345-027-0371 and is summarized below.

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[11] 469.370(3).

[12] OAR 345-027-0371(5).

[13] OAR 345-015-0016(3). Council does not consider incorporation by reference statements or comments made by other persons, (whether they are comments on the DPO, raised by other commenters for this facility or past proceedings, comments on another agency proceeding, or other external references) to meet the sufficient specificity requirement under ORS 469.370(3) and OAR 345-015-0016(3). Blanket incorporations by reference do not afford the Department, Council or certificate holder an adequate opportunity to respond to each issue as required under ORS 469.370(3) because they typically do not specify which portion(s) of the other person(s) comments are to be incorporated or how those comments relate to any alleged shortcoming in the subject DPO.

[14] OAR 345-027-0371(11).

For consideration in a contested case, issues must:

- Be submitted within the comment timeframe;
- Be within the jurisdiction of the Council; and
- Include sufficient specificity with facts so that the Council, the Department, and the certificate holder can understand and respond to the issue raised

Threshold for a contested case for a Type A Amendment:

- Council must find that the request raises a significant issue of fact or law that is reasonably likely to affect the Council's determination whether the facility, with the change proposed by the amendment, meets the applicable laws and Council standards included in chapter 345 divisions 22, 23 and 24.

Council Options on Requests for a Contested Case:

- Hold a contested case on properly raised issue(s) that could affect the Council's determination
- Remand Proposed Order to Department – direct the Department to address properly raised issue(s) in a revised Proposed Order, e.g., through new findings and/or conditions
- Deny – Request does not include properly raised issue(s)

II.C.5. Final Order

The Council may adopt, modify or reject the Proposed Order based on the considerations described in OAR 345-027-0375. If the Proposed Order is adopted, or adopted with modifications, the Council shall issue a final order granting issuance of an amended site certificate. If the Proposed Order is denied, the Council shall issue a final order denying issuance of the amended site certificate.

III. EVALUATION OF COUNCIL STANDARDS

Where a standard requires an evaluation of whether or not the design, construction and operation of the facility, with proposed changes, is likely to result in a significant adverse impact to a resource, the Council 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. No statistical analysis of the magnitude or likelihood of a particular impact is required to determine significance. [15]

III.A. GENERAL STANDARD OF REVIEW: OAR 345-022-0000

[15] OAR 345-001-0010(29).

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

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

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

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(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirements of the Council statutes if other agencies have special expertise, the Department of Energy shall consult with 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.[16]

III.A.1. Findings of Fact

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that the facility, with proposed RFA1 changes, would continue to comply with the requirements of EFSC statutes, siting standards adopted by the Council, all other Oregon statutes and administrative rules applicable to the issuance of an amended site certificate for the facility. The record of the proceedings on the Final Order on the ASC and RFA1 demonstrate that the facility, with proposed RFA1 changes, provides a preponderance of evidence to make findings of fact and conclusions of law under each standard and applicable rule.

[16] OAR 345-022-0000, effective March 8, 2017.

The requirements of OAR 345-022-0000 are discussed in the sections that follow. The Department consulted other state agencies during its review of pRFA1 to aid in the evaluation of whether the facility, with proposed RFA1 changes, would continue to satisfy the requirements of applicable statutes, rules and ordinances otherwise administered by other agencies.

OAR 345-022-0000(2) and (3) apply to RFAs where a certificate holder has shown that the proposed amendment cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of the damage to protected resources; and, for those instances, establish criteria for the Council to evaluate in making a balancing determination. In RFA1, the certificate holder represents that the facility would continue to meet, with conditions, all applicable Council standards. Therefore, OAR 345-022-0000(2) and (3) would not apply to this review.

Construction Deadlines

The mandatory conditions of OAR 345-025-0006 were adopted and imposed by Council in the *Final Order on ASC*.[17] Pursuant to OAR 345-025-0006(4), Council must impose conditions in a site certificate that establish dates for the beginning and completion of construction. OAR 345-027-0385(5) authorizes Council to grant extensions of up to three years from the deadlines in effect prior to the Council's decision on the amendment, through no more than two amendment requests. In the Final Order on the ASC, Council established June 25, 2024 as the construction commencement deadline, where the completion deadline extended 18-months from the commencement date.

Certificate holder requests a deadline extension commensurate with the allowable 3-year extension established in rule, to be reflected in General Standard Condition 1 (GEN-GS-01), as amended below:

> **Recommended Amended General Standard Condition 1 [GEN] [OAR 345-025-0006(4)]:** The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.
>
> (a) Construction of the facility or facility component(s) shall commence ~~within three years after the date of Council action [~~by June 25, 2027~~4]~~. 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.

[17] Department review of RFA1 identified Mandatory Condition OAR 345-025-0006(11), discussed and applied as General Standard Condition 6 (OPR-GS-01), was imposed by Council in the Final Order on ASC, but was inadvertently not included in Section 5.6 of the Site Certificate. Therefore, the Department has administratively included the condition, as imposed in the Final Order on ASC to the draft First Amended Site Certificate.

(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.

[Final Order on ASC, AMD1, Condition GEN-GS-01]

III.A.2. Conclusions of Law

As evaluated in this Order, the Department recommends the Council find that the facility, with the proposed RFA1 changes, would continue to comply with the requirements of Oregon Revised Statutes (ORS) 469.300 to 469.570 and 469.590 to 469.619, the Council's standards in OAR chapter 345, and all other Oregon statutes and administrative rules applicable to the issuance of an amended site certificate.

III.B. ORGANIZATIONAL EXPERTISE: OAR 345-022-0010

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

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

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

(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the 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.[18]

III.B.1. Findings of Fact

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

Compliance with Council Standards and Site Certificate Conditions

Madras PV1, LLC is a project-specific limited liability company (LLC) and therefore previously relied upon the organizational expertise and experience of its parent company, Ecoplexus Inc., to demonstrate compliance with the Council's Organizational Expertise standard. Since Council approved the original Application for Site Certificate, there has been a change in organizational structure, where the certificate holder is now wholly held by a new entity, Fresh Air Power Development, LLC. Per the certificate holder, Ecoplexus Inc., is the 100 percent owner of Fresh Air Power Development, LLC and the latter holds Ecoplexus' operating solar project assets. The certificate holder continues to rely on Ecoplexus for the technical and financial capabilities necessary to comply with the standard.

The Organizational Expertise standard expressly allows Council to consider a certificate holder's access to technical expertise when assessing whether the certificate holder complies with the standard. Given the reliance on the parent company, the Department recommends Council supplement site certificate conditions to authorize the Department and Council to adjust the facility decommissioning estimate and the associated amount of financial assurance the certificate holder must provide, should non-compliance and operability issues lead to a

[18] OAR 345-022-0010, effective April 3, 2002.

circumstance where the certificate holder is unable to fulfil its obligation to decommission the facility based on a Council approved retirement plan and set of EFSC site certificate conditions.

The process of designing, constructing and operating a facility in compliance with an EFSC issued Site Certificate is costly. Resolving compliance issues is costly. Decommissioning the facility and restoring the site to a useful, nonhazardous condition was previously estimated at over $5 million.

To protect the State from risk that $5 million is no longer adequate to decommission the facility and restore the site due to failure to comply and or operate the facility in a manner that protects public health and safety, the Department recommends Council amend Organizational Expertise Condition 5 (GEN-OE-04), as presented below:

Recommended Amended Organizational Expertise Condition 5 [GEN]: 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.
d. <u>Upon receipt of the written report in sub(c) of this condition, the Department may review the facility record for incidents or circumstances reported or reportable under sub(a) related to public health and safety, the environment, or other resources protected under Council standards. If these incidences are determined by the Department to impact the adequacy of the facility decommissioning cost, the Department or Council may adjust the contingencies identified in Final Order on</u>

RFA1 Table 5 and request that the certificate holder promptly provide an updated bond or letter of credit in the adjusted amount.
[OAR 345-029-0010, GEN-OE-04, Final Order on ASC, RFA1]

As presented in Section III.G. *Retirement and Financial Assurance*, the Department recommends Council amend Retirement and Financial Assurance Condition 4 to provide the Department and Council authority to adjust the contingencies applied to the retirement estimate, consistent with recommended amended Organizational Expertise Condition 5(d) above.

Ecoplexus's central development focus is on utility-scale solar PV facilities in the 20- to 100-MW range, along with large-scale government and commercial solar installations. Ecoplexus has 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.[19] There have been no regulatory citations issued to the certificate holder or Ecoplexus within the last 5 years.[20] Council previously determined that Ecoplexus has the expertise to construct, operate and retire the facility in compliance with Council standards and that it has a reasonable likelihood of obtaining all third party permits necessary.

To ensure that the design, construction and operation of the facility is conducted in a manner that protects public health and safety in accordance with the Organizational Expertise standard, Council previously imposed Organizational Expertise Conditions 1, 2 and 3 (GEN-OE-01, PRE-OE-01, and GEN-OE-02) requiring that, prior to construction, the certificate holder provide qualifications of its contractors to the Department for review; contractually require its contractors to comply with site certificate requirements; and provide the Department notification of any changes in the certificate holder owner's corporate structure.

Based upon the findings presented here and compliance with existing site certificate conditions, the Department recommends that Council continue to find that the certificate holder has the ability to design, construct, operate, and retire the facility, with proposed RFA1 changes, in compliance with Council standards and site certificate conditions.

III.B.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with existing conditions and recommended amended conditions, the Department recommends Council find that the certificate holder has the organizational expertise to construct, operate and retire the facility, with proposed RFA1 changes, in compliance with Council standards and conditions of the site certificate.

[19] MSEFAPPDoc1-4 Exhibit D Applicant Expertise 2020-11-09, p. D-1.
[20] MSEFRFA1 Certificate Holder RAI Responses 2024-09-09

III.C. STRUCTURAL STANDARD: OAR 345-022-0020

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

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

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

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

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

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

(3) The Council may not impose the Structural Standard in section (1) to deny an application for a special criteria facility under OAR 345-015-0310. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.[21]

III.C.1. Findings of Fact

The analysis area for the Structural standard is the area within the site boundary. The evaluation of historic seismic and potentially active faults extends 50-miles from the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued

[21] OAR 345-022-0020, effective October 18, 2017, as amended by minor correction filed May 28, 2019.

to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard.

2021 Geotechnical Investigation – Evaluation of Seismic and Nonseismic Hazards

Since the Council's approval of the Final Order on the ASC, certificate holder completed a Site-Specific Geotechnical Investigation in 2021. The Site-Specific Geotechnical Investigation was completed by Terracon Consultants, Inc, and authorized by registered professional engineer, Kristopher T. Hauck (78373PE). Based on the 2021 Site-Specific Geotechnical Investigation, seismic hazards at the site include strong earthquake shaking and landslide susceptibility (low within the site and high on surrounding slope areas). Three fault zones were identified: Warm Springs fault zone (Class A); Metolius fault zone (Class A) and Sisters fault zone (Class A), of which were determined to present low risk of surface rupture at the site.

Conditions previously imposed that would address risks from earthquake shaking and landslide susceptibility include:

- Structural Standard Condition 2 (GEN-SS-01): Requires the certificate holder to design, engineer and construct facility components based on Site Class (soils-related category) determined through the site-specific geotechnical investigation in PRE-SS-01.
- Structural Standard Condition 3 (GEN-SS-02): Requires the certificate holder to design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards.
- Structural Standard Condition 4 (GEN-SS-03): Requires the certificate holder to 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 ASC.
- Structural Standard Condition 5 (GEN-SS-04): Requires the certificate holder to 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.

Results of the 2021 Site-Specific Geotechnical Investigation identified that the entire site is believed to be underlain by cemented soil and/or massive basaltic bedrock. This type of subsurface condition reduces the ability to use direct piledriving for solar panel piles and substation foundation. Sample set pre-drilling is recommended to inform embedment design. Shallow excavations could result in sloughing and erosion channels. Temporary sidewall supports for excavation and site grades are recommended.

Council previously imposed Structural Standard Condition 3 (GEN-SS-02), as described above. The condition requires that the certificate design the facility to avoid dangers from seismic hazards. While not explicitly stated, the Department would apply the results of the Site Specific Geotechnical Investigation to the review of this condition to ensure that recommendations of the site-specific geotechnical investigation are implemented or adequately addressed.

III.C.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate conditions described above, the Department recommends that the Council find the certificate holder has adequately characterized potential seismic and geologic hazards at the site and can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by those hazards.

III.D. SOIL PROTECTION: OAR 345-022-0022

> *To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.*[22]

III.D.1. Findings of Fact

The analysis area for the Soil Protection standard is the area within the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard.

The two major soil types within the analysis area are Cullius Loam and Madras Loam.[23] Additionally, all land within the analysis area is Exclusive Farm Use (A-1) zoned land, within Jefferson County.

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.[24]

Council previously imposed conditions to minimize soil impacts from the activities. Council previously imposed Soil Protection Condition 1 (GEN-SP-01) requiring that the certificate holder obtain and implement a National Pollutant Discharge Elimination System (NPDES) 1200-C

[22] OAR 345-022-0022, effective May 15, 2007.
[23] NRCS Websoil Survey Tool. June 2024.
[24] MSEFAPP ASCDoc1-9 Exhibit I Soils 2002-11-09.

permit, which regulates and manages stormwater by applying best management practices (BMPs) to reduce erosion and sedimentation.

Council previously imposed Soil Protection Condition 2 (PRO-SP-02) requiring that, prior to and during operations, the certificate holder develop and implement a Spill Prevention Control and Countermeasure Plan (SPCC) for the site, and Hazardous Materials Business Plan (HMBP) for the battery storage system, which would include an inventory of both hazardous and nonhazardous materials. Council previously imposed Soil Protection Condition 3 (OPR-SP-02) limiting the methods for and types of cleaners that may be used for solar panel washing during operations.

III.D.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate conditions described above, the Department recommends the Council find that the facility, with proposed RFA1 changes, is not likely to result in significant adverse impacts to soils.

III.E. LAND USE: OAR 345-022-0030

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

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

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

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

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

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

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

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

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

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

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

(c) The following standards are met:

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

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

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

(5) If the Council finds that applicable substantive local criteria and applicable statutes and state administrative rules 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.

(6) If the special advisory group recommends applicable substantive criteria for an energy facility described in ORS 469.300(11)(a)(C) to (E) or for a related or supporting facility that does not pass through more than one local government jurisdiction or more than three zones in any one jurisdiction, the Council shall apply the criteria recommended by the special advisory group. If the special advisory group recommends applicable substantive criteria for an energy facility described in ORS 469.300(11)(a)(C) to (E) or a related or supporting facility that passes through more than one jurisdiction or more than three zones in any one jurisdiction, the Council shall review the recommended criteria and decide whether to evaluate the proposed facility against the applicable substantive criteria recommended by the special advisory group, against the statewide planning goals or against a combination of the applicable substantive criteria and statewide planning goals. In making the decision, the Council shall consult with the special advisory group, and shall consider:

(a) The number of jurisdictions and zones in question;

(b) The degree to which the applicable substantive criteria reflect local government consideration of energy facilities in the planning process; and

(c) The level of consistence of the applicable substantive criteria from the various zones and jurisdictions.[25]

III.E.1. Findings of Fact

The Land Use standard requires the Council to find that the facility, with proposed RFA1 changes, would continue to comply with local applicable substantive criteria, as well as the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC).[26]

The analysis area for potential land use impacts, as defined in the project order, is the area within and extending ½ mile from the site boundary. The site boundary and analysis area are located entirely within Jefferson's County Exclusive Farm Use A-1 (EFU A-1) zone.[27]

[25] OAR 345-022-0030, effective September 3, 2003, as amended by minor correction filed May 28, 2019.
[26] The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.
[27] MSEFAPP pASC Reviewing Agency SAG Comment Jefferson Co._Stenbeck 2019-12-18.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard.

Local Applicable Substantive Criteria

"Applicable substantive criteria" previously recommended by the Council appointed Special Advisory Group (SAG), Jefferson County Board of Commissioners, were based on the zoning provisions and goals and policies established in the Jefferson County Zoning Ordinance (JCZO) and Jefferson County Comprehensive Plan (JCCP), as amended in 2018 and 2013, respectively. Neither the JCZO or JCCP have changed in a manner that would impact Council's previous analysis. Therefore, the Council may rely on its previous findings and conclusions of law as evaluated in the *Final Order on ASC*.[28]

The applicable substantive criteria from JCZO and goals and policies from JCCP are presented below in Table 3, *Jefferson County Applicable Substantive Criteria*.

[28] MSEFAPPDoc4-1 Final Order with Attachments 2021-08-02, pp. 41-105.

Table 3: Jefferson County Applicable Substantive Criteria

Jefferson County Zoning Ordinance (JCZO)	
Chapter 3 Land Use Zones	
Section 301	Exclusive Farm Use Zones
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 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	

Council previously imposed six site certificate conditions related to applicable local ordinance requirements (Land Use Condition's 1 through 6). These previously imposed conditions would continue to apply to the facility with proposed RFA1 changes.

Directly Applicable State Rules and Statutes

There have been no changes to LCDC's solar rules at OAR 660-033-0130(38)(h) since Council's 2021 *Final Order on ASC.* However, the Department evaluated changes in the county's noxious weed list to determine if any changes to the previously approved Noxious Weed Plan are warranted under OAR 660-033-0130(38). OAR 660-033-0130(38) requires that construction and maintenance activities associated with solar facilities not result in unabated introduction or spread of noxious weeds and other undesirable species. Council previously imposed Fish and Wildlife Condition 2 (GEN-FW-02) requiring that the certificate holder finalize and implement a Noxious Weed Control Plan.

Since the Council's *Final Order on ASC*, Jefferson County's Weed List includes four Noxious Weeds that were not included or represented in the ASC or the draft Noxious Weed Control Plan. These four weeds and their County Weed Designation are: Common purslane (C List); False brome (A List); Field morning glory (B List); and Whitetop (B List). Fish and Wildlife Condition 2 (GEN-FW-02) requires that, prior to construction, the certificate holder finalize the Noxious Weed Control Plan based on review of Jefferson County's current noxious weed list at the time (to determine the weeds to be evaluated during the preconstruction noxious weed survey) and completion of a preconstruction noxious weed survey, to then determine appropriate preconstruction and short- and long-term treatment and monitoring plans to be applied during construction and operation. Based on the existing requirements of the condition, any changes in Jefferson County's noxious weed list will be accounted for prior to construction. The Department recommends Council continue to find compliance with OAR 660-033-0130(38)(h)

Goal 3 Exception

In the *Final Order of the ASC,* pursuant to ORS 469.504(2)(c), the Council granted a Goal 3 exception for the 284 acres of nonarable land that could be occupied by facility components, subject to compliance with site certificate conditions. The reasons Council determined supported granting an exception were that the facility is locationally dependent, the facility would not have direct impacts to agricultural uses, and that the site provides unique characteristics from the perspective of minimal to no direct or indirect impacts to other resources protected under Council's standards. Because RFA1 does not propose any changes to the site boundary or facility design that would change these previous findings, the Department recommends Council maintain its prior exception.

III.E.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate conditions described above, the Department recommends the Council find that the facility,

with proposed RFA1 changes, will comply with the statewide planning goals adopted by the Land Conservation and Development Commission.

III.F. PROTECTED AREAS: OAR 345-022-0040

(1) To issue a site certificate, the Council must find:

(a) The proposed facility will not be located within the boundaries of a protected area designated on or before the date the application for site certificate or request for amendment was determined to be complete under OAR 345-015-0190 or 345-027-0363;

(b) The design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to a protected area designated on or before the date the application for site certificate or request for amendment was determined to be complete under OAR 345-015-0190 or 345-027-0363.

(2) Notwithstanding section (1)(a), the Council may issue a site certificate for: (a) A facility that includes a transmission line, natural gas pipeline, or water pipeline located in a protected area, if the Council determines that other reasonable alternative routes or sites have been studied and that the proposed route or site is likely to result in fewer adverse impacts to resources or interests protected by Council standards; or

(b) Surface facilities related to an underground gas storage reservoir that have pipelines and injection, withdrawal or monitoring wells and individual wellhead equipment and pumps located in a protected area, if the Council determines that other alternative routes or sites have been studied and are unsuitable.

(3) The provisions of section (1) do not apply to:

(a) A transmission line 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

(b) A natural gas pipeline routed within 500 feet of an existing utility right of way containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

(4) The Council shall apply the version of this rule adopted under Administrative Order EFSC 1-2007, filed and effective May 15, 2007, to the review of any Application for Site Certificate or Request for Amendment that

was determined to be complete under OAR 345-015-0190 or 345-027-0363 before the effective date of this rule. Nothing in this section waives the obligations of the certificate holder and Council to abide by local ordinances, state law, and other rules of the Council for the construction and operation of energy facilities in effect on the date the site certificate or amended site certificate is executed.[29]

III.F.1. Findings of Fact

The analysis area for the Protected Areas standard is the area within and extending 20 miles from the site boundary.[30] Since the Council's 2021 *Final Order on ASC*, the Protected Areas standard was amended; those changes are evaluated below.[31]

Protected Areas in the Analysis Area

There are 15 protected areas within the analysis area; protected areas not previously evaluated are highlighted in "green." These areas are discussed further in this section.

Table 4: Protected Areas within the 20-mile Analysis Area

Protected Area	Approx. Distance from Proposed Site Boundary (miles)	Direction from Proposed Site Boundary	Basis for Protection (OAR 345-001-0010)
The Cove Palisades State Park	3.0	South	(j) State Parks & Waysides
Central Oregon Agriculture Research and Extension Center	3.5	East	(q) Oregon State University Agricultural Experiment Stations or Research Centers
Round Butte Hatchery	4.1	South	(p) State Fish Hatcheries
Lower Deschutes Wild and Scenic River – from Pelton Dam downstream to the north county line	4.2	North	(d) National Wild, Scenic, or Recreational Rivers

[29] OAR 345-022-0040, effective December 19, 2022.

[30] Under OAR 345-027-0360(3), the analysis area for a request for amendment is the larger of either the study area, as defined in OAR 345-001-0010, or the analysis area described in the project order for the application for site certificate, unless otherwise approved in writing by the Department following a pre-amendment conference. The study area for impacts to protected areas under OAR 345-001-0010(35)(e) is the area within and extending 20 miles from the site boundary. The analysis area for impacts to protected areas established in the Project Order is the area within and extending 5 miles from the site boundary.[30] Because the study area under OAR 345-001-0010 is larger, and because the certificate holder has not requested a smaller study area, the analysis area in this Order is 20 miles within and extending from the site boundary.

[31] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 117.

Table 4: Protected Areas within the 20-mile Analysis Area

Protected Area	Approx. Distance from Proposed Site Boundary (miles)	Direction from Proposed Site Boundary	Basis for Protection (OAR 345-001-0010)
Lower Deschutes River State Scenic Waterway*	4.2	North	(n) State Scenic Waterways
The Island Area of Critical Environmental Concern	6.3	South	(i) Federal Administratively Designated Lands
Deschutes Canyon-Steelhead Falls Wilderness Study Area	8.9	South	(h) Wilderness Study Areas
Upper Deschutes River State Scenic Waterway*	11.6	South	(n) State Scenic Waterways
Middle Deschutes Wild and Scenic River – from Odin Falls to the upper end of Lake Billy Chinook	11.6	South	(d) National Wild, Scenic, or Recreational Rivers
Metolius Wild and Scenic River – from Deschutes National Forest boundary to Lake Billy Chinook	12.0	West	(d) National Wild, Scenic, or Recreational Rivers
Lower Crooked Wild and Scenic River – from the National Grasslands boundary to Dry Creek	12.8	South	(d) National Wild, Scenic, or Recreational Rivers
Haystack Butte RNA	13.1	Southeast	(i) Federal Administratively Designated Lands
Warm Springs National Fish Hatchery	13.4	North	(f) National Fish Hatcheries
Peter Skene Ogden State Scenic Viewpoint	18.4	South	(j) State Parks & Waysides
Smith Rock State Park	19.6	South	(j) State Parks & Waysides

Source: MSEFAMD1 RFA1 2024-10-17, Table 3.
* Lower and Upper Deschutes River State Scenic Waterway is identified as a protected area not previously evaluated; however, these resources are the same resource as the area designated under National Wild, Scenic, or Recreational Rivers but also designated as a State Scenic Waterway.

Round Butte Hatchery

The Round Butte Hatchery is located at the base of the Round Butte Dam, with a satellite rearing facility located at the former fish passage ladder at the base of the Pelton reservoir. The Hatchery was constructed in 1972 to mitigate for the fishery losses caused by the Pelton/Round Butte (PRB) Hydroelectric Complex, and is used for adult collection, egg incubation and rearing

of spring chinook, and summer steelhead.[32] Public access is available by advance arrangement with ODFW only.

Lower Deschutes River State Scenic Waterway

Under OAR 390.826(5), the segment of the Deschutes River from the Pelton Dam to the confluence of the Deschutes River, excluding lands within the City of Maupin, is designated as a State Scenic Waterway. This river segment is also designated at the federal level as the Lower Deschutes Wild and Scenic River, which was considered in the *Final Order on ASC*.[33]

Upper Deschutes River State Scenic Waterway

Under ORS 390.826(5), the segment of the Deschutes River from Deschutes Market Road Bridge downstream to the Lake Billy Chinook Reservoir is designated as a State Scenic Waterway. This segment is also included in the federally designated Middle Deschutes Wild and Scenic River; which was considered in the *Final Order on ASC*.[34]

Haystack Butte Research Natural Area

The Haystack Butte RNA is located within the Crooked River National Grassland of the Ochoco National Forest. The area was designated in 2003 to protect the ecological integrity of the largely intact juniper/big sagebrush/Idaho fescue plant communities located on the upper parts of the butte. Due to the lack of access and isolation of the upper reach of the Butte, recreational use of the area is minimal.[35]

Figure 2 below shows the protected areas identified above in relation to the site boundary.

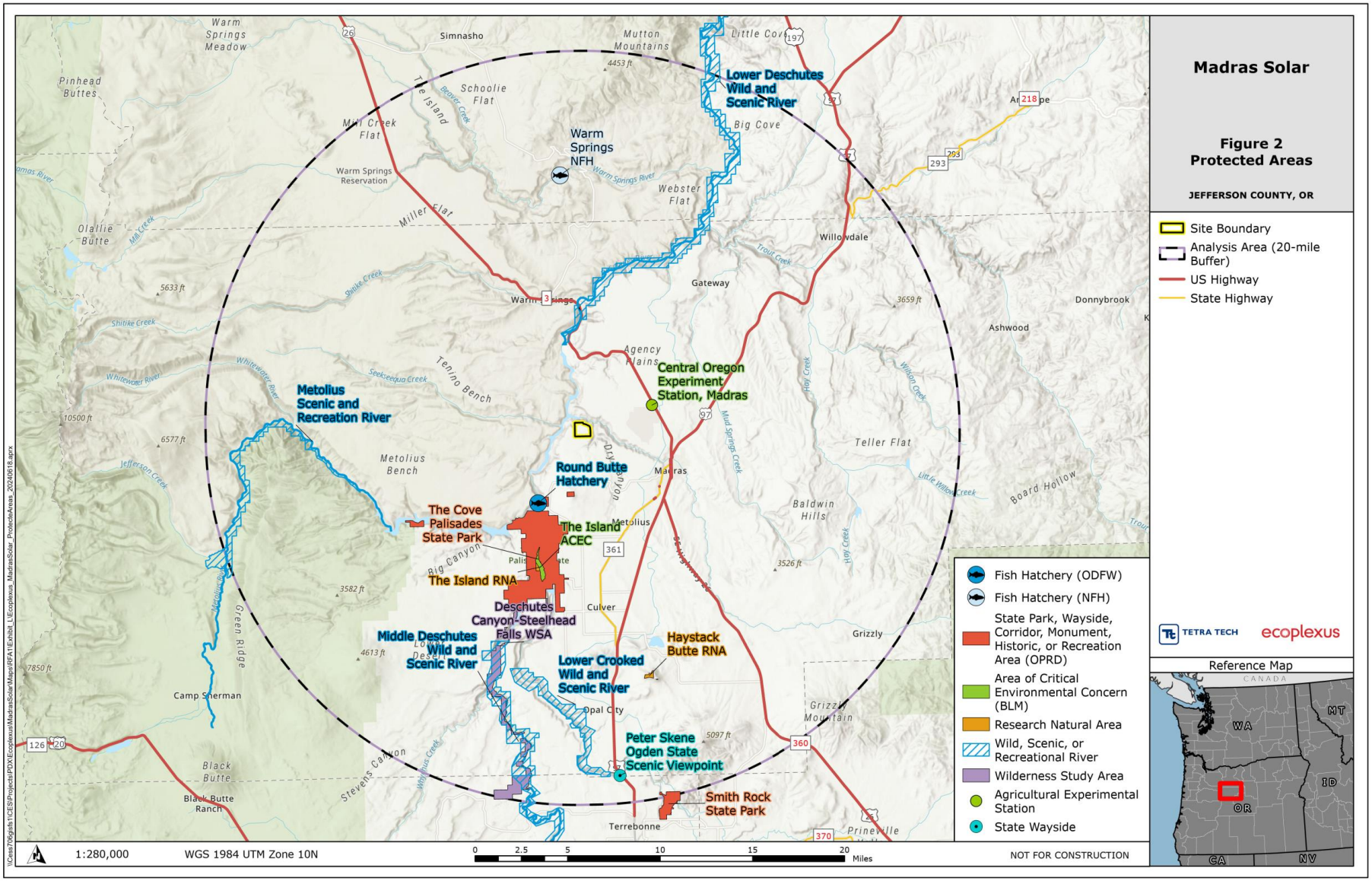
[32] ODFW. Round Butte Fish Hatchery Program Management Plan. 2023.

[33] MSEFAMD1 RFA1 2024-10-17, Section 6.6., Bureau of Land Management. Lower Deschutes River Management Plan Record of Decision. 1993.

[34] MSEFAMD1 RFA1 2024-10-17. Section 6.6. Bureau of Land Management. Middle Deschutes/Lower Crooked Wild and Scenic Rivers' Management Plan. 1992.

[35] MSEFAMD1 RFA1 2024-10-17. Section 6.6, U.S. Forest Service. Establishment Record for Haystack Butte Research Natural Area within Ochoco National Forest, Crooked River National Grassland, Jefferson County, Oregon. 2003. Oregon Natural Areas Plan 2015.

Figure 2: Protected Areas Within the RFA1 Analysis Area



Potential Impacts on Protected Areas

There are no changes proposed in RFA1 that would alter the previously evaluated noise levels, transport or haul routes, water use or wastewater disposal, or visual impacts that would result from the construction and operation of the facility; the Department recommends the Council continue to rely on its previous findings with regard to all previously considered protected areas.

As discussed above, the certificate holder identified four additional protected areas which were not previously considered by the Council. As noted, two of these newly identified protected areas, the Upper and Lower Deschutes State Scenic Waterways, are located on the same segments of the Deschutes River as the previously evaluated Lower and Middle Deschutes Wild and Scenic Rivers. The Council found that the construction and operation of the facility was not likely to result in significant adverse impacts to these federally protected river segments.[36] Because both the state and federal designations protect the same resources for similar purposes, the Department recommends that the Council rely on these previous findings with regards to the Upper and Lower Deschutes State Scenic Waterways.

The potential impacts to the two remaining newly identified protected areas are discussed in more detail below.

<u>Potential Visual Impacts</u>

Haystack Butte RNA - Council previously found that the tallest facility components that may create a visual impact are the 80-foot-tall transmission support poles and the 10-foot pad-mounted inverters and transformers located throughout the area within the facility's security fence. Council previously found that protected areas at 5 miles or further there would not likely be visual impacts from the facility due to distance, topography, and vegetative screening, therefore it is not anticipated that there would be any visual impacts at the Haystack Butte RNA, 13.1 miles away.

Round Butte Hatchery - In the *Final Order on ASC*, visual impacts were evaluated at Cove Palisades State Park, located 3.1 miles south of the facility. A photo survey documented existing views from three viewpoints 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. Council previously found that the photographs demonstrate that views of the facility site from the selected locations would be precluded by existing elevation and topography.[37] Round Butte Hatchery is located 4.1 miles from the facility in the same direction as Cove Palisades State Park. The Hatchery is managed to raise spring Chinook, summer steelhead, and sockeye salmon, does not have public open access and is not managed for recreational or scenic qualities. For these reasons there would not be visual impacts at Cove Palisades State

[36] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 111-117.

[37] MSEFAPPDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-7, Attachment L-1, Photograph L-1 to L-4.

Park, and because Round Butte Hatchery is further away, the Department recommends Council find that there would not be adverse visual impacts at this protected area.

Potential Noise Impacts

Construction Noise - Potential noise impacts from construction and operation of the facility are summarized in Section IV.A., *Noise Control Regulations*, of this order. Council previously found that construction noise levels are expected to attenuate to 44 to 50 dBA at a distance of 1 mile, and at a distance of 3.1 miles, the distance to Cove Palisades State Park, the protected area nearest to the site, construction related noise were expected to attenuate to below levels that are discernable from ambient background noise.[38] Because there are no proposed changes to the design of the facility that would increase construction related noise levels, and because the closest protected area (Round Butte Hatchery) not previously evaluated is 4.1 miles away, the Department recommends Council find that construction-related noise would not impact Round Butte Hatchery or impede the use of the protected area.

Operational Noise - The certificate holder's noise analysis estimated that noise generated by these components would attenuate to approximately 29 dBA (or 26 dBA without battery components) within 0.5 miles of the site boundary.[39] At 3.1 miles, the distance to the Cove Palisades State Park, the protected area nearest to the site, the noise analysis indicated that operational noise was expected to attenuate to below detectable levels.[40] Council previously found that the certificate holder's noise assessment estimated that operational noise would attenuate to approximately 29 dBA within 0.5 miles of the site boundary.[41] The Council found that operational noise from the facility was not likely to result in significant adverse noise impacts to the Cove Palisades State Park or other protected areas within the analysis area.[42] Because there are no proposed changes to the design of the facility that would increase operational noise levels, and because there are no new or newly identified protected areas in closer proximity to the site, the Department recommends the Council continue to rely on its previous findings.

Potential Traffic-related Impacts

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, the route then turns north on SW Elk Drive and extends for approximately 2.5 miles to the

[38] MSEFAPPDoc1-12_Exhibit_L_Protected_Areas 2020-11-09.
[39] MSEFAPPDoc1-24_Exhibit_X_Noise 2020-11-09, p. X-5-6.
[40] MSEFAPPDoc1-12_Exhibit_L_Protected_Areas 2020-11-09, pg. L-3.
[41] MSEFAPPDoc1-24_Exhibit_X_Noise 2020-11-09, p. X-5-6.
[42] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 112.

facility site.[43] In the *Final Order on ASC*, the Council 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.[44]

The Haystack Butte RNA is located to the east of highway 97, and is not likely to be affected by slowdowns on SW and NW Elk Drive and SW Belmont Lane. The Round Butte Hatchery is located at the end of SW Belmont Lane, and would likely be affected by temporary and intermittent construction related slowdowns, however, public access to the hatchery is only available by advance arrangement and impacts are not likely to affect large numbers of visitors. In addition, the Council previously imposed Condition GEN-PS-01, requiring the certificate holder to develop and implement a Construction Traffic Management Plan to minimize traffic related impacts. Because construction traffic related impacts would be temporary and intermittent, would only affect a small number of visitors to the Round Butte Hatchery, and would be minimized by existing conditions, the Department recommends the Council find that traffic associated with construction of the facility is not likely to have a significant adverse impact on the Round Butte Hatchery.

The Council previously found that operational traffic would only result in minimal traffic impacts because the facility would be operated remotely without need any full-time, onsite employees.[45] The Department recommends the Council continue to rely on this previous finding.

Potential Water-Related Impacts

In the *Final Order on ASC*, the Council found that 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.[46] The Department recommends the council continue to rely on this previous finding with regard to impacts to the Round Butte Fish Hatchery.

Based on the minimal amounts of wastewater and permitting requirements to minimize off-site runoff, the Council found that facility construction and operational wastewater disposal would be unlikely to result in a significant adverse impact to any protected areas, including protected waterways, within the analysis area.[47] Because no changes to the amount of water that would be disposed or methods of control are proposed in RFA1, the Department recommends the Council continue to rely on its previous findings.

[43] MSEFAPPDoc1-12 Exhibit L Protected Areas 2020-11-09, pg. L-3
[44] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 112-113.
[45] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 112.
[46] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 113-114.
[47] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 114.

III.F.2. Conclusions of Law

Based on the foregoing analysis described above, the Department recommends the Council find that the facility, with proposed RFA1 changes, is not located within the boundaries of a protected area and that the design, construction and operation of the facility, with the proposed RFA1 changes, are not likely to result in significant adverse impact to any protected areas.

III.G. RETIREMENT AND FINANCIAL ASSURANCE: OAR 345-022-0050

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

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

(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.[48]

III.G.1. Findings of Fact

OAR 345-027-0375(2)(e) designates that the Scope of Council's Review for all site certificate amendments is to determine whether the amount of the bond or letter of credit required under OAR 345-022-0050 is adequate. As presented below, the scope of the evaluation under OAR 345-022-0050 for RFA1 is an evaluation associated with updated unit costs for facility components, tasks, and actions associated with decommissioning each type of facility component. Certificate holder also provides updated evidence of their ability to secure a bond or letter of credit that reflects the updated cost to restore the site to a useful, nonhazardous condition.

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires that 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. Restoring the site to a useful, nonhazardous condition for the facility is the same as Council previously approved and includes:

- Preparation the facility site for retirement and restoration, which includes maintaining internal service roads and access roads, fencing, and electrical power in place for use by the retirement and restoration workers until no longer needed. Mobilization of decommissioning equipment, set up construction management offices/tailers and

[48] OAR 345-022-0050, effective April 3, 2002.

facilities, and site preparation. Conduct safety, training, and project orientations with work crews.

- Disconnect electrical power to panels. Remove solar panels from trackers and load onto recycler's trucks. Remove steel trackers from posts, extract steel posts, and stage for recycling from site. Disconnect electrical equipment from underground cables. Excavate any concrete foundations, load and transport for disposal. Maintain the underground cables in place except where they surface, then cut and remove to 3 feet below grade and transport. Decompact as necessary and reseed areas.
- Disconnect electrical power. Stage large transformers, drained of oil, and stage lithium-ion battery units onsite or load onto scrap recycler trucks. Truck substation electrical equipment and inverters to recycle and dispose. Remove concrete equipment foundations to a minimum depth of 3 feet and truck to the county transfer station. Decompact as necessary and reseed areas.
- Remove internal gravel access road segments and gravel from substation and laydown yards. This will result in stockpiling of reusable gravel onsite for loading by recycler/reuser. Decompact roads includes discing and regrading. Reseed areas.
- Stage steel fences and gates onsite and load onto scrap recycler trucks. Stage copper cable from substation grounding grid onsite for recycler.

In preparation of RFA1, the certificate holder provided a retirement cost estimate in a format that is different from which Council previously evaluated. The format provided in RFA1 is consistent with other Council-approved energy facilities and breaks down the cost estimate by each type of facility component. In reviewing the cost estimate and amendment, the Department verifies that all the tasks and actions associated with retiring a type of facility component and the quantities of each type of component are appropriate. Important assumptions associated with the retirement tasks, actions, and the below updated cost estimate to retire the facility include:

- Estimate includes wages for superintendent, differing wages operators for various necessary equipment, electricians, general laborers, and union labor.
- Solar panel removal assumes 20 panels per laborer per hour, which includes packaging and preparing for shipment offsite. Solar post removal assumes production a crew of one excavator with shear, one excavator with grapple, two operators and two laborers and includes post removal and sizing of steel for sale as scrap, and loadout to haul trucks.
- The estimate assumes no salvage value recovery for materials to be disposed of by way of recycling.
- All concrete and substation electrical equipment (other than transformers) is trucked to Jefferson County Transfer Station (JCTS) for a recycling decision and disposed of by JCTS and their recycling partners.
- Estimate assumes that the entire area occupied by the solar modules (approximately 300 acres) will be reseeded (or likely overseeded).

The Council's rules include several mandatory site certificate conditions, which were imposed in the *Final Order on ASC*, which would continue to apply to the facility. Retirement and Financial Assurance Condition 1 (GEN-RF-01) specifies the obligation of a certificate holder to prevent the development of conditions on the site that would preclude restoration of the site. Retirement and Financial Assurance Conditions 2 and 3 (RET-RT-01, and RET-RT-02) require the certificate holder to obtain Council approval of a retirement plan in the event that the facility ceases construction or operation, and if no plan is submitted the Council may develop its own plan and draw upon the bond held to restore the site.

Estimated Costs of Site Restoration

In the *Final Order on ASC*, the Council determined that the amount necessary to restore the site to a useful, non-hazardous condition was approximately $4.1 million in Q4 2019 dollars. With additional contingencies for bonding, administration, and future development, the total amount of financial assurance required under Retirement and Financial Assurance Condition 4 (PRE-RF-01) is $4.9 million.[49]

RFA1, Section 6.7 and Attachment 4, include an updated cost estimate to retire the facility, in Q4 2024 dollars. The decommissioning cost estimate in includes contractor mark ups and contingencies previously approved by Council. As noted above, the updated retirement cost estimate was provided in a format familiar to the Department and Council and the Department reviewed and verified that the unit costs and quantities of each type of facility component are appropriate and that there is a line item cost associated with each task for retiring each type of component. Therefore, the Department recommends Council find that the tasks, actions, assumptions, and unit costs associated with the updated retirement cost estimate are appropriate. Based on this data, the Department recommends Council find that the updated cost to retire the facility to a useful, nonhazardous condition, including contingencies, is approximately $4.5 million, as presented in Table 5, below.

Table 5: Updated Retirement Cost Estimate

Task or Component	Quantity	Unit	Unit Cost ($)	Estimate ($)
1.1 Mobilization /Demobilization				
1.1.1 Equipment Mob	1	Lump Sum	40,600.00	40,600.00
1.1.2 Site Facilities	1	Lump Sum	2,200.00	2,200.00
1.1.3 Crew - Mob & Site Setup	3	Day	9,202.51	27,607.53
1.1.4 Crew - Demob & Site Cleanup	2	Day	9,202.51	18,405.02
			Subtotal	***88,812.55***
1.2 Project Site Support				

[49] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, Table 3, pg. 124-125.

Table 5: Updated Retirement Cost Estimate

Task or Component	Quantity	Unit	Unit Cost ($)	Estimate ($)
1.2.1 Site Facilities	4	Month	1,305.00	5,220.00
1.2.2 Field Management	4	Month	44,599.70	178,398.80
			Subtotal	***183,618.80***
1.3 Substation / Switchyard Retirement				
1.3.1 Fence Removal	1	Day	1,429.00	1,429.00
1.3.2 Transformer Removal	1	Each	96,135.90	96,135.90
1.3.3 Control Building Removal	1	Each	2,624.50	2,624.50
1.3.4 UG Utility & Ground Removal	2	Day	1,429.00	2,858.00
1.3.5 Remove Foundations	600	Cubic Yard	30.78	18,468.00
1.3.6 Misc. Material Disposal	1	Lump Sum	2,200.00	2,200.00
1.3.7 Restore Yard	1	Lump Sum	68,334.28	68,334.28
			Subtotal	***192,049.68***
1.4 230 kV Transmission Line Retirement				
1.4.1 Structure and Cable Span Removal	4	Each	4,921.57	19,686.28
1.4.2 Remove Foundations to Subgrade	4	Each	5,390.68	21,562.72
			Subtotal	***41,249.00***
1.5 34.5 kV Collector Line Tray and Cable				
1.5.1 Remove Tray & Cable	4	Miles	$9,830.31	39,321.24
1.5.2 Trucking - Per Load	12	Each	1,500.00	18,000.00
			Subtotal	***57,321.24***
1.6 Battery Storage System Removal				
1.6.1 Battery Removal & Disposal	63	MW	$2,195.16	138,295.07
1.6.2 Structure & Components Removal	63	MW	$883.52	55,662.06
			Subtotal	***193,957.13***
1.7 Solar Array Retirement				

Table 5: Updated Retirement Cost Estimate

Task or Component	Quantity	Unit	Unit Cost ($)	Estimate ($)
1.5.1 Fence Removal	23,306	Linear Feet	1.39	32,395.34
1.5.2 Inverter/Transformer Removal	19	Each	2,253.96	42,825.24
1.5.3 Remove Foundations To Subgrade	19	Each	2,954.89	56,142.91
1.5.4 Solar Panel Removal & Disposal	137,673.00	Each	7.65	1,053,198.45
1.5.5 Solar Rack (Trackers) & Post Removal	1	Lump Sum	777,887.65	777,887.65
			Subtotal	***1,962,449.59***
2.0 O&M Building Removal[4]				
Structure Demo	1	Each	$2,624.50	2,624.50
Fence Removal	1	Day	$1,429.00	1,429.00
			Subtotal	***4,053.50***
1.8 Site Restoration				
1.8.1 Decompact Roads	5,000	Linear Feet	1.01	5,050.00
1.8.2 Spot Grade Disturbed Areas	284[4]	Acre	316.81	89,974.04
1.8.3 Re-Seed w Native Vegetation - Roads & Areas Disturbed By Construction	284[4]	Acre	1,000.00	284,000.00
			Subtotal	***379,024.04***
Total Decommissioning Cost				***3,102,535.53***
Contractor Markups				
Home Office, Project Management	0.05		155,126.78	
Contractor OH & Fee			0.13	423,496.10
			Subtotal	***578,622.88***
Total Decommissioning Cost				***3,681,158.41***
Performance Bond			0.01	36,811.58
			Gross Cost	***3,717,969.99***

Table 5: Updated Retirement Cost Estimate

Task or Component	Quantity	Unit	Unit Cost ($)	Estimate ($)
ODOE/EFSC Contingencies				
	Basis (% of Cost)	**Basis ($)**	**Contingency**	**Estimate ($)**
Administration and Project Management	100%	3,717,969.99	0.10	371,797.00
Future Development (Exclude Battery)	94%	3,485,538.55	0.10	348,553.85
Future Development (Battery Only)	6%	232,431.44	0.20	46,486.29
			Subtotal	***766,837.14***
TOTAL ESTIMATED COST ($Q4 2024)				**4,484,807.13**
ROUNDED				**4,485,000.00**

Notes:
1. See ASC Exhibit X Attachment X-1 for detailed breakdown of tasks, actions and unit costs for the sum total costs presented in this Table.
2. To allow continued use of the land for agricultural or other purposes deemed appropriate at the time of decommissioning purposes, all subsurface features including underground collector lines and concrete foundations associated with the O&M, Substation, Solar, Battery, Transmission Line, and Met towers will be removed under the Final Order on ASC, or as agreed with the landowner, in a final Retirement Plan.
3. Tasks associated with a Lump Sum unit cost may be calculated using a fraction (in decimal form) of the actual quantities constructed or by using the more detailed breakdown of unit costs associated with the Lump Sum task identified in the cost estimating worksheet in ASC Exhibit X, Attachment X-1.
4. Added or modified by Department.

To reflect the updated cost estimate to retire the facility and to incorporate condition changes recommended in Section III.B. *Organizational Expertise*[50], the Department recommends Council amend Retirement and Financial Assurance Condition 4 (PRE-RF-01) as follows:

> **Recommended Amended Retirement and Financial Assurance Condition 4 [PRE]:** 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 $4.5~~4.9~~ million dollars (Q4 2024~~19~~ 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

[50] In Section III.B Organizational Expertise, the Department recommends Council amend Organizational Expertise Condition 5 to provide the Department the directive to review site certificate compliance and any repeated issues against the adequacy of contingencies applied to the retirement estimate, to address the additional liability shield represented in RFA1.

costs presented in Table ~~3~~ 5 of the Final Order on RFA1 ~~the ASC~~, and the contingencies illustrated in Table ~~3~~ 5 of the Final Order on RFA1 ~~the ASC~~, and may further make adjustments based on unit costs for task and actions presented in ~~ASC Exhibit W~~ Attachment G to the Final Order on RFA1 ~~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~~ 5 of the Final Order on RFA1 ~~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 2024~~19~~ 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 2024~~19~~ 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 2024~~19~~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.

d. The Department and Council reserve the right to adjust the contingencies, as appropriate and necessary to ensure that costs to restore the site are adequate to maintain health and safety of the public and environment.

[Mandatory Condition OAR 345-025-0006(8); PRE-RF-01; Final Order on ASC; AMD1]

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

RFA1 Attachment 5 includes a June 21, 2024 financial assurance letter from Arch Insurance Company indicating that Arch would provide Ecoplexus, Inc., the certificate holder's parent company, with a surety credit of up to $20 million for the Madras facility. Arch Insurance Company is included on the Council's 2024 list of pre-approved financial institutions for financial assurance instruments.[51] The letter continues that Ecoplexus maintains sufficient bonding capacity for the bond requirements and that, based on the financial institution's knowledge of the management team, experience, and financial conditions, they are confident in Ecoplexus' ability to successfully complete the project. While the letter does not provide a binding commitment from the financial institution, the Department recommends Council find that it sufficiently demonstrates the certificate holder's ability, via its parent company, to obtain a bond or letter of credit in the amount necessary to retire the facility site.

[51] 2024 EFSC Approved Financial Institution List 2024-02-23.

III.G.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing and recommended amended site certificate conditions described above, the Department recommends Council find that the site can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility, and that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to restore the site to a useful, non-hazardous condition.

III.H. FISH AND WILDLIFE HABITAT: OAR 345-022-0060

> *To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with:*
>
> *(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017, and*
>
> *(2) For energy facilities that impact sage-grouse habitat, the sage-grouse specific habitat mitigation requirements of the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-415-0025(7) and OAR 635-140-0000 through -0025 in effect as of February 24, 2017.*[52]

III.H.1. Findings of Fact

The Fish and Wildlife Habitat standard requires the Council to find that the design, construction and operation of the facility, with proposed RFA1 changes, is consistent with the Oregon Department of Fish and Wildlife's (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025. This rule creates requirements for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted as well as the nature, extent, and duration of the impact. The rule also establishes a habitat classification system based on the function and value of the habitat it would provide to a species or group of species likely to use it. There are six habitat categories, with Category 1 being the most valuable, and Category 6 the least valuable.

As defined in the project order, the analysis area for fish and wildlife habitat includes the area within and extending ½-mile from the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued to determine whether, based on changes in fact or law, the facility, with proposed RFA1 changes, would continue to satisfy requirements of the standard. There have been no changes

[52] OAR 345-022-0060, effective Mar. 8, 2017.

in the Council's standard or in ODFW's Habitat Mitigation Policy since Council's approval of the Final Order on the ASC. To determine whether there have been changes in fact that could impact the prior evaluation, various sources were evaluated, as referenced in RFA and described in this section.

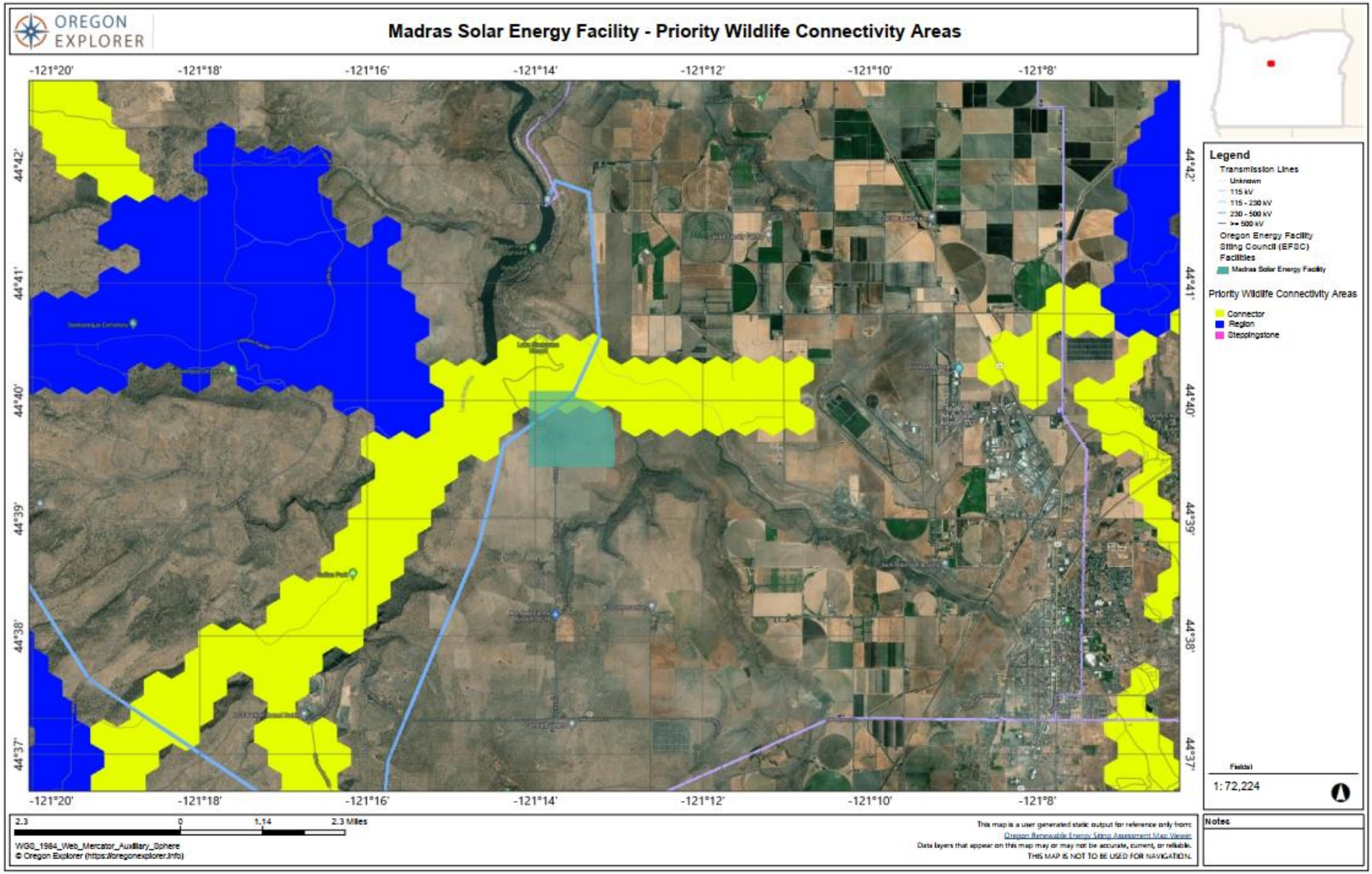
The certificate holder conducted a 2023-24 literature review of aerial imagery; Oregon Biodiversity Information Center (ORBIC); United States Fish and Wildlife Service's Information for Planning and Consultation (IPaC) resource report; the National Audubon Society's Important Bird Areas; and the U.S. Geological Survey's Breeding Bird Survey. In addition, priority wildlife corridor areas (PWCA), based on ODFW's 2022 Oregon Connectivity Assessment and Mapping Project, were evaluated to determine potential effects to the prior habitat categorization of the site and analysis area. The results of the literature review, which were provided in RAI2, did not identify any new federally listed or state listed Special-status species that could affect the prior habitat categorization of species' impact assessment.

Based on review of ODFW's PWCA Web Map, the northeastern side of the site boundary overlaps with a portion of a mapped PWCA, as presented in Figure 3 (below). The proximity and overlap of the site boundary to the PCWA does not impact the prior habitat categorization because the site predominately avoids the PWCA and because the overlap is near the PWCA termination point, lessoning the impact to an area that would otherwise provide important habitat connectivity. [53]

Based on the results of literature review and Department's consultation with ODFW, there are no new state-listed sensitive species recorded, land cover/use changes or new available data that would impact the previous designation of Category 4 (Exotic Annual Grassland, Rabbitbrush Shrub-Steppe), and Category 6 (Developed) habitat at the site.

[53] MSEFAMD1 Reviewing Agency Comments ODFW 2024-10-04

Figure 3: Priority Wildlife Corridor Areas within and in proximity to the approximate Facility site



Habitat impacts from facility construction and operation include approximately 273 acres of permanent impact and 6.7 acres of temporary impact. Due to ongoing challenges of habitat restoration (i.e., limited restoration success) when implemented by EFSC certificate holders, the Department recommends Council consider the previously designated 6.7 acres of temporary habitat impacts as permanent impacts, and account for and mitigate for these acres in the Habitat Mitigation Plan (HMP) under Fish and Wildlife Habitat Conditions 3 (GEN-FW-03).

Temporary disturbance impacts would still be required to be restored in accordance with General Standard Condition 6 (OPR-GS-01) and Soil Protection Condition 1 (GEN-SP-01), just not to a habitat restoration standard.

Council previously imposed Fish and Wildlife Habitat Condition 1 (GEN-FW-01) requiring that the certificate holder finalize and implement a Revegetation Plan. Because temporary habitat impacts are recommended to be considered permanent impacts, the Revegetation Plan is no longer needed. Therefore, the Department recommends Council remove this condition from the site certificate, as presented below.

Recommended Deleted Fish and Wildlife 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:~~

~~1. Final assessment of temporary habitat impacts (in acres), based on habitat quality of habitat subtype, and final facility design, presented in tabular format.~~

~~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.~~

~~3. Description of topsoil salvage, scarification and restoration methods if intended to be implemented.~~

~~4. 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;~~ Deleted in Final Order on RFA1]

The certificate holder identified a potential Habitat Mitigation Area (HMA), as presented in the draft Habitat Mitigation Plan (HMP – included as Attachment D to this order), on a 280-acre parcel. Therefore, the HMA is large enough to achieve the ODFW habitat mitigation goals and standards applicable to the site.

The draft HMP includes 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 include an HMA habitat assessment, grazing assessment, enhancement action review, provision of success criteria, and legal instrument. This draft plan was previously approved by Council. The Department recommends Council find that

there have been no changes that would impact or change the previous approval. The Department recommends Council continue to find that the draft HMP mitigation is adequate to satisfy the Council's Fish and Wildlife Habitat standard

III.H.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate conditions, the Department recommends the Council find that the design, construction and operation of the facility, with the proposed RFA1 changes, are consistent with the mitigation goals and requirements of the Oregon Department of Fish and Wildlife's Fish and Wildlife Habitat Mitigation Policy under OAR 635-415-0025.

III.I. THREATENED AND ENDANGERED SPECIES: OAR 345-022-0070

> *To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*
>
> *(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:*
>
> *(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*
>
> *(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and*
>
> *(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.*[54]

III.I.1. Findings of Fact

The Threatened and Endangered (T&E) Species standard requires the Council to find that the design, construction, and operation of the facility, with the requested extension of the construction deadlines, 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. For

[54] OAR 345-022-0070, effective May 15, 2007.

threatened and endangered plant species, the Council must also find that the facility, with the requested extension of the construction deadlines, is consistent with an adopted protection and conservation program from Oregon Department of Agriculture. 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.[55]

As defined in the project order, the analysis area for threatened and endangered plant and wildlife species includes the area within and extending five miles from the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard. Since Council's approval of the *Final Order on ASC*. Changes in fact are evaluated in this section.

To determine whether there have been any changes in fact since the Council's approval of the *Final Order on ASC*, the certificate holder requested an updated records search from Oregon Biodiversity Information Center (ORBIC) and the USFWS's 2024 Information for Planning and Consultation (IPaC) resource report. Neither of these sources identified any state-listed T&E species likely to occur within the analysis area. ODAg's T&E plant list was updated in May 2024, however, the update did not result in any changes for Jefferson County, where there are no state listed T&E plants likely to occur.

With no state listed threatened or endangered species that are likely to occur in the analysis area, and no changes in fact or law that would influence the Council's previous findings and conclusions, the Department recommends that Council continue to find that the facility, with proposed RFA1 changes, will not result in impacts to the likelihood or survival of any T&E species.

III.I.2. Conclusions of Law

Based on the foregoing analysis, the Department recommends the Council find that the design, construction and operation of the facility, with the proposed RFA1 changes, are not likely to cause a significant reduction in the likelihood of survival or recovery of species listed as threatened or endangered by the Oregon Department of Agriculture or Oregon Fish and Wildlife Commission.

[55] Although the Council's standard does not address federally-listed threatened or endangered species, certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

III.J. SCENIC RESOURCES: OAR 345-022-0080

(1) 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 visual impacts to significant or important scenic resources.

(2) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). In issuing such a site certificate, the Council may impose conditions of approval to minimize the potential significant adverse visual impacts from the design, construction, and operation of the facility on significant or important scenic resources.

(3) A scenic resource is considered to be significant or important if it is identified as significant or important in a current land use management plan adopted by one or more local, tribal, state, regional, or federal government or agency.

(4) The Council shall apply the version of this rule adopted under Administrative Order EFSC 1-2007, filed and effective May 15, 2007, to the review of any Application for Site Certificate or Request for Amendment that was determined to be complete under OAR 345-015-0190 or 345-027-0363 before the effective date of this rule. Nothing in this section waives the obligations of the certificate holder and Council to abide by local ordinances, state law, and other rules of the Council for the construction and operation of energy facilities in effect on the date the site certificate or amended site certificate is executed.[56]

III.J.1. Findings of Fact

Under OAR 345-027-0360(3), the analysis area for a request for amendment is the larger of either the study area, as defined in OAR 345-001-0010, or the analysis area described in the project order for the application for site certificate, unless otherwise approved in writing by the Department following a pre-amendment conference. The study area for impacts protected areas under OAR 345-001-0010(35)(b) is the area within and extending 10 miles from the site boundary. The analysis area for impacts to Scenic Resources established in the project order is the area within and extending 5 miles from the site boundary.[57] Because the study area under OAR 345-001-0010 is larger, and because the certificate holder has not requested a smaller study area, the analysis area for RFA1 is the area within and extending 10 miles from the site boundary.

[56] OAR 345-022-0080, effective December 19, 2022.

[57] MSEFNOIDoc11 Project Order SIGNED 2019-09-12, Table 2.

III.J.1.a. Scenic Resources in the Analysis Area and Visual Impact Summary

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, state, regional, and/or federal land management plans.

In preparation of RFA1 and in the review of RFA1, the certificate holder and Department reviewed land use plans previously reviewed and determined that none of the applicable plans have been updated since the site certificate was approved; there are not any new Scenic Resources in the analysis area.[58] There have not been any changes in fact or law that would influence the Council's previous findings and conclusions under OAR 345-022-0090 provided in the *Final Order on ASC*. Those prior findings are incorporated herein by reference and direct incorporation, as applicable, and briefly summarized below.[59]

Table 6 below lists the scenic resources Council previously determined were considered significant or important as designated in a management plan and therefore protected under the standard. Table 6 lists the resource, the designating management plan, and provides a summary of the visual impact assessment Council relied upon in the *Final Order on ASC*.

[58] MSEFAMD1 RFA1, Section 6.10. RFA1, Table 4 lists the names of the Land Use Plans reviewed for RFA1 and in the Final Order on ASC.

[59] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 139-155.

Table 6: Council-Protected Scenic Resources Identified in Applicable Land Use and Management Plans and Summary of Visual Impact Assessment

Scenic Resource	Managing Jurisdiction	Plan Where Scenic Resource is Identified	Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary	Is Facility Potentially Visible?	Conclusions from Final Order on ASC
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. Views of the facility site were precluded from view by existing elevation and topography at accessible locations where photo surveys were conducted.
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. 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	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. Any visible facility components would lack definition and detail and will not dominate the existing landscape.

Table 6: Council-Protected Scenic Resources Identified in Applicable Land Use and Management Plans and Summary of Visual Impact Assessment

Scenic Resource	Managing Jurisdiction	Plan Where Scenic Resource is Identified	Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary	Is Facility Potentially Visible?	Conclusions from Final Order on ASC
				with a low profile on the landscape.	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 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. Facility would not be visible from areas within the park boundary surrounding Lake Billy Chinook.	No significant potential adverse impacts to the scenic resource – facility location would not be visible from views identified as significant or important in the Cove Palisades State Park Master Plan Potential. Visibility only occurs in the middleground of views from a portion of the park that is not identified for scenic resource management.

Table 6: Council-Protected Scenic Resources Identified in Applicable Land Use and Management Plans and Summary of Visual Impact Assessment

Scenic Resource	Managing Jurisdiction	Plan Where Scenic Resource is Identified	Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary	Is Facility Potentially Visible?	Conclusions from Final Order on ASC
Lower Deschutes River – from Pelton Dam downstream to the north County line Deschutes River Scenic Waterway Recreation Area 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. Facility would appear obscured or may be undetectable in the surrounding landscape. 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

Table 6: Council-Protected Scenic Resources Identified in Applicable Land Use and Management Plans and Summary of Visual Impact Assessment

Scenic Resource	Managing Jurisdiction	Plan Where Scenic Resource is Identified	Nearest Approximate Distance (Miles) and Direction from Facility Site Boundary	Is Facility Potentially Visible?	Conclusions from Final Order on ASC
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. Based on the 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.	No impact.

1

The Council did not impose any conditions specifically to ensure compliance with the Scenic Resources Standard. Because there are no changes to the facility design proposed in RFA1 or other changes that would increase or alter the visual impacts of the facility, the Department recommends Council find that there would not be significant adverse impacts from the facility to Scenic Resources within the analysis area.

III.J.2. Conclusions of Law

Based on the foregoing analysis, the Department recommends the Council find that the that the facility, with the proposed deadline extension, is not likely to result in significant adverse visual impacts to significant or important scenic resources.

III.K. HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES: OAR 345-022-0090

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:

(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;

(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in 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.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.[60]

III.K.1. Findings of Fact

[60] OAR 345-022-0090, effective May 15, 2007, amended by minor correction filed on July 31, 2019.

The project order describes that the analysis area for the Historic, Cultural and Archaeological Resources standard is the area within and extending one mile from the site boundary. The Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Klamath Tribes and the Burns Paiute Tribe are potentially affected by the facility pursuant to OAR 345-001-0010(28)(o).

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard.

To identify any potential new resources within the analysis area, the certificate holder reviewed the General Land Office (GLO) records, Historic Map Works, the results of their 2019 Phase I Cultural Resource Survey, and the Oregon State Historic Preservation Office (SHPO) 2016 Guidelines for Conducting Field Archaeology in Oregon. Based on this review, no additional resources were identified. Described below, evaluation provided in RFA1 found that there have not been any changes in fact or law that would influence the Council's previous findings and conclusions under OAR 345-022-0090, as provided in the *Final Order on ASC*. Those prior findings are incorporated herein by reference and direct incorporation, as applicable, briefly summarized, and supplemented below.[61]

Survey Methods and Results

The certificate holder previously evaluated the Oregon State Historic Preservation Office online geographic information system database to identify previously recorded cultural resources within the analysis area and its vicinity which indicated that there were 14 previous cultural resource investigations conducted within one mile of the site boundary. The desktop review identified two cultural resources within one mile of the site boundary and did not identify any previously recorded National Register of Historic Places (NRHP)-eligible properties, archeological sites, or objects within the proposed site boundary.

Also during the review of the ASC, pedestrian surveys of the facility site boundary were conducted by a team of archeologists from Jacobs, and accompanied by a Geo Visions, Inc. archeological technician.[62] Importantly, prior to the field surveys, the area experienced a fire, so surface visibility of the site was excellent.[63] According to the Phase I Cultural Resources Survey,

[61] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 155-158; MSEFAPP ASCDoc1-19_Exhibit_S_Cultural_Resources 2020-11-09.
[62] 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/
[63] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, page 156.

submitted and reviewed and concurred by SHPO, no archaeological sites, objects, or resources potentially eligible for listing on the NRHP were identified during the pedestrian survey.[64]

Comment letters from the CTWSRO indicated they had reviewed the technical reports and provided a template for an Inadvertent Discovery Plan, which was adopted by the certificate holder and Council in the below referenced conditions.[65]

Potential Impacts to Resources

Although Council previously found that no historic or archaeological resources were identified during the pedestrian survey, it would be possible for previously unidentified resources to be impacted during facility construction activities. As such, and as requested by CTWSRO, Council adopted Historic, Cultural and Archeological Condition 1 (GEN-HC-01), which requires that an Inadvertent Discovery Plan be implemented during construction and operation of the facility. This condition continues to apply to the facility, with changes proposed in RFA1.

As noted above, only two historic resources have been documented within 1 mile of the facility area. 35JE00891 is a historic site ditch and refuse scatter which the certificate holder designated as potentially eligible (unevaluated) for the NRHP in the Phase I Cultural Resources Survey. It is located 0.7 miles north of facility area, north of Willow Creek. Willow Creek and the Willow Creek Canyon Trail are approximately 0.3 miles north of the facility site boundary and follow a canyon east, southeast of the facility and Lake Simtustus. 35JE00892 is an historic site railroad grade and associated refuse scatter which the certificate holder recommended as eligible. It is located 0.8 mile north of facility area, also north of Willow Creek. The existing viewshed in this area includes vegetation, juniper trees, and an existing road and high voltage transmission line.

Council previously found that from a point on Willow Creek Road 0.7 miles north of the facility (which also serves as Willow Creek Canyon Trail) east of the intersection with NW Pelton Dam Road, visual impacts would appear as a dark black line, combined with vegetation screening and existing industrial infrastructure and development within the viewshed, visual impacts would be less than significant.[66] Because resources 35JE00891 and 35JE00892 are in same vicinity, elevation, and distance from the facility as this point on Willow Creek Road, the Department recommends visual impacts would be similar and that these two potentially eligible resources would also be less than significant.

[64] SHPO stated that they had reviewed the 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. MSEFAPPDoc7 pASC Reviewing Agency Comments (SHPO - SHPO Case No__ 19-1001) LETTER 2020-02-25.

[65] MSEFAPPDoc6 pASC Reviewing Agency Comments (CTWS) 2020-01-29.

[66] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, page 156.

III.K.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing certificate condition described above, the Department recommends the Council find that the construction and operation of the facility, with the proposed RFA1 changes, are not likely to result in significant adverse impacts to historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places or other archaeological objects or sites identified under OAR 345-022-0090.

III.L. RECREATION: OAR 345-022-0100

(1) 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.

(2) The Council must 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.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). In issuing such a site certificate, the Council may impose conditions of approval to minimize the potential significant adverse impacts from the design, construction, and operation of the facility on important recreational opportunities.

(4) The Council must apply the version of this rule adopted under Administrative Order EFSC 1-2002, filed and effective April 3, 2002, to the review of any Application for Site Certificate or Request for Amendment that was determined to be complete under OAR 345-015-0190 or 345-027-0363 before the effective date of this rule. Nothing in this section waives the obligations of the certificate holder and Council to abide by local ordinances, state law, and other rules of the Council for the construction and operation of

energy facilities in effect on the date the site certificate or amended site certificate is executed.[67]

III.L.1. Findings of Fact

Under OAR 345-027-0360(3), the analysis area for a request for amendment is the larger of either the study area, as defined in OAR 345-001-0010, or the analysis area described in the project order for the application for site certificate, unless otherwise approved in writing by the Department following a pre-amendment conference. The study area for impacts to recreational opportunities under OAR 345-001-0010(35)(d) is the area within and extending 5 miles from the site boundary. The analysis area for impacts to Scenic Resources established in the Project Order is the area within and extending 5 miles from the site boundary.[68] Because the study area under OAR 345-001-0010 and the analysis area established in the project order are equivalent, the analysis area for RFA1 is the area within and extending 5 miles from the site boundary.

Recreational Opportunities within the Analysis Area and Impact Assessment Summary

In the *Final Order on ASC*, the Council evaluated 21 recreational opportunities identified by the certificate to determine if the recreational opportunities would be considered important under OAR 345-022-0100(2). The Council found that 7 of the recreational opportunities that were identified in the analysis area were considered important, while 14 identified recreational opportunities did not meet the criteria of importance under OAR 345-022-0100(2).[69] The Council's findings are summarized in Table 7 below.

Neither the Certificate Holder nor Department identified any new or previously unevaluated recreational opportunities in the 5-mile analysis area for RFA 1, and no significant changes to any of the opportunities since the site certificate was granted were identified.[70] There have not been any changes in fact or law that would influence the Council's previous findings and conclusions under OAR 345-022-0090 provided in the *Final Order on ASC*. Those prior findings are incorporated herein by reference and direct incorporation, as applicable, and briefly summarized below.[71]

[67] OAR 345-022-0100, effective December 19, 2022.

[68] MSEFNOIDoc11 Project Order SIGNED 2019-09-12, Table 2.

[69] 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. MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, Table 8.

[70] MSEFAMD1 RFA1 2024-10-17, Section 6.13.

[71] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 158-176.

Table 7: Summary of Recreational Opportunity Impact Assessment

Important Recreational Opportunity	Management or Jurisdiction	Distance from Site Boundary (miles)	Importance Assessment and Conclusions	Noise	Traffic	Visual Impacts
Areas identified as Important						
Crooked River National Grassland	Local/State/Federal	0*	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. Only National Grassland in Oregon, the opportunities at this resource are unique, rare and irreplaceable.	Maximum predicted construction noise level at 50 feet is 90 dBA. Construction noise is temporary. Areas impacted by construction noise are 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. Temporary, short-term noise levels from facility construction would not be expected to significantly impact grazing use or recreational hunting	-	Facility may be visible up to a distance of 3.5 miles from the proposed site boundary within the grassland. Not significant because the areas impacted are not publicly accessible and not specifically managed for scenic qualities, yet for wildlife management and preservation.
Willow Creek Canyon Trail	State/Federal	0.3	Grassland is one of five designated regional trails, with a large greenway connected directly to a population center, managed by BLM and USFS. The opportunities at this resource are unique, rare and irreplaceable.	Maximum predicted construction noise levels between 400 and 2,640 feet range from 72 to 56 dBA. Construction noise is temporary. Terrain between the proposed site boundary and the trail includes existing juniper, a moderate level of vegetation and elevation increase from canyon walls. Terrain, topography and existing road noise sources mask construction noise.	-	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 it would not be visible from the trail. From photo point at Willow Creek Road facility may appear as a thin dark line along the ridgeline. Existing viewshed includes vegetation, juniper trees, an existing road and high voltage transmission line. Visual impacts would appear as a dark black line, combined with vegetation screening and existing industrial infrastructure and development within the viewshed, making impacts less than significant.
Madras Mountain Views Scenic Bikeway	State	2.5	One of 17 designated scenic bikeways in Oregon. Demand for opportunities at the scenic bikeway is moderate based on designation and capacity. It is specially designated as a scenic bikeway with opportunities for viewing unique natural and historic features, the	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 be audible. Construction noise is temporary.	Construction-related traffic may result in minor delays in access and impacts to bikers from sharing the road. Local roads have sufficient capacity to support the load and use by facility	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. An approximately 80-foot segment of SW Belmont Lane at the SW Elk Drive intersection, the facility may be visible and will appear similar as a dark

Table 7: Summary of Recreational Opportunity Impact Assessment

Important Recreational Opportunity	Management or Jurisdiction	Distance from Site Boundary (miles)	Importance Assessment and Conclusions	Noise	Traffic	Visual Impacts
			opportunities at this resource are unique, rare and irreplaceable.		construction vehicles and bikers.	geometric outline or shadow with a low profile on the landscape. Facility components will lack definition and detail and will not dominate the existing landscape. 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, and therefore less than significant.
The Cove Palisades State Park	State	3.1	5,200 acre state park managed by OPRD; one of five parks in the region. Demand for opportunities at the park is high and 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.	Due to distance from the site and noise attenuation, no impacts from facility construction noise are anticipated.	Construction-related traffic may result in minor delays in access and impacts to bikers from sharing the road. Local roads have sufficient capacity to support the load and use by facility construction vehicles and bikers.	Facility would not be visible from areas within the park boundary surrounding Lake Billy Chinook. Facility is only potentially visible from an isolated 64-acre area of the park located approximately 3.1 miles south. Important viewpoints in park are not located within the 5-mile analysis area forrecreational opportunities. The nature of topography of the existing landscape, and the facility'slimited visibility from the park makes any visual impact less than significant.
Round Butte Overlook Park	Portland General Electric	4.0	Popular for bird watching, and site of an annual Eagle Watch festival. Demand for opportunities at the park is moderate given the annual festival and picnicking capacity. Based on the unique overlook viewing opportunities, the opportunities at this resource are outstanding.	Due to distance from the site and noise attenuation, no impacts from facility construction noise are anticipated.	Construction-related traffic may result in minor delays in access and impacts to bikers from sharing the road. Local roads have sufficient capacity to support the load and use by facility construction vehicles and bikers.	Based on ZVI and photographic evidence, facility would not be visible at the park.
Lower Deschutes Wild and Scenic River	Federal	4.2	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. Demand for opportunities at the river is moderate and based on the	Due to distance from the site and noise attenuation, no impacts from facility construction noise are anticipated.	-	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. Facility could be visible to motorists and boaters from a small area within the Lower Deschutes Wild and Scenic River boundary, approx. 5 miles from the facility site boundary along an approximately 0.2-mile-long section of BIA

Table 7: Summary of Recreational Opportunity Impact Assessment

Important Recreational Opportunity	Management or Jurisdiction	Distance from Site Boundary (miles)	Importance Assessment and Conclusions	Noise	Traffic	Visual Impacts
			moderate degree of demand with scenic views and high-quality fishing, the opportunities at this resource are outstanding and irreplaceable.			Road 24, and along an approximately 400-foot-section of the river at river level. Facility location is on the plateau that forms the horizon in the background of the viewshed but would appear obscured or may be undetectable in the surrounding landscape. Views of the facility from the majority of the 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 are less than significant.
Jefferson County Fairgrounds	Jefferson County	4.6	50 acres of land, 15 buildings and indoor facilities, and a youth fishing pond. Opportunities for fishing, picnicking, use as an RV park, attendance at the Jefferson County Fair and Rodeo. Only fairground in the county, with high demand. Recreational opportunities contain outstanding or unusual qualities and therefore are rare, with high demand.	Due to distance from the site and noise attenuation, no impacts from facility construction noise are anticipated.	-	Based on ZVI and photographic evidence the facility would not be visible at the fairgrounds

Source: Compiled from Final Order on ASC Table 8 and findings and conclusions from Final Order.
* 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, however, the protected area is not crossed by the site boundary.

Potential Impacts to Important Recreation Opportunities

In the Final Order, the Council found that the construction and operation of the facility would not result in any direct loss of recreational opportunities because it would not require any physical disturbance or closure of any of the identified important recreational opportunities.[72] As described in more detail below, the Council also found that the construction and operation of the facility would not result in any significant adverse visual impacts, or significant impacts from traffic or noise.[73]

III.L.2. Conclusions of Law

Based on the foregoing analysis, the Department recommends the Council continue to find that the design, construction and operation of a facility, with the proposed RFA1 changes, are not likely to result in a significant adverse impact to important recreational opportunities.

III.M. PUBLIC SERVICES: OAR 345-022-0110

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*
>
> *(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*[74]

III.M.1. 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

[72] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 168-169.
[73] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pg. 158.
[74] OAR 345-022-0110, effective April 3, 2002.

supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. 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.

Prior findings of fact from the *Final Order on ASC* that are applicable RFA1 are incorporated herein by reference and direct incorporation, as applicable, and briefly summarized below.[75]

Certificate holder confirms that the assumptions relied upon in the ASC to evaluate potential impacts from facility construction and operation to private and public service providers have not changed. Some of those assumptions include that construction of the facility would use a maximum construction workforce of 200; average construction workforce of 100, where 10 to 15 percent of workforce hired locally (10 to 15 workers). Haul routes would include US 26; US 26 to US 97; US 97 to SW Belmont Lane to SW Elk Drive. Workers would travel approximately 400 roundtrips per day (or around 200 roundtrips per day, if carpooling is used consistently).

Sewer and Sewage Treatment

The facility would not rely on or require use of existing public or private sewer system or sewage treatment, other than portable toilets, which would be managed via licensed third-party contractor for material handling and disposal. Because public or private providers of sewer and sewage disposal facilities would not be directly utilized by the facility, the Department recommends Council continue to find that the facility would not result in impacts to providers of sewer and sewage treatment providers.

Stormwater Drainage

The facility does not require use of or interconnection to a publicly or privately managed stormwater system. 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 site, therefore, the Department recommends Council continue to find that the facility would not impact stormwater service providers.

Water Use

As discussed in the *Final Order on ASC* and provided in Table 8 below, the following quantities of water are estimated for construction and operation of the facility.

[75] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 176-189.

Table 8: 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.	

Service Providers in Analysis Area

Water for construction would be supplied by the Deschutes Valley Water District (Water District) from its water supply system under the District's municipal or quasi-municipal water permit or water right permit numbers S26113 and S36515.[76] ASC Exhibit O 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. An additional 2020 letter is also provided 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.[77]

RFA1 states that the certificate holder will continue to obtain water from the District, which will be trucked on-site by a third-party, however, the certificate holder does not provide a current letter or other form of evidence from the District confirming its ability to provide water for construction. The Department recommends Council impose the following condition to ensure, given the uncertainty in water source to supply water and the unknown provider's legal ability to meet the construction water usage needs, the Department recommends Council impose the following condition:

> **Recommended Public Services Condition 5 [PRE]**: Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall:
> a. Identify all water-related needs and estimate daily and annual water demand for each construction phase, as applicable.
> b. Provide to the Department, evidence such as a contract or purchase agreement demonstrating that adequate water supply to meet construction demand has been

[76] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, Section IV.Q. *Water Rights*.
[77] MSEFAPP ASC Clarification Request (Water Rights) 2021-01-07.

secured and that water for all construction activities will be legally obtained by service providers or third-party permits.
[PRE-PS-02, Final Order on AMD1]

Based on the above proposed condition, the Department recommends Council find that construction and operation of the facility would not impact the Deschutes Valley Water District's ability to provide water services.

Solid Waste Management

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 to 2019 Oregon DEQ data, 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.[78] ASC Exhibit V,[79] indicates that the steel posts for solar panels would be recycled. The ultimate recycling or disposal of facility components on the landscape, including the wood monopoles and posts, would be addressed in the retirement plan presented to Council or development by Council under the bond for the facility under existing site certificate conditions. Therefore, the Department recommends that the facility, with RFA1 changes, would not impact the ability of waste disposal site to provide services.

Housing

A maximum estimate of 360 temporary new residents that may be associated with facility construction during the peak construction period.[80] 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 certificate holder evaluated the availability of housing in preparation of RFA1 and estimates that lodging vacancy rates in Central Oregon are estimated at approximately 58 percent.[81] Based on vacancy rate and maximum number of workers, and potential availability of RV and campsites within the area, the Council found 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.

Health Care and Schools

[78] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 178-179.
[79] Rule changes since the final order on ASC has made the Waste Minimization Exhibit Letter W.
[80] MSEFAPPDoc1-21 Exhibit U Public-Services 2020-11-09, Section U.1.2.1
[81] MSEFAMD1 RFA1 2024-10-17, Section 6.13.

The nearest hospital to the facility is St. Charles Madras and is an approximate 9 mile drive from the facility. The St. Charles health care system, offers basic, intermediate, and advanced life support emergency medical care and transportation also has health care systems in Redmond, Prineville, and Bend. RFA1 indicates that health care facilities evaluated in the ASC are still in operation and still provide the same trauma levels of care as at the time of RFA1. Because most families do not relocate school age children to work on temporary construction positions, it is not anticipated that many school age children would join schools in the area. Based on the total new temporary residents during construction, and that construction is temporary, and few permanent residents during operation, the Department recommends Council continue to find that the facility is not likely to impact the ability of healthcare providers and the school district to provide their service.

Traffic Safety

The certificate holder maintains the same assumptions for worker traffic and transportation routes in RFA1 that was evaluated in the *Final Order on ASC*. It's estimated that a maximum of 490 roundtrips per day from a combination of trucks and worker vehicles travelling a roundtrip would occur if there was no carpooling to and from the site during construction. Primary 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.

Public Services Condition 1 (GEN-PS-01) continues to apply to the facility and requires the development and implementation of a Traffic Management Plan that includes project details, a road conditions survey, schedule, description of mobility impacts and mitigation measures, and communication. The Department highlights that many of the measures designated in Public Services Condition 1 may be met with an executed Road Use Agreement between the certificate holder and the County. Based on compliance with the existing site certificate condition, the Department recommends Council continue to find that the facility, with RFA1 changes, would not impact public providers pf traffic services and road conditions.

Air Traffic Safety

Airports within proximity to the 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.[82] To determine, based on the final design of the facility, if the facility may impact nearby public airport, Council imposed Public Services Condition 2 (GEN-PS-02), which requires the submission and follow up to a FAA 7460-1 Notice of Proposed Construction or Alteration Forms to the Oregon Department of Aviation. The Department recommends Council find that the facility, with proposed changes, would not impact private and public providers of air traffic services.

[82] MSEFAPP Complete ASC Reviewing Agency Comment ODA_Thompson 2020-12-09.

Fire Protection

The facility has been annexed to be within the service boundaries for the Jefferson County Fire and Emergency Medical Services (EMS). In the *Final Order on ASC*, Council imposed Public Services Condition 3, which required that the certificate holder annex the facility site into the service territory of the Jefferson County Fire District #1. RFA1 Attachment 7 includes a letter from the Jefferson County Fire and EMS Fire Chief confirming that effective March 22, 2023, the location of the facility has been annexed into the service area for Jefferson County Fire and EMS.[83] As discussed in Section III.N., *Wildfire Prevention and Risk Mitigation*, since Council's approval of the ASC, it adopted a new standard to address wildfire and Wildfire Mitigation Plans (WMPs). The Department recommends incorporating the measures that were previously required under Public Services Condition 4 (provided in strike out below and recommended deleted) into the construction WMP attached to this order as Attachment F-1. The substantive elements of the previously adopted Public Services Condition 4, however, are modified for clarity, intent and implementation. For instance, as described in Section III.N. of this order, and in the construction WMP, pre-construction coordination with the local fire department(s) is required as well as pre-construction staff training and regular construction staff safety training during construction.

Recommended Deleted 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;~~ Deleted in Final Order on RFA1]

[83] In telephone correspondence with Jefferson County Fire and EMS on 09-30-2024, the Department confirmed that Jefferson County Fire District #1 (JCFD1) or Jefferson County Rural Fire District (JCRFD) was combined with emergency medical services and renamed to Jefferson County Fire and EMS.

Based on compliance with existing site certificate conditions and compliance with the WMP's for construction and operation of the facility under recommended Wildfire Prevention and Risk Mitigation Conditions 2 and 4, the Department recommends Council find the facility, with proposed RFA1 changes would not impact the ability of fire departments to respond to fires and emergencies.

Police Protection and Emergency Response

Local police service within the analysis area would be provided by the Jefferson County Sheriff's Office in Madras, Oregon.[84] Backup law enforcement service is available from the Oregon State Police Eastern Region, also with an office in Madras. As discussed in Section III.N, *Wildfire Prevention and Risk Mitigation*, the construction and operational WMP include coordination with local fire departments and emergency management personnel as well as specific procedures and instances in which on-site or remote personnel would contact authorities for assistance. Further, the WMP's include the development and implementation of Emergency Management Plans which would contribute to a reduction in police and law safety services. Based on compliance with site certificate conditions, and the Sheriff's indication of its ability to respond to emergencies on site, the Department recommends Council find that the facility, with RFA12 changes would not impact the ability of local law enforcement to provide services.

III.M.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing and recommended site certificate conditions described above and, in this order, the Department recommends the Council find that construction and operation of the facility are not likely to result in significant adverse impacts to the ability of public and private providers to provide the services listed in OAR 345-022-0110.

III.N. WILDFIRE PREVENTION AND RISK MITIGATION: OAR 345-022-0115

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

(a) The applicant has adequately characterized wildfire risk within the analysis area using current data from reputable sources, by identifying:

(A) Baseline wildfire risk, based on factors that are expected to remain fixed for multiple years, including but not limited to topography, vegetation, existing infrastructure, and climate;

[84] MSEFAPPDoc1-21_Exhibit_U_Public-Services 2020-11-09, Attachment U-2.

(B) Seasonal wildfire risk, based on factors that are expected to remain fixed for multiple months but may be dynamic throughout the year, including but not limited to, cumulative precipitation and fuel moisture content;

(C) Areas subject to a heightened risk of wildfire, based on the information provided under paragraphs (A) and (B) of this subsection;

(D) High-fire consequence areas, including but not limited to areas containing residences, critical infrastructure, recreation opportunities, timber and agricultural resources, and fire-sensitive wildlife habitat; and

(E) All data sources and methods used to model and identify risks and areas under paragraphs (A) through (D) of this subsection.

(b) That the proposed facility will be designed, constructed, and operated in compliance with a Wildfire Mitigation Plan approved by the Council. The Wildfire Mitigation Plan must, at a minimum:

(A) Identify areas within the site boundary that are subject to a heightened risk of wildfire, using current data from reputable sources, and discuss data and methods used in the analysis;

(B) Describe the procedures, standards, and time frames that the applicant will use to inspect facility components and manage vegetation in the areas identified under subsection (a) of this section;

(C) Identify preventative actions and programs that the applicant will carry out to minimize the risk of facility components causing wildfire, including procedures that will be used to adjust operations during periods of heightened wildfire risk;

(D) Identify procedures to minimize risks to public health and safety, the health and safety of responders, and damages to resources protected by Council standards in the event that a wildfire occurs at the facility site, regardless of ignition source; and

(E) Describe methods the applicant will use to ensure that updates of the plan incorporate best practices and emerging technologies to minimize and mitigate wildfire risk.

(2) The Council may issue a site certificate without making the findings under section (1) if it finds that the facility is subject to a Wildfire Protection Plan that has been approved in compliance with OAR chapter 860, division 300.

(3) This Standard does not apply to the review of any Application for Site Certificate or Request for Amendment that was determined to be complete under OAR 345-015-0190 or 345-027-0363 on or before the effective date of this rule.[85]

III.N.1. Findings of Fact

The analysis area to evaluate potential wildfire risks is the site boundary and one-half mile from the site boundary.[86]

Wildfire Risk Analysis

Under OAR 345-022-0115(1)(a), a certificate holder must adequately characterize the wildfire risk within the analysis area using reputable sources to describe Baseline Wildfire Risk, Seasonal Wildfire Risk, Areas Subject to Heightened Risk of Wildfire, and High-fire Consequence Areas. Each of these are discussed in detail in this section with a description of the data source, as necessary to support the findings and recommended conclusions. The data sources used to evaluate wildfire risk are listed in RFA1 Exhibit V, Section 1.0 and include but are not limited to:

- National Interagency Fire Center 2024 data;
- Community Wildfire Protection Plan Planning Tool; 2018 Quantitative Wildfire Risk Assessment;
- Conservation Biology Institute 2020 data;
- Jefferson County 2022 Multi-Jurisdictional Natural Hazard Mitigation Plan and Community Wildfire Protection Plan;
- Oregon Department of Forestry 2024 Wildfire Risk Explorer;
- Pyrologix, United States Forest Service 2018 Pacific Northwest Quantitative Wildfire Risk Assessment.

Baseline Wildfire Risk

Baseline wildfire risk within the analysis area is evaluated based on factors expected to remain fixed for multiple years, including topography of the site, vegetation, existing infrastructure, regional climate, and burn probability. These are discussed in RFA1 Exhibit V, Section 2.1, incorporated herein and summarized, in part, below:

Wildfires tend to travel quicker on steeper slopes and slower on the flatter portions of land. All of the area within the site boundary is relatively flat and have slopes ranging from 0 to 25 degrees. The predominant vegetation within the site is annual grassland and Rabbitbrush shrub-steppe and are best represented by Fuel Model 122 which is categorized as Moderate load dry climate grass-shrub.[87]

[85] OAR 345-022-0115, effective July 29, 2022.
[86] OAR 345-001-0010(35)(c).
[87] MSEFAMD1 RFA1 2024-10-17, Table V-2.

Existing infrastructure within the wildfire analysis area includes the Pelton Dam to Round Butte 230-kilovolt transmission line, Lake Simtustus Resort, a residence, and multiple public rights-of ways. NW Pelton Dam Road and NW Elk Drive paved public rights-of-ways extend south through the site boundary as well, otherwise there isn't any infrastructure within the site boundary. This description is consistent with the identification of infrastructure in the 2022 Jefferson County CWPP.[88]

Seasonal Wildfire Risk

Seasonal wildfire risk within the analysis area is expected to remain fixed for multiple months but may be dynamic throughout the year, including cumulative annual and monthly precipitation, weather advisories which include fuel moisture content data, and Average Flame Length which is the average length of flames expected during a fire, given local fuel and weather conditions. These are discussed in RFA1 Exhibit V, Section 2.1, incorporated herein and briefly summarized below:

> The total average annual precipitation for Madras is 11.2 inches per year, which is indicative of a semi-arid climate. Fuel model groups within the wildfire analysis area consist of grass, shrubs, open water, bare ground, and urban/suburban. The most prominent fuel models within the site boundary are FM 122 (57 percent) and FM 102 (35 percent). The primary carrier of fire in FM 122 is grass and shrubs; which have an overall high spread rate. The moisture of extinction for this fuel type is low.

Areas Subject to Heightened Risk of Wildfire and High-Fire Consequence Areas

High-fire consequence areas include areas containing residences, critical infrastructure, recreation opportunities, timber and agricultural resources, and fire-sensitive wildlife habitat As described above under the *Baseline Wildfire Risk for Existing Infrastructure* section, the areas within the analysis area having higher wildfire risk are the areas with existing infrastructure, including transmission lines, roads, and residences.[89] Within the site boundary, there is the existing Pelton Dam to Round Butte 230 kV transmission line operated by PGE and NW Pelton Dam Road and NW Elk Drive which are both paved. The Department recommends Council find that the Pelton Dam to Round Butte 230 kV transmission line is a high-fire consequence area/resource, however, because the roads are paved with a 60 foot set back (see Figure 6 below) from the facility fence line, these roads would act as fire breaks and wouldn't need to be considered high-fire consequence areas/resources.

The 2018 CWPP Mapping tool provides Overall Fire Risk Ratings, which measures vulnerability of assets by the presence of the assets within the fire's path, and the likelihood of that asset being harmed. This data layer maps highly valued resources and assets combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic

[88] Jefferson Country Infrastructure, Figure on page 75/80. https://www.jeffco.net/media/26456 Downloaded and Accessed by Department 09-26-2024.

[89] RFA1 Exhibit V, Section 2.3 and 2.4.

structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat.[90] The site boundary has a 13 percent very high overall fire risk rating and 40 percent high overall fire risk rating, which are illustrated in Figure 4 below. Figure 4 below, shows that the heightened wildfire risk follows the route of the existing transmission line as well as existing roads within the site boundary.

Jefferson County 2020 Community Wildfire Protection Plan (Jefferson County CWPP) is a county-wide, strategic assessment of the risks, hazards, mitigation and prevention opportunities associated with wildfire and communities. It includes designations of Wildland Urban Interfaces (WUI) which are determined using geographical areas where structures and other human development meets or intermingles with wildland vegetative fuels. The Plan shows that the facility is partially located within a WUI categorized as Low Density (portions of the site are in uncategorized area).[91] The Jefferson County CWPP also evaluates fire risk classifications from high to high density extreme shows that the facility site is located within a high wildfire risk area (the lowest risk on their scale), this is illustrated in Figure 4 below.[92]

[90] This data layer contains all the resources required under OAR 345-022-0115(1)(D); High-fire consequence areas, including but not limited to areas containing residences, critical infrastructure, recreation opportunities, timber and agricultural resources, and fire-sensitive wildlife habitat.

[91] Jefferson Country Wildland Urban Interface (second Figure), *Id*.

[92] Jefferson Country Risk Classification, Figure on page 75/80 (Figures not numbered). https://www.jeffco.net/media/26456 Accessed by Department 09-26-2024.

Figure 4: Overall Wildfire Risk (2018 CWPP Planning Tool)

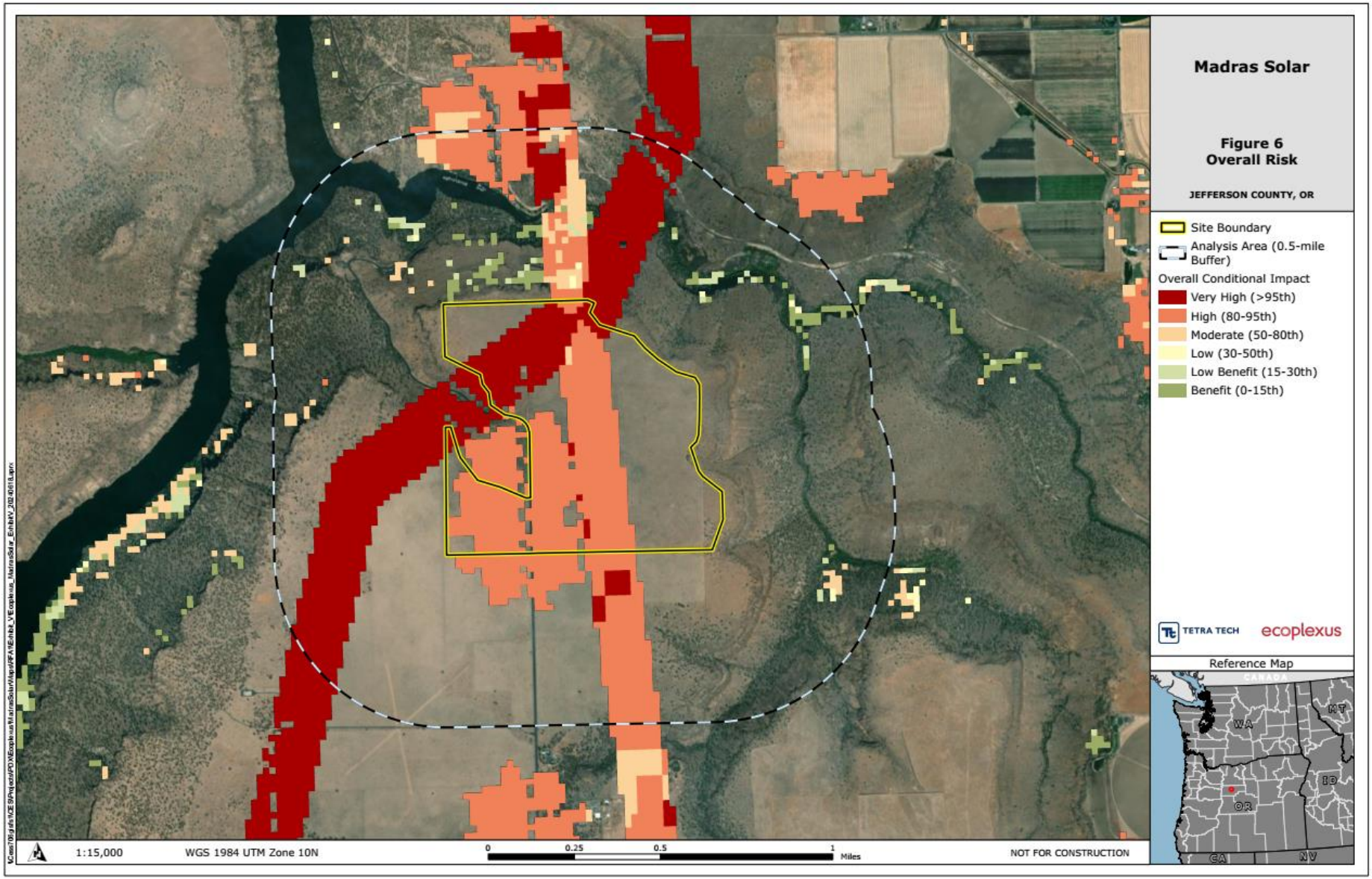


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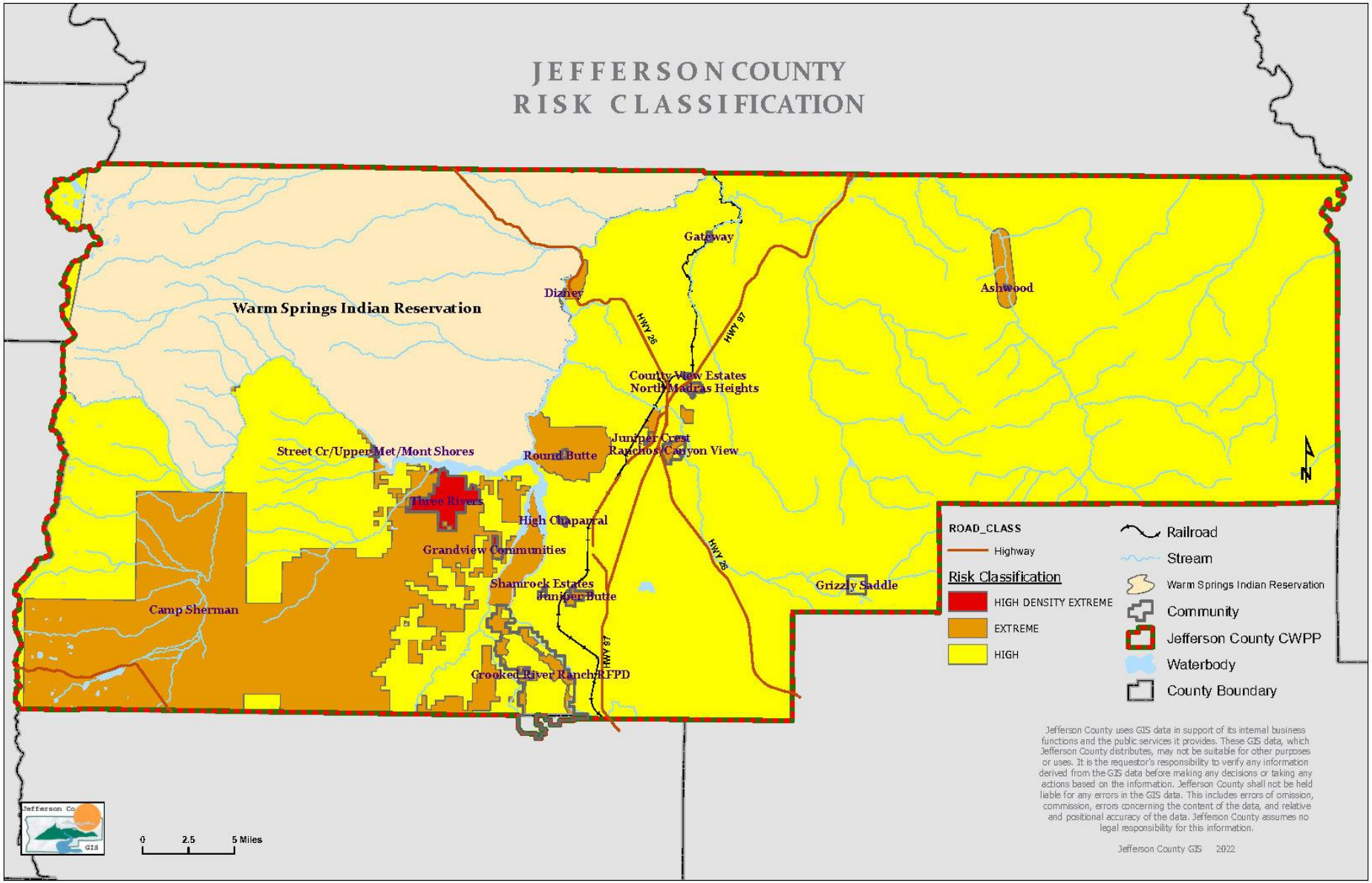
Figure 5: Jefferson County 2020 CWPP



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Wildfire Mitigation Plan

Under OAR 345-022-0115(1)(b), Council must find that the facility will be designed, constructed, and operated in compliance with a Wildfire Mitigation Plan (WMP) approved by Council. During the review of the pRFA1 the Department provided the certificate holder with revisions to the WMP's which reflect the Department and Council's ongoing work regarding the sufficiency of the Plans under the standard. The recommended changes provided to and adopted by the certificate holder are described in this section and based on:

- Ongoing coordination with ODF, local fire departments and emergency managers;
- Council's feedback from other energy facilities, and review of the standard and WMP's during the September 2024 EFSC Meeting;
- Review of ODF Fire Season Requirements;
- Review of Oregon Emergency Response System (OERS) and utilization of county emergency notifications and incident response.

In its ongoing effort to refine Council's WMP's to clearly and meaningfully prevent and mitigate the chance of wildfire igniting on-site and spreading from a facility site or from outside fires impacting a facility, the Department coordinated with local fire Department and the emergency management agencies to understand the best procedures to follow in the event of an emergency as well as appropriate equipment to maintain on-site.

The Oregon Department of Emergency Management (OEM) manages operation of the statewide 9-1-1 communications system which ensures uniform, prompt, and efficient access to public and private safety services. OEM maintains the statewide emergency services system for emergency and disaster communications and manages Oregon Emergency Response System (OERS), which coordinates state resources in response to natural and technological emergencies involving multi-jurisdictional cooperation between all levels of government and the private sector.[93] In the event of a fire or other emergency, by dialing 9-1-1, operators are able to quickly contact local fire departments and emergency responders to manage the fire. The local fire department(s) have a chain of communication system to call in other resources to assist in a larger event or fire. In Jefferson County, this is detailed in the 2024 Emergency Operations Plan (EOP) which includes an Incident Annex IA 3, a Major Fire Incident Checklist that includes detailed protocols and chains of communications for the County to follow.[94] Under ORS 401.305, each County in Oregon has established an emergency management office. Each of Oregon's 36 counties has an emergency notification system that any person can register for to receive emergency notifications. Frontier Regional Emergency Alert Program is the emergency notification system for the Jefferson County Emergency Management Office which can be access via the County or via OEM. The notification system enables the County to provide individuals with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons and evacuations of buildings or neighborhoods.

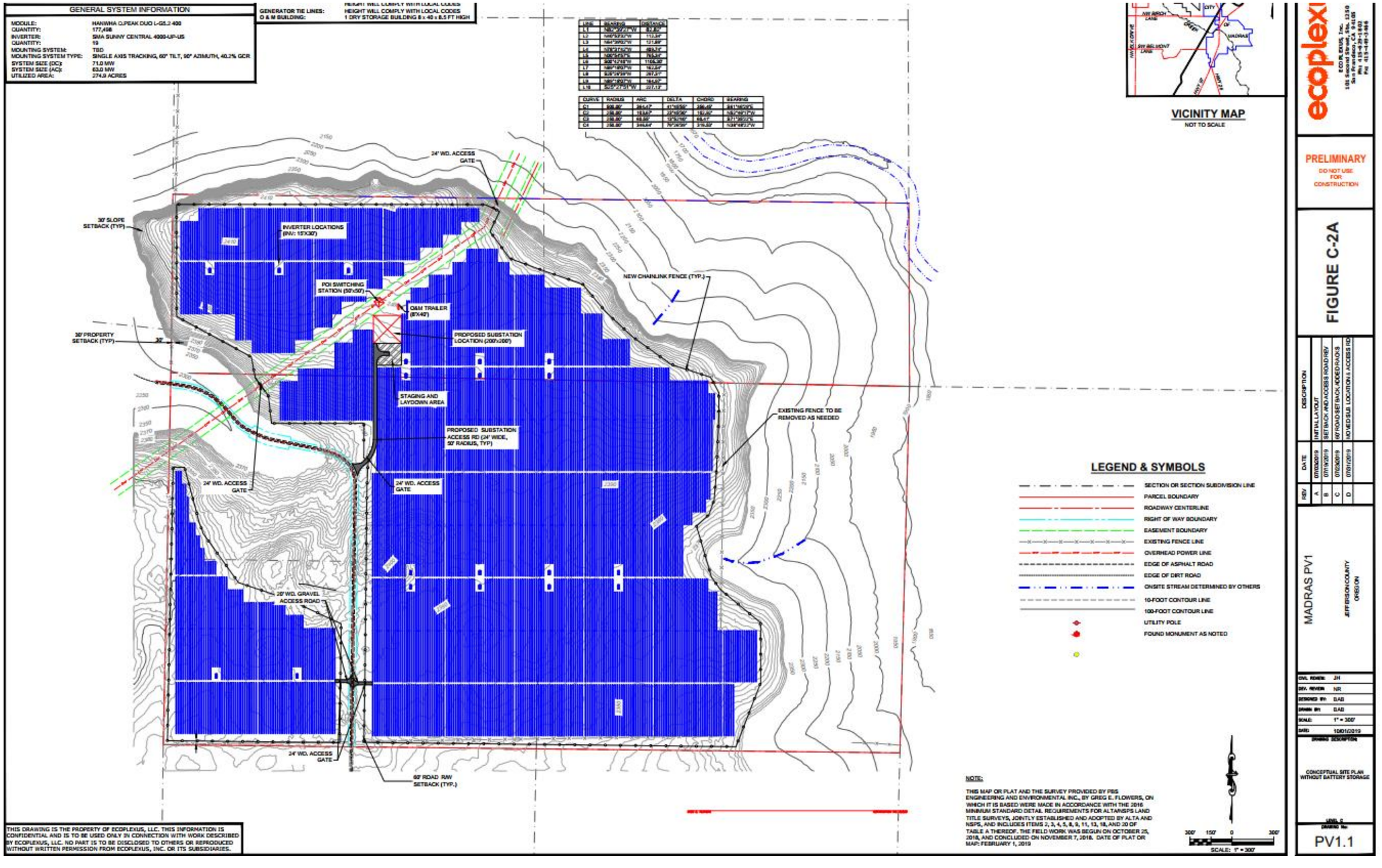
[93] OEM responsibilities are defined and authorized in ORS 401.

[94] https://www.jeffco.net/media/29326 Incident Annex IA 3 – Major Fire. Accessed by Department 10-09-2024

As summarized in the below sections, the Department recommends that 9-1-1 be the primary contact for emergencies that cannot be addressed onsite and that need external emergency resources. Further, to help ensure that adjacent landowners (landowners within 0.5 miles of the site boundary) are registered to receive emergency alerts, the Department recommends the certificate holder contact individuals to see if they have already signed up for the Frontier Regional Emergency Alert Program, and if not, the certificate holder will provide registration information.

The construction and operational WMPs are included in RFA1 as Attachments F-1 and F-2, respectively. Both the construction and operational WMP's include recommendations provided by the Department. As noted above, the WMP's provided in RFA1 reflect substantive revisions provided to the certificate holder by the Department. The additional redline revisions presented in the WMP's attached to this order are provided for clarity and implementation as well as to add reference to high-fire consequence areas/resources identified in this section. Within the site boundary, the high-fire consequence area/resource is the existing Pelton Dam to Round Butte 230 kV transmission line operated by PGE. As illustrated in Figure 6 below, the existing transmission line has a ROW that would be avoided by the facility, therefore, the Department recommends Council finds that this avoidance area is sufficient to mitigate any potential impacts from fire to the resource, which is indicated in both the WMP's.

Figure 6: Preliminary Facility Design with Setbacks



Facility Design

Facility design standards and measures that would minimize wildfire risk include but are not limited to the following:

Fire Breaks and Vegetative Clearances:

- The collector substation area, transformer pads, the permanent, fenced parking and O&M building storage areas, and Battery Storage Systems will have a gravel base with no vegetation within a 10-foot perimeter area;
- Graveled service roads within the solar fence line, approximately 14 feet wide with 2-foot shoulders.
- A 10- foot noncombustible, defensible space clearance along the fenced perimeter of the site boundary will be maintained for vegetation. Defensible space will be free of combustible vegetation or other materials.

Electrical Components:

- Facility components will meet National Electrical Code and Institute of Electrical and Electronics Engineers standards.
- The solar array will have shielded electrical cabling, as required by applicable code, to prevent electrical fires.
- The collector system and substation will have redundant surge arrestors to deactivate the facility during unusual operational events that could start fires. The collector substation and the switchyard will have also sufficient spacing between equipment to prevent the spread of fire.
- The SCADA system collects operating and performance data from the solar array and from the facility as a whole and allows remote operation, including shut down in the event of an emergency, from the O&M building.
- Smoke/fire detectors will be placed around the site that will be tied to the SCADA system and will contact local firefighting services.

Facility Construction

As discussed in Section III.M., *Public Services*, Council previously imposed Public Services Condition 4 (GEN-PS-03), which required a construction emergency management plan be developed in coordination and trainings held with Jefferson County Fire and EMS.[95] Since that approval, Council adopted its Wildfire standard, therefore the substantiative elements of GEN-PS-03 have been included in the attached construction WMP, and the previously imposed conditions is recommended to be deleted to reduce duplication.

As described below, the construction WMP has tasks and actions associated with finalizing the WMP, pre-construction tasks, and tasks and actions that must be implemented during construction of the facility. To help the certificate holder ensure the action items are completed, and for the Department to track compliance with them, the Department is

[95] Previously called Jefferson County Fire District #1.

preparing Compliance Checklists that will be attached to the construction WMP, as indicated in the Plan.

As recommended in Wildfire Prevention and Risk Mitigation Condition 1 below, the construction WMP (Attachment F-1 to this order) would be finalized prior to construction to include (but is not limited to):

- Incorporate guidance from the Jefferson County CWPP;
- Include feedback from local fire districts, as well as local emergency management about measures in the WMP;
- Identify the appropriate set up for water trucks including pump, hose and nozzle;
- Provide maps with access points, emergency access procedures particularly when personnel are not onsite, and the location and buffers for any newly identified high-fire consequence areas/resources;
- Include updated contact information for certificate holder and contractors and confirm they have registered for the Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management;
- Provide a list of property owners and tenants for residences within 0.5 miles from the site boundary;
- Confirm if property owners or tenants have registered for Frontier Regional Emergency Alert Program, the emergency notification system. If residents have not registered, provide them with information and encourage them to do so.

As designated in the WMP, prior to construction the certificate holder would:

- Hold a construction kick off meeting with contractors and personnel to train personnel on fire prevention measures in the WMP, proper usual for fire protection equipment including the use of the water truck, pump and hose, safety procedures including procedures during Red Flad weather conditions and Warnings.
- Notify and submit to the local fire department(s):
    - Primary contacts for the certificate holder and construction personnel;
    - The date construction will begin;
    - The days and times construction will occur;
    - A description of the general construction phasing;
    - A description and maps of:
        - Access points to the facility, with a description of emergency access procedures, particularly when personnel will not be onsite;
        - The water source(s) and specifications for water pump, hose and nozzle.
        - Location of fire protection equipment.
        - Procedures to follow and BMPs for activities during Red Flad weather conditions and Warnings.

To ensure that the construction WMP would be finalized in an effective manner to include all of the applicant representations and Department recommendations and that the pre-construction

training and local fire department notifications are completed, the Department recommends Council impose the following condition:

> **Recommended Wildfire Prevention and Risk Mitigation Condition 1 (PRE):** Prior to construction of the facility or phase, as applicable, the certificate holder shall:
>
> a. Finalize the Construction Wildfire Mitigation Plan, as provided in Attachment F-1 to the Final Order on RFA1. The final Construction Wildfire Mitigation Plan shall be submitted to the Department for review and approval.
>
> b. Complete pre-construction tasks and actions designated in the Construction Wildfire Mitigation Plan approved under sub a of PRE-WF-01.
>
> [PRE-WF-01, Final Order on AMD1]

Finally, the construction WMP includes measures that would be deployed during construction on an ongoing basis to reduce, prepare for and respond to wildfire emergencies. These measures include:

- Holding meetings to ensure construction personnel are trained on proper use of fire prevention equipment and procedures;
- Updating the list of property owners and tenants within 0.5 miles of the facility, confirming and encouraging them to register for the Frontier Regional Emergency Alert Program, the County's emergency notification system;
- Maintaining vegetation to not exceed 10-12 inches in height, defensible spaces as described in the plan, and to not store brush piles on-site;
- Procedures for updating on-site personnel about Red Flag Warning Weather Conditions and restrictions in work areas (including setbacks from the buffer areas for high fire consequence areas/resources) during Red Flag weather.
- Contacting 911 in the event of an emergency on site that cannot be addressed by personnel, or a fire started on-site that has spread off-site, or an off-site fire that does not appear to have emergency personnel on site.

To ensure the facility is constructed in compliance with a construction WMP, the Department recommends Council impose the Recommended Wildfire Prevention and Risk Mitigation Condition 2 which would require that the construction WMP be implemented by the certificate holder and its contractors during facility construction:

> **Recommended Wildfire Prevention and Risk Mitigation Condition 2 (CON):** During construction of the facility or phase, as applicable, the certificate holder shall implement and require all onsite contractors and employees to adhere to, the Construction Wildfire Mitigation Plan required under PRE-WF-01. Updates to the Wildfire Mitigation Plan may be required if determined necessary by the certificate holder, certificate holder's contractor(s) or the Department to address wildfire hazard to public health and safety. Any Department required updates shall be implemented within 14 days, unless otherwise agreed to by the Department based on a good faith effort to address wildfire hazard.
>
> [CON-WF-01, Final Order on AMD1]

Facility Operation:

As described below, the operational WMP has tasks and actions associated with finalizing the WMP, pre-operational tasks, and tasks and actions that must be implemented during construction of the facility. To help the certificate holder ensure the action items are completed, and for the Department to track compliance with them, there will be Compliance Checklists that will be attached to the operational WMP, as indicated in the plan.

As recommended in Wildfire Prevention and Risk Mitigation Condition 3 below, the operational WMP (Attachment F-2 to this order) would be finalized prior to operation to include:

- Incorporate guidance from the Jefferson County CWPP that would apply to operations;
- Include feedback from local fire districts, as well as local emergency management about measures in the WMP;
- Identify water sources that will be on site during fire season and confirm specifications for pump, hose and nozzle;
- Provide maps with access points, emergency access procedures particularly when personnel are not onsite, and the location and buffers for any newly identified high-fire consequence areas/resources;
- Include updated contact information for certificate holder and operational managers;
- Provide a list of property owners and tenants for residences within 0.5 miles from the site boundary;
- Confirm if property owners or tenants have registered for Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management. If residents have not registered, provide them information and encourage them to do so;
- Provide maps that identify and describe the location of facility components and emergency shut offs, emergency access procedures, including how emergency responders and/or adjacent landowners may access site for fire protection equipment or to extinguish an on-site fire when personnel will not be onsite.

As designated in the WMP, prior to operation the certificate holder would:

- Hold an on-site meeting inviting equipment manufacturers, specialty contractors, local fire department(s), emergency management office personnel, the Department, and any other emergency management agency and provide training on fire prevention measures in the WMP, proper usual for fire protection equipment including the use of the water truck, pump and hose, safety procedures including procedures during Red Flad weather conditions and Warnings.
- Submit to the local fire department(s):
    - The location of facility components and emergency shut offs;
    - A description of emergency access procedures, including how emergency responders and/or adjacent landowners may access site for fire protection equipment or to extinguish an on-site fire when personnel will not be onsite;

- The set up and location(s) of water source(s) that will be on-site during fire season;
- The identification of any hazardous chemicals and appropriate emergency procedures.

To ensure that the operational WMP would be finalized in an effective manner to include all of the applicant representations and Department recommendations and that the pre-operational training and local fire department notifications are completed, the Department recommends Council impose the following condition:

> **Recommended Wildfire Prevention and Risk Mitigation Condition 3 (PRO)**: Prior to operation of the facility or phase, as applicable, the certificate holder shall finalize the operational Wildfire Mitigation Plan (WMP), included as Attachment F-2 to the Final Order on RFA1.
> [PRO-WF-01, Final Order on AMD1]

Finally, the operational WMP includes measures that would be deployed during operation on an ongoing basis to reduce, prepare for and respond to wildfire emergencies.[96] These measures include:

- Holding meetings and inviting fire department(s), the Department, and emergency managers to be trained on the location of facility components, proper use of fire prevention equipment and response procedures;
- Updating the list of property owners and tenants within 0.5 miles of the facility;
- Contacting 911 in the event of an emergency on site that cannot be addressed by personnel on-site, or a fire started on-site that has spread off-site, or an off-site fire that does not appear to have emergency personnel on site;
- Conducting regular vegetation surveys in advance of fire season and mowing or addressing any vegetation that has grown too tall or encroached near electrical equipment or defensible space;[97]
    - Maintaining vegetation to not exceed 10-12 inches in height, defensible spaces, and fire breaks such as graveled perimeter and service roads as described in the plan;
- Procedures for updating on-site personnel about Red Flag Warning Weather Conditions and restrictions in work areas (including setbacks from the buffer areas for high fire consequence areas/resources) during Red Flag weather;
- Water sources such as a water truck, including a pump, hose and appropriate nozzle must be on-site during fire season.

Table 2 of the operational WMP indicates the duration, standard and procedures for inspections of facility electrical components.[98] The solar inverters would be inspected monthly,

[96] OAR 345-022-0115(1)(b)(C).
[97] OAR 345-022-0115(1)(b)(B).
[98] *Id*.

the substation would be inspected annually, and the overhead electrical lines would be inspected on a bi-annual basis. These requirements would be required to be implemented under Recommended Wildfire Prevention and Risk Mitigation Condition 4 below.

Plan Updates

The operational WMP will be reviewed and updated as necessary each year. Each year, the certificate holder will fill out and submit the Operational WMP Compliance Checklist in the annual report submitted to the Department.

Under General Standard of Review Condition 5 (GEN-GS-04), if any emergency incidents occur on-site, or if the certificate holder becomes aware of a significant environmental change or impact attributable to the facility the certificate holder shall submit a written report to the Department describing the impact on the facility and any affected site certificate conditions.[99]

Updates to the WMP will account for changes in local fire protection agency personnel and changes in best practices for minimizing and mitigating fire risk. After each five-year review, a copy of the updated plan will be provided to the Department with the annual compliance report required under OAR 345-026-008(2), required under General Standard of Review Condition 11. As required under OAR 345-022-0115(1)(b), because the facility site has a high wildfire risk, and to reflect the certificate holders representations to evaluate and reduce the risk of wildfire during operation of the facility in compliance with the WMP, the Department recommends Council impose the following condition:

Recommended Wildfire Prevention and Risk Mitigation Condition 4 [OPR]: During operation, the certificate holder shall:

a. Implement the Operational Wildfire Mitigation Plan, included as Attachment F-2 to the Final Order on RFA1.
b. After the first operational year, annually review and update the evaluation of wildfire risk under OAR 345-022-0115(1)(b) and submit the results in the annual report for that year.
c. Submit an updated Operational Wildfire Mitigation Plan to the Department if substantive changes are made to the plan because of the review under sub (b) of this condition, or at any other time substantiative revisions are made to Attachment F-2 of the Final Order on RFA1.
d. Updates to the Wildfire Mitigation Plan may be required if determined necessary by the certificate holder, certificate holder's contractor(s) or the Department to address wildfire hazard to public health and safety. Any Department required updates shall be implemented within 14 days, unless otherwise agreed to by the Department based on a good faith effort to address wildfire hazard. [OPR-WF-01; Final Order on AMD1]

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

III.N.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the recommended site certificate conditions described above, the Department recommends the Council find that the certificate holder has adequately characterized wildfire risk within the analysis area using current data from reputable sources, and that, subject to Council approval, the facility will be designed, constructed, and operated in compliance with Wildfire Mitigation Plans.

III.O. WASTE MINIMIZATION: OAR 345-022-0120

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:*
>
> *(a) The applicant's solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;*
>
> *(b) The applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*
> *(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*[100]

III.O.1. Findings of Fact

As indicated in Table 1 of this order, the certificate holder proposes to increase the quantities of facility components (solar panel posts and wood monopoles) that were previously reviewed and approved in the *Final Order on ASC*. The impacts from construction and operation of the facility and actions to minimize the generation and disposal of solid and wastewater wastes, with the RFA1 construction deadline extension and facility component increase, are not significantly different from that which was previously approved. Prior findings are incorporated herein by reference and direct incorporation, as applicable, and briefly summarized below.[101]

[100] OAR 345-022-0120, effective May 15, 2007.

[101] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 189-193; MSEFAPP ASCDoc1-22_Exhibit_V_Waste 2020-11-09; MSEFAPP ASCDoc1-21_Exhibit_U_Public-Services 2020-11-09.

Solid Waste

During construction, approximately one 40-cubic-yard roll-off per week would be generated.[102] 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.

During operations, the primary waste generated would be solid waste from maintenance and ongoing operational activities, which includes maintenance and replacement of solar panels and battery systems. 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 National PV Recycling Program.[103] 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 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.

Council previously adopted Waste Minimization Condition 1 (GEN-WM-01) which requires the development and implementation of a Waste Management Plan that would identify measures to minimize and recycle waste materials, to the maximum extent possible, including solar panels and batteries. As imposed, the condition requires that a Waste Management Plan be developed and would apply to construction, operation and retirement activities. However, as described in the *Final Order on ASC,* Retirement and Financial Assurance Condition 2 (RET-RF-01) requires the certificate holder to retire the facility in accordance with a Council approved retirement plan. The retirement plan must include a description of the activities necessary to restore the site to a useful nonhazardous condition, including waste minimization measures. Therefore, the Department recommends Council amend Waste Minimization Condition 1 (GEN-WM-01) and remove the decommissioning requirement of submitting a Waste Management Plan to the Department for review and approval. This recommended amendment to Waste Minimization Condition 1 is provided in Attachment A of this order.

Wastewater

Wastewater generated during construction would result from the use of portable toilets, which would be managed by a local contractor for disposal off site in accordance with state law.

During operations, solar panels may need to be washed, however washwater would not include cleaning solvents, and would be discharged by evaporation and seepage into the ground, as required in Soil Protection Condition 2 (PRO-SP-01).

[102] MSEFAPPDoc1-22 Exhibit V Waste 2020-11-09, Section V.2.1.

[103] MSEFAPPDoc1-22 Exhibit V Waste 2020-11-09, Section V.3.

III.O.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing and recommended amended site certificate conditions described above, the Department recommends the Council find that the certificate holder's solid waste plans(s) are likely to minimize generation of solid waste and wastewater during construction and operation of the facility, would result in recycling and reuse of such wastes, and would manage the accumulation, storage, disposal and transportation of wastes in a manner that will result in minimal adverse impacts to surrounding and adjacent areas.

III.P. 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.*[104]

III.P.1. Findings of Fact

The Siting Standard for Transmission Lines under 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*. [Emphasis added] Section (2) of the rule requires implementation of measures to reduce the risk of induced current.

Electro-magnetic fields

As described in the *Final Order on ASC* and in RFA1, the approved point of interconnect switching station would be located directly adjacent to the Pelton Dam to Round Butte 230-kV transmission line, overhead cables connecting the two components will be located near the middle of the facility layout, directly adjacent to the existing 230-kV transmission line, located behind multiple security fences, and would be inaccessible to the public. The facility layout is not changed in RFA1, therefore, Council's conclusions from the *Final Order on ASC* remain the same for RFA1.

[104] OAR 345-024-0090, effective May 15, 2007.

Induced-Currents and Grounding

Council previously adopted General Standard Condition 8 (GEN-GS-06) [based on the mandatory condition contained in OAR 345-025-0010(4)], which requires, in part, the certificate holder 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. This condition continues to apply to the facility and demonstrates that the facility can be designed, constructed and operated so that induced currents would be as low as reasonably achievable.

III.P.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate condition described above, the Department recommends the Council find that the certificate holder can design, construct, and operate the facility, with proposed RFA1 changes, 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 and that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.

IV. EVALUATION OF OTHER APPLICABLE REGULATORY REQUIREMENTS

IV.A. Noise Control Regulations: OAR 340-035-0035

(1) Standards and Regulations:

(a) Existing Noise Sources. No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules.

(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.

*****

(c) Quiet Areas. No person owning or controlling an industrial or commercial noise source located either within the boundaries of a quiet area or outside its boundaries shall cause or permit the operation of that noise source if the statistical noise levels generated by that source exceed the levels specified in Table 9 as measured within the quiet area and not less than 400 feet (122 meters) from the noise source.

(d) Impulse Sound. Notwithstanding the noise rules in Tables 7 through 9, no person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if an impulsive sound is emitted in air by that source which exceeds the sound pressure levels specified below, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule:

(A) Blasting. 98 dBC, slow response, between the hours of 7 a.m. and 10 p.m. and 93 dBC, slow response, between the hours of 10 p.m. and 7 a.m.

(B) All Other Impulse Sounds. 100 dB, peak response, between the hours of 7 a.m. and 10 p.m. and 80 dB, peak response, between the hours of 10 p.m. and 7 a.m.

(e) Octave Bands and Audible Discrete Tones. When the Director has reasonable cause to believe that the requirements of subsection (1)(a), (b), or (c) of this rule do not adequately protect the health, safety, or welfare of the

public as provided for in ORS Chapter 467, the Department may require the noise source to meet the following rules:

(A) Octave Bands. No person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if such operation generates a median octave band sound pressure level which, as measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceeds applicable levels specified in Table 10.

(B) One-third Octave Band. No person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if such operation generates a median one-third octave band sound pressure level which, as measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, and in a one-third octave band at a preferred frequency, exceeds the arithmetic average of the median sound pressure levels of the two adjacent one-third octave bands by:

(i) 5 dB for such one-third octave band with a center frequency from 500 Hertz to 10,000 Hertz, inclusive. Provided: Such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band; or

(ii) 8 dB for such one-third octave band with a center frequency from 160 Hertz to 400 Hertz, inclusive. Provided: Such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band; or

(iii) 15 dB for such one-third octave band with a center frequency from 25 Hertz to 125 Hertz, inclusive. Provided: Such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band;

(iv) This rule shall not apply to audible discrete tones having a one-third octave band sound pressure level 10 dB or more below the allowable sound pressure levels specified in Table 10 for the octave band which contains such one-third octave band.

(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(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);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(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:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

(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);

(l) Sounds created by agricultural activities;

(m) Sounds created by activities related to the growing or harvesting of forest tree species on forest land as defined in subsection (1) of ORS 526.324.

(6) Exceptions: Upon written request from the owner or controller of an industrial or commercial noise source, the Department may authorize exceptions to section (1) of this rule, pursuant to rule 340-035-0010, for:

(a) Unusual and/or infrequent events;

(b) Industrial or commercial facilities previously established in areas of new development of noise sensitive property;

(c) Those industrial or commercial noise sources whose statistical noise levels at the appropriate measurement point are exceeded by any noise source external to the industrial or commercial noise source in question;

(d) Noise sensitive property owned or controlled by the person who controls or owns the noise source;

(e) Noise sensitive property located on land zoned exclusively for industrial or commercial use.[105]

DEQ 23-2018, minor correction filed 04/02/2018, effective 04/02/2018
DEQ 24-2017, minor correction filed 11/08/2017, effective 11/08/2017
DEQ 14-2017, amend filed 10/30/2017, effective 11/02/2017

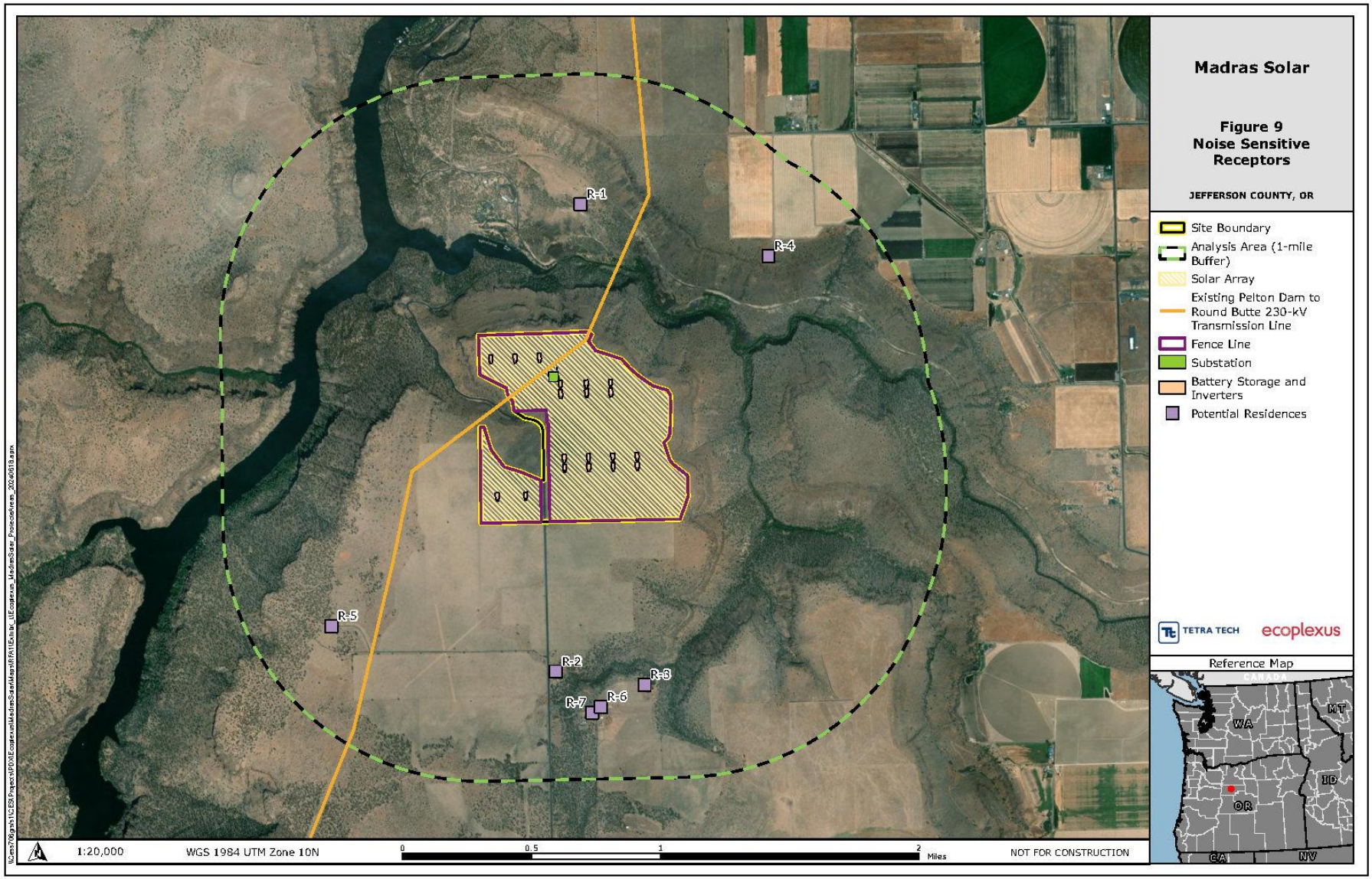
IV.A.1. Findings of Fact

The area that is evaluated for compliance with the DEQ noise regulation includes the area within and extending one-mile from the site boundary.

The certificate holder evaluated the presence of any new noise sensitive residents (NSRs) by using the Jefferson County GIS Public Mapping Application to review tax lots within one mile of the site boundary. The mapping application provides both aerial photography and the County Assessor's detailed property assessment for each tax lot including the real market value of improvements made to the property. No new improvements were identified within 1 mile of the facility site boundary, as illustrated in Figure 7 below.

[105] OAR 345-035-0035, effective November 2, 2017, as amended by minor corrections filed on November 8, 2017 and April 2, 2018.

Figure 7: RFA1 Review of Noise Sensitive Receptors Within 1 Mile of Site Boundary



The certificate holder is not proposing any changes to previously approved noise generating equipment (inverters, transformers, battery units, etc.), which are listed in Table 1 of this order and in Attachment A Draft First Amended Site Certificate. Therefore, the modeled noise from the facility would not change from what Council approved in the *Final Order on ASC*.[106] A summary of Council's previous conclusions and site certificate conditions is provided below.

Potential Noise Impacts

Operational noise would be from equipment: inverters, inverter transformers, substation transformer and battery storage equipment. To confirm compliance with the DEQ Noise Regulations, Council approved the methodologies the certificate holder used to determine the ambient noise environment and noise modeling by selecting two noise sensitive properties as representative measurement points (R-3 and R-4).[107]

Table 9: Summary of Ambient Noise Measurement Results at NSRs

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 9 above, ambient conditions during nighttime L50 (quietest time period) as measured at the representative noise sensitive properties range from 23-47 dBA and from 19 to 36 dBA.

Operational noise from the facility is compared to the maximum allowable noise limits (OAR 340-035-0035, Table 8), the most restrictive of which is 50 dBA at night. The predicted full load sound level attributable to facility operations at the closest residence, R-2, is 29 dBA with the battery storage, which is below the maximum allowable noise limit.

As described in the *Final Order on ASC*, the quietest single nighttime (10:00 p.m. to 7:00 a.m.) L50 monitoring result was 19 dBA at R-4. The quietest <u>average</u> 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

[106] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, pp. 195-203.

[107] As described in the *Final Order on ASC*, 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. MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, page 200.

conducted) is 29 dBA, Council found that noise generated during facility operation is expected to comply with the 10-dBA ambient degradation standard.

In the Final Order on ASC, the Council adopted Noise Control Condition 1, requiring the certificate holder to submit a noise summary report to the Department based on final facility design, equipment and components in dBA terms showing that the facility will meet the operational noise limits and falls within the range approved by Council. Council also imposed Noise Control Condition 2 to require that the certificate holder establish a noise complaint program for the public prior to facility construction. For these reasons, the Department recommends that Council continue to find that the facility, with proposed RFA1 changes, continues to comply with the DEQ Noise Regulations.

IV.A.2. Conclusions of Law

Based on the foregoing analysis, and subject to compliance with the existing site certificate conditions described above, the Department recommends the Council find that the facility, with proposed RFA1 changes, will comply with the applicable Noise Control Regulations in OAR 340-035-0035.

IV.B. Removal-Fill

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state."[108] 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.

IV.B.1. Findings of Fact

The certificate holder assessed the 284-acre site boundary for wetlands and waters of the state to determine if a removal fill permit was required in Exhibit J of the ASC. No wetlands or waters of the state were identified in that assessment conducted in 2018 and submitted to DSL for review and concurrence.[109] DSL issued its concurrence which was issued in March 2019 (WD #2018-0671). A copy of DSL concurrence was submitted with the ASC.[110]

RFA1 does not propose any changes to the site boundary or facility design that would change those previous findings. Based on the delineation and DSL concurrence, Council found in the *Final Order of the ASC*, that no removal-fill permit would be required for the facility. Because RFA1 proposes no changes, and no changes to standards or methods for delineation have been

[108] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.
[109] MSEFAPPDoc1-10_Exhibit_J_Wetlands 2020-11-09, Attachment J-1.
[110] MSEFAPPDoc1-10_Exhibit_J_Wetlands 2020-11-09, Attachment J-2.

made since Council's prior evaluation, the Department recommends that Council continue to find that the facility will not require a removal fill permit.

IV.B.2. Conclusions of Law

Based on the foregoing analysis, the Department recommends the Council continue to find that the facility will not require a removal-fill permit.

IV.C. 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, with proposed changes, would comply with the statutes and administrative rules identified in the project order. The project order identifies OAR 690, Divisions 310 and 380 (OWRD permitting requirements) as the administrative rules governing use of water resources and water rights as applicable to the facility.

IV.C.1. Findings of Fact

As summarized in Section III.M., *Public Services*, of this order, the construction deadline extension proposed in RFA1 does not change the estimated amount of water usage or the water service provider (Deschutes Valley Water District) for facility construction. Water would be provided by the District under its municipal or quasi-municipal water permit or water right permit numbers S26113 and S36515.[111] Because RFA1 proposes no changes to water needs, usage or sources, the Department recommends that Council rely on its previous findings that a groundwater permit, surface water permit, or water right transfer is not required.

IV.C.2. Conclusions of Law

Based on the foregoing analysis, the Department recommends Council continue to find that the facility does not need a groundwater permit, surface water permit, or water right transfer.

[111] MSEFAPPDoc4-1 Final Order (SIGNED) with Attachments 2021-08-02, Section IV.Q. Water Rights

V. PROPOSED CONCLUSIONS AND ORDER

Based on the recommended findings of fact and conclusions included in this Order, the Department recommends Council make the following findings:

1. The facility, with the proposed changes, complies with the requirements of the Energy Facility Siting Statutes ORS 469.300 to 469.520.

2. The facility, with proposed changes, complies with all applicable standards adopted by Council pursuant to ORS 469.501, in effect on the date Council issues its Final Order.

3. The facility, with proposed changes, complies with all other Oregon statutes and administrative rules identified in effect on the date Council issues its Final Order.

Accordingly, the Department recommends Council find that the facility, with the proposed changes, complies with the General Standard of Review OAR 345-022-0000 and OAR 345-027-0375. The Department recommends that the Council find, based on a preponderance of the evidence on the record, that the site certificate may be amended as requested.

The Department therefore recommends that the Council approve Request for Amendment X of the Site Certificate for the Madras Solar Energy Facility, and issue the 1st Amended Site Certificate included as Attachment A to this Order.

Issued October 18, 2024

OREGON DEPARTMENT OF ENERGY

Todd Cornett

Todd Cornett (Oct 18, 2024 12:59 PDT)

_____

Todd Cornett, Assistant Director for Siting

ATTACHMENTS

Attachment A: Draft First Amended Site Certificate
Attachment B: Placeholder for DPO Comments and Responses EFSC Meeting –Adopted by Council to include EFSC Deliberation
Attachment C: Reviewing Agency Consultation and Documents Referenced in Order
Attachment D: Draft Habitat Mitigation Plan
Attachment E: Draft Noxious Weed Control Plan
Attachment F-1: Draft Construction Wildfire Mitigation Plan
Attachment F-2: Draft Operational Wildfire Mitigation Plan
Attachment G: Updated Decommissioning Cost Estimate and Assumptions

Attachment A: Draft First Amended Site Certificate

ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

First Amended Site Certificate for the Madras Solar Energy Facility

ISSUANCE DATES

Site Certificate	June 25, 2021
First Amended Site Certificate	TBD

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Attachments

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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 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: (a) the Council's *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*), and (b) the Council's *Final Order on Request for Amendment 1 of the Madras Solar Energy Facility*.

In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) *Final Order on Request for Amendment 1 of the Madras Solar Energy Facility Site Certificate* issued on [TBD] , (2) Final Order on the Application for Site Certificate issued on [TBD], and (3) the record of the proceedings that led to the above referenced orders.

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~~Attachment A: *Facility ~~Regional~~ Location Maps*. 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

[1] ORS 469.300(25)

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~~ of ~~approximately 7 and 277 acres, respectively~~.

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

3.0 Facility Description

Specifications and details of the approved facility, including related or supporting facilities, are presented in Table 1 below.

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Site Boundary		
Site Boundary	284	acres
Micrositing Area	284	acres
Maximum Area within Fenceline	270.18	acres
Solar Components		
PV Solar Modules		
Approx. total number	137,673	modules
Max Height at full-tilt	8-10	feet
Posts		
Approx. total number (assumes ballasted design for foundations)	114,000	posts
Cabling		
Combiner Boxes	274	each
Inverter Step Up Transformer Units (Power Conversion Station – PCS)		
Approx. total number	19	each
Noise level	92	dBA
Transformer oil-containing capacity	550	Gallons/each
Related or Supporting Facility Components		
34.5 kilovolt (kV) Collection System[1]		
Collector line length with Cable Tray	4	miles
Collector Substations		
Substations w SCADA; Generator step-up transformers, each	1	each
Site size (approx.)	1	acre
Transformer oil-containing capacity	8,000	gallons/each
Transformer noise level	86	dBA
Max height of structures	34	feet
Switching Station (POI)		
Stations; transformers, each	1	each
Site size (with foundation and graveled areas)	0.06	acres
230 kV Transmission Line		
Length (total; northern line; southern line)	200	feet
Structures: Type (H frame); quantity	4	each
Height of structures	80	feet
Battery Energy Storage System (Lithium-ion/Zinc)		
Zinc		

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Approx. total batteries/containers on foundations with fans/heating systems; SCADA	120	each
Site size	0.088	acres
Approx. container dimensions	9.5 x 8 x 40	H x W x L; feet
Noise level (broadband)	87	dBA
Lithium-ion		
Approx. total batteries/containers on foundations with HVAC and fire suppression systems; SCADA	120	each
Site size	0.088	acres
Approx. container dimensions	9.5 x 8 x 40	H x W x L; feet
Noise level (broadband)	87	dBA
O&M Building		
Quantity	1	each
Site size	320	Sq. ft.
Height	8.5	feet
Appurtenances	Portable toilets, fencing	
Facility Roads		
Length (main access roads/service roads)	5,000	feet
Width (main access/service)	24/16-20	feet
Perimeter Fence		
Length	23,306	miles
Height	6-8	feet
Access/gates	3	each
Temporary Concrete Batch Plant		
Quantity	1	each
Temporary Construction Areas		
Quantity	1	each
Site size	6.77	acres
Description	Graveled	

Acronyms: dBA = A-weighted decibels; HVAC = heating, ventilation and air conditioning; kV = kilovolt; OH = overhead; O&M = operations and maintenance; SCADA = supervisory, control and data acquisition

Notes:

1. The electrical collection system, or portions thereof, may be aboveground. If aboveground, there would be up to 50 wood monopoles. Disturbance would be greater from underground system, which is represented in the table above.

The approved energy facility is comprised of up to 60 module blocks (crystalline silicon modules) which include tracker system/racks, ballasted posts (approx. ~~30~~114,000 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 to 10 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~~114,000 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 it's 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 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 switch gear enclosures typically measure approximately 33 feet long

[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 is approved to ~~will~~ either be 6 feet tall with two strands of barbed wire, or 8 feet tall with no barbed wire.

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, with portions that may be above ground with collector trays of -34.5 kV collector lines that carry power from the switchgear to the approved substation. The 34.5 kV collector lines that 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]

[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.

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 are 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 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 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 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 temporary use at the site to no more than 6-months 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
CON	Construction Conditions
PRO	Pre-Operational Conditions
OPR	Operational Conditions
RET	Retirement 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.

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	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~~ [by June 25, ~~2024~~2027]. 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. [General Standard of Review Condition 1, Mandatory Condition OAR 345-025-0006(4), Final Order on ASC, AMD1]
GEN-GS-02	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. [General Standard of Review Condition 2, Mandatory Condition OAR 345-025-0006(2), Final Order on ASC]
GEN-GS-03	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. [General Standard of Review Condition 3, Mandatory Condition OAR 345-025-0006(3); OAR 345-026-0015(3),Final Order on ASC]

GEN-GS-04	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. [General Standard of Review Condition 5, Mandatory Condition OAR 345-025-0006(6), Final Order on ASC]
GEN-GS-05	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. [General Standard of Review Condition 7, Mandatory Condition OAR 345-025-0006(15), Final Order on ASC]
GEN-GS-06	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. [General Standard Condition 8, Site Specific Condition OAR 345-025-0010(4), Final Order on ASC]
GEN-GS-07	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. [General Standard Condition 9, Site Specific Condition OAR 345-025-0010(5), Final Order on ASC]
GEN-GS-08	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. 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. [General Standard Condition 11, OAR 345-026-0080, Final Order on ASC]
STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]	
GEN-OE-01	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).

	[Organizational Expertise Condition 1, Final Order on ASC]
GEN-OE-02	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. [Organizational Expertise Condition 3, Final Order on ASC]
GEN-OE-03	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. [Organizational Expertise Condition 4, Final Order on ASC, OAR 345-026-0170]
GEN-OE-04	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. d. Upon receipt of the written report in sub(c) of this condition, the Department may review the facility record for incidents or circumstances reported or reportable under sub(a) related to public health and safety, the environment, or other resources protected under Council standards. If these incidences are

	determined by the Department to impact the adequacy of the facility decommissioning cost, the Department or Council may adjust the contingencies identified in Final Order on RFA1 Table 5 and request that the certificate holder promptly provide an updated bond or letter of credit in the adjusted amount. [Organizational Expertise Condition 5, Final Order on ASC, AMD1]
GEN-OE-05	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). [Organizational Expertise Condition 6, Final Order on ASC]
GEN-OE-06	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. [Organizational Expertise Condition 7, Final Order on ASC]
GEN-OE-07	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. [Organizational Expertise Condition 8, Final Order on ASC]
STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]	
GEN-SS-01	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.

	[Structural Standard Condition 2, Final Order on ASC]
GEN-SS-02	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. [Structural Standard Condition 3, Mandatory Condition OAR 345-025-0006(12), Final Order on ASC]
GEN-SS-03	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. [Structural Standard Condition 4, Mandatory Condition OAR 345-025-0006(13), Final Order on ASC]
GEN-SS-04	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. [Structural Standard Condition 5, Mandatory Condition OAR 345-025-0006(14), Final Order on ASC]
GEN-SS-05	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. [Structural Standard Condition 6, Final Order on ASC]
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	

GEN-SP-01	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. [Soil Protection Condition 1, Final Order on ASC]
STANDARD: LAND USE (LU) [OAR 345-022-0030]	
GEN-LU-01	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. [Land Use Condition 2, Final Order on ASC]
GEN-LU-02	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. [Land Use Condition 3, Final Order on ASC]

GEN-LU-03	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. [Land Use Condition 4, Final Order on ASC]
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: 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. [Land Use Condition 5, Final Order on ASC]
GEN-LU-05	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). [Land Use Condition 6, Final Order on ASC]
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	
GEN-RF-01	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. [Retirement and Financial Assurance Condition 1, Mandatory Condition OAR 345-025-0006(7), Final Order on ASC]
STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]	
~~GEN-FW-01~~	~~:~~[Deleted Final Order on RFA1] ~~The certificate holder shall: 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:~~

	~~Final assessment of temporary habitat impacts (in acres), based on habitat quality of habitat subtype, and final facility design, presented in tabular format.~~ ~~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.~~ ~~Description of topsoil salvage, scarification and restoration methods if intended to be implemented.~~ ~~Approval of appropriate seed mix composition from the ODFW.~~ ~~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.~~ [Fish and Wildlife Condition 1, Final Order on ASC, AMD1]
GEN-FW-02	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. [Fish and Wildlife Condition 2, Final Order on ASC]
GEN-FW-03	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. [Fish and Wildlife Condition 3, Final Order on ASC]
GEN-FW-04	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.

[Fish and Wildlife Condition 4, Final Order on ASC]

GEN-FW-05

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.

[Fish and Wildlife Condition 6, Final Order on ASC]

STANDARD: HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]

GEN-HC-01	During construction, operations, and retirement of the facility, the certificate holder shall implement and adhere to the requirements of the Inadvertent Discovery Plan (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. [Historic, Cultural and Archeological Condition 1, Final Order on ASC]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]	
GEN-PS-01	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: 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 advanced 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. [Public Services Condition 1, Final Order on ASC]
GEN-PS-02	The certificate holder shall: 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. 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. [Public Services Condition 2, Final Order on ASC]
~~GEN-PS-03~~	[Deleted Final Order on RFA1] ~~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.~~ [Public Services Condition 4, Final Order on ASC, AMD1]
STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]	
GEN-WM-01	During construction, and 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. [Waste Minimization Condition 1, Final Order on ASC, AMD1]

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	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. [General Standard Condition 4, Mandatory Condition OAR 345-025-0006(5), Final Order on ASC]
PRE-GS-02	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. [General Standard Condition 10, OAR 345-026-0048, Final Order on ASC]
STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]	
PRE-OE-01	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. [Organizational Expertise Condition 2, Final Order on ASC]
STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]	
PRE-SS-01	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). [Structural Standard Condition 1, Final Order on ASC]
STANDARD: LAND USE (LU) [OAR 345-022-0030]	
PRE-LU-01	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. [Land Use Condition 1, Final Order on ASC]
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~~4.5 million dollars (Q4 ~~2019~~ 2024 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~~ 5 of the Final Order on ~~the ASC~~RFA1, and the contingencies illustrated in Table ~~3~~ 5 of the Final Order on ~~the ASC~~RFA1, and may further make adjustments based on unit costs for task and actions presented in ~~ASC Exhibit W~~ Attachment ~~W-1~~G ~~and W-2~~ to the Final Order on RFA1. 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~~ 5 of the Final Order on ~~the ASC~~RFA1 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~~ 2024 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~~ 2024 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~~ 2024 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. d. The Department and Council reserve the right to adjust the contingencies, as appropriate and necessary to ensure that costs to restore the site are adequate to maintain health and safety of the public and environment. [Retirement and Financial Assurance Condition 4, Mandatory Condition OAR 345-025-0006(8), Final Order on ASC, AMD1]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]	

PRE-PS-01	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. [Public Services Condition 3, Final Order on ASC]
PRE-PS-02	Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall: a. Identify all water-related needs and estimate daily and annual water demand for each construction phase, as applicable. b. Provide to the Department, evidence such as a contract or purchase agreement demonstrating that adequate water supply to meet construction demand has been secured and that water for all construction activities will be legally obtained by service providers or third-party permits. [Public Services Condition 5, Final Order on AMD1]
STANDARD: WILDFIRE PREVENTION AND RISK MITIGATION (WF) OAR 345-022-0115	
PRE-WF-01	Prior to construction of the facility or phase, as applicable, the certificate holder shall: a. Finalize the Construction Wildfire Mitigation Plan, as provided in Attachment F-1 to the Final Order on RFA1. The final Construction Wildfire Mitigation Plan shall be submitted to the Department for review and approval. b. Complete pre-construction tasks and actions designated in the Construction Wildfire Mitigation Plan approved under sub a of PRE-WF-01. [Wildfire Prevention and Risk Mitigation Condition 1, Final Order on AMD1]
STANDARD: NOISE CONTROL REGULATIONS (NC) [OAR 340-035-0035]	
PRE-NC-01	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. [Noise Control Condition 1, Final Order on ASC]

5.4 Construction (CON) Conditions

Condition Number	General (CON) Conditions
STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]	
CON-FW-01	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. [Fish and Wildlife Condition 5, Final Order on ASC]
CON-FW-02	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. [Fish and Wildlife Condition 7, Final Order on ASC]
STANDARD: WILDFIRE PREVENTION AND RISK MITIGATION (WF) OAR 345-022-0115	
CON-WF-01	During construction of the facility or phase, as applicable, the certificate holder shall implement and require all onsite contractors and employees to adhere to, the Construction Wildfire Mitigation Plan required under PRE-WF-01. Updates to the Wildfire Mitigation Plan may be required if determined necessary by the certificate holder, certificate holder's contractor(s) or the Department to address wildfire hazard to public health and safety. Any Department required updates shall be implemented within 14 days, unless otherwise agreed to by the Department based on a good faith effort to address wildfire hazard. [Wildfire Prevention and Risk Mitigation Condition 2, Final Order on AMD1]

5.5 Pre-Operational (PRO) Conditions

Condition Number	Pre-Operational (PRO) Conditions
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	
PRO-SP-01	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. [Soil Protection Condition 2, Final Order on ASC]
STANDARD: WILDFIRE PREVENTION AND RISK MITIGATION (WF) OAR 345-022-0115	

PRO-WF-01	Prior to operation of the facility or phase, as applicable, the certificate holder shall finalize the operational Wildfire Mitigation Plan (WMP), included as Attachment F-2 to the Final Order on RFA1. [Wildfire Prevention and Risk Mitigation Condition 3, Final Order on AMD1]

5.6 Operational (OPR) Conditions

Condition Number	Operational (OPR) Conditions
STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]	
OPR-GS-01	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. [General Standard Condition 6, Mandatory Condition Oar 345-025-0006(11), Final Order on ASC]
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	
OPR-SP-01	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. [Soil Protection Condition 3, Final Order on ASC]
STANDARD: WILDFIRE PREVENTION AND RISK MITIGATION (WF) OAR 345-022-0115	
OPR-WF-01	During operation, the certificate holder shall: a. Implement the Operational Wildfire Mitigation Plan, included as Attachment F-2 to the Final Order on RFA1. b. After the first operational year, annually review and update the evaluation of wildfire risk under OAR 345-022-0115(1)(b) and submit the results in the annual report for that year. c. Submit an updated Operational Wildfire Mitigation Plan to the Department if substantive changes are made to the plan because of the review under sub (b) of this condition, or at any other time substantiative revisions are made to Attachment F-2 of the Final Order on RFA1. d. Updates to the Wildfire Mitigation Plan may be required if determined necessary by the certificate holder, certificate holder's contractor(s) or the Department to address wildfire hazard to public health and safety. Any Department required updates shall be implemented within 14 days, unless otherwise agreed to by the

	Department based on a good faith effort to address wildfire hazard. [Wildfire Prevention and Risk Mitigation Condition 4, Final Order on AMD1]
STANDARD: NOISE CONTROL REGULATIONS (NC) [OAR 340-035-0035]	
OPR1-NC-01	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. [Noise Control Condition 2, Final Order on ASC]

5.7 Retirement (RET) Conditions

Condition Number	General (RET) Conditions
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	
RET-RT-01	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. [Retirement and Financial Assurance Condition 2, Mandatory Condition OAR 345-025-0006(9), Final Order on ASC]
RET-RT-02	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.

	[Retirement and Financial Assurance Condition 2, Mandatory Condition OAR 345-025-0006(16), Final Order on ASC]

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), a wholly owned subsidiary of Ecoplexus Inc (certificate holder parent company).

ENERGY FACILITY SITING COUNCIL

By: _____

Kent Howe, Chair

Date: _____

Madras PV1, LLC

By: _____

Authorized Representative

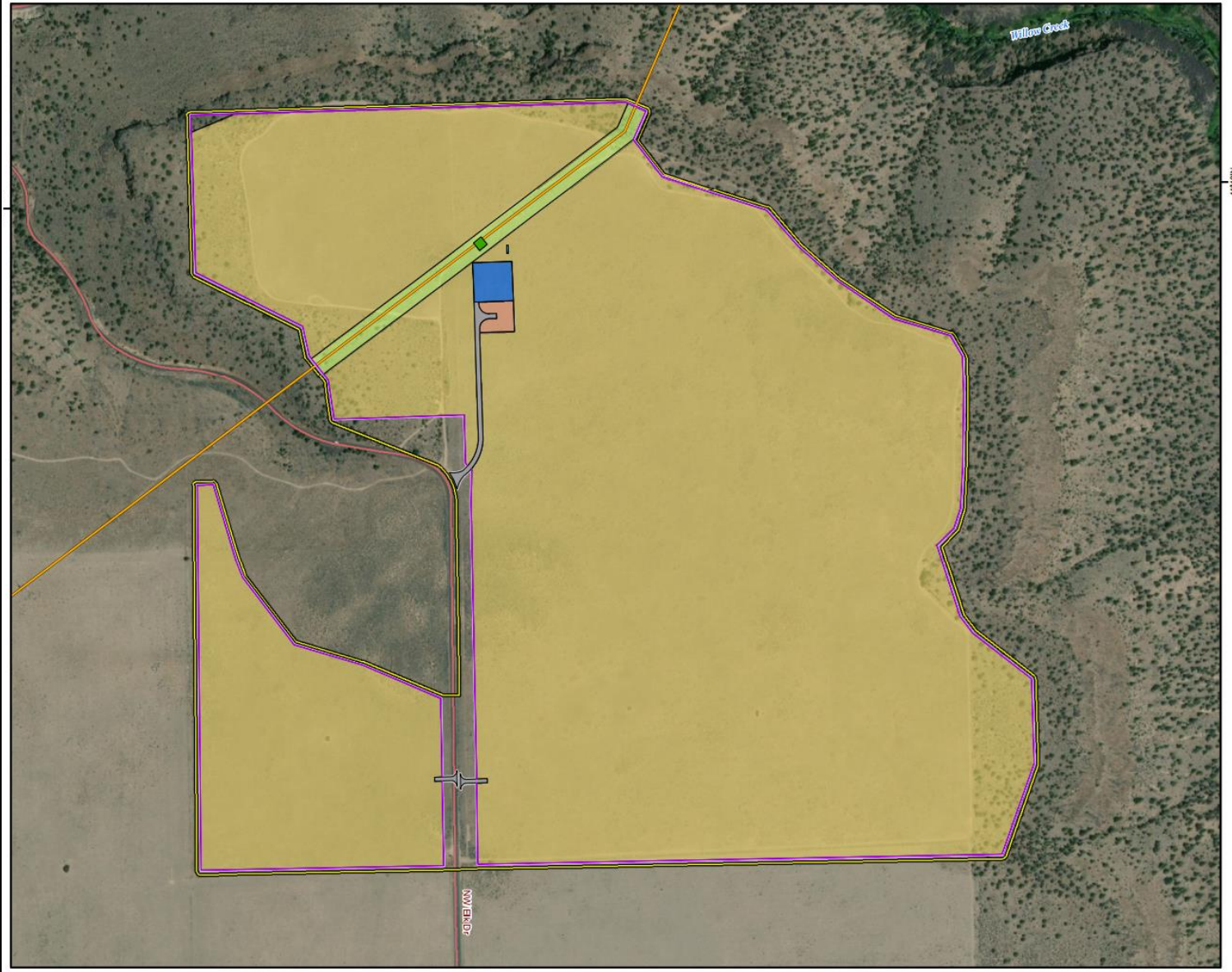
Date:_____

By: _____

Date:_____

Attachment A

Facility Location Map~~set~~s ~~(ASC Exhibit C)~~



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

\\BROOKSIDEFILESGIS_SHARE\ENBG\00_PROJECTS\ECOPLEXUS\MADRASSOLARPROJECT\MAPS\REPORT\2019\SITECERTIFICATEAPPNC-1_191107.MXD KGRANT 11/18/2019 8:32:34 PM

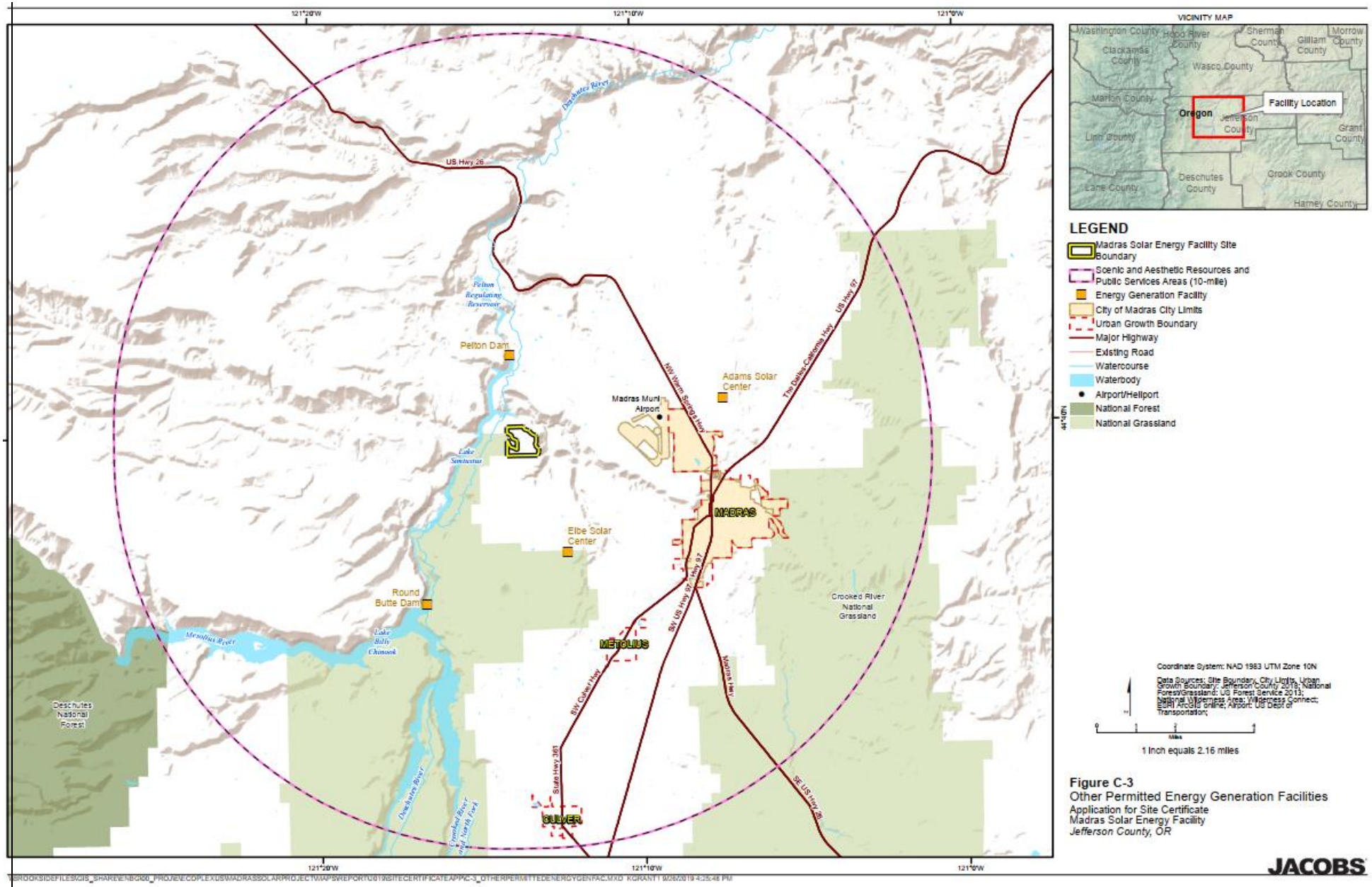


Figure C-3
Other Permitted Energy Generation Facilities
Application for Site Certificate
Madras Solar Energy Facility
Jefferson County, OR

JACOBS

Attachment B: Placeholder for DPO Comments and Responses EFSC Meeting –Adopted by Council to include EFSC Deliberation

Attachment C: Reviewing Agency Consultation and Documents Referenced in Order

ESTERSON Sarah * ODOE

From: Sarah.ESTERSON@energy.oregon.gov
Subject: Madras Solar Energy Facility Site Certificate (Request for Amendment 1) - Call Summary Notes (please confirm)

From: CLARK Jessica S * ODFW <Jessica.S.Clark@odfw.oregon.gov>
Sent: Friday, October 4, 2024 10:38 AM
To: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>; JACKLE Greg S * ODFW <Greg.S.JACKLE@odfw.oregon.gov>
Cc: THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; TARDAEWETHER Kellen * ODOE <Kellen.TARDAEWETHER@energy.oregon.gov>; MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Subject: RE: Madras Solar Energy Facility Site Certificate (Request for Amendment 1) - Call Summary Notes (please confirm)

Hi Sarah,
Thanks for the summary notes! That all looks accurate to me.

Let us know if there is anything else you need help with.

Thanks,

Jessica Clark
Regional Habitat Biologist- Deschutes Watershed
Oregon Department of Fish and Wildlife
61374 Parrell Rd Bend, OR 97702
Office: 541-388-6099
Cell: 541-640-1420
Fax: 541-388-6281

From: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Sent: Wednesday, October 2, 2024 2:12 PM
To: CLARK Jessica S * ODFW <Jessica.S.Clark@odfw.oregon.gov>; JACKLE Greg S * ODFW <Greg.S.JACKLE@odfw.oregon.gov>
Cc: THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; TARDAEWETHER Kellen * ODOE <Kellen.TARDAEWETHER@energy.oregon.gov>; MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Subject: Madras Solar Energy Facility Site Certificate (Request for Amendment 1) - Call Summary Notes (please confirm)

Hi everyone,

Thanks again for taking the time to discuss whether there are any changes in fact or law that would impact or change the prior evaluation conducted for the Madras Solar Energy Facility. Based on our discussion, there are no changes that need to be evaluated. Here is a summary of our discussion:

- In June 2024, certificate holder's consultant (Carrie Andrews, Tetra Tech) coordinated with ODFW's District Biologist, Greg Jackle, to confirm whether any prior to new surveys should be conducted at the site to inform extent of changes or current conditions. He expressed that raptor (golden eagle) surveys should be completed.

    - In the amendment request, certificate holder refers to 2023 golden eagle nest monitoring and surveys. The Department has requested that the survey reports be provided for Department/ODFW review/reference.
    - Raptor nest surveys are required through an existing pre-construction condition.
- The facility site's northern boundary runs along an ODFW designated priority wildlife corridor area (PWCA), but generally is sited to avoid the PWCA and therefore would not impact the site's habitat categorization or associated mitigation obligation/HMP.
- There have been no updates to ODFW deer and elk winter range maps that are relevant or that would impact the prior characterization of the site.
- ODFW concurs that the prior habitat categorization of Category 4 with current Incidental Take Permit (ITP) remains valid. Recent fire does not impact habitat categorization.
- ODFW accepts the proposal to incorporate 6.7 acres of what was previously identified as temporary habitat impacts into the HMP, and to apply general revegetation requirements to the 6.7 acres. This results in a lessor monitoring obligation for the certificate holder while still requiring revegetation consistent with the surrounding environment, and increased area for the long-term habitat mitigation area.
- No other comments or concerns.

Threatened and Endangered Species Notes/Questions

- There is no suitable habitat or potential for state-listed T&E species to occur within the site. No concerns.

Please confirm if this summary accurately reflects our discussion or if you have any other comments/concerns related to the amendment request.

Thank you,
Sarah and Chase

OREGON DEPARTMENT OF ENERGY

Sarah T. Esterson
Senior Policy Advisor
550 Capitol St. NE | Salem, OR 97301
P: 503-385-6128
1-800-221-8035
Stay connected!

From: CLARK Jessica S * ODFW <Jessica.S.Clark@odfw.oregon.gov>
Sent: Friday, September 27, 2024 12:51 PM
To: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>; JACKLE Greg S * ODFW <Greg.S.JACKLE@odfw.oregon.gov>
Cc: THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; TARDAEWETHER Kellen * ODOE <Kellen.TARDAEWETHER@energy.oregon.gov>; MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Subject: RE: Madras Solar Energy Facility Site Certificate (Request for Amendment 1) - Request for Review/TEAMs meeting

Hi all,
Next week at least Jeremy and I are available:

- Oct 2 12:00-1:30
- Oct 4 9:00-11:00, 12:30-3:00

Let us know if any of those time slots work for you! Thanks for your coordination on this.

Have a good weekend,

Jessica Clark
Regional Habitat Biologist- Deschutes Watershed
Oregon Department of Fish and Wildlife
61374 Parrell Rd Bend, OR 97702
Office: 541-388-6099
Cell: 541-640-1420
Fax: 541-388-6281

From: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Sent: Thursday, September 26, 2024 7:14 AM
To: CLARK Jessica S * ODFW <Jessica.S.Clark@odfw.oregon.gov>; JACKLE Greg S * ODFW <Greg.S.JACKLE@odfw.oregon.gov>
Cc: THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; TARDAEWETHER Kellen * ODOE <Kellen.TARDAEWETHER@energy.oregon.gov>; MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Subject: Madras Solar Energy Facility Site Certificate (Request for Amendment 1) - Request for Review/TEAMs meeting

Good morning ODFW!!

We would like to coordinate ODOE/ODFW review/comments on the Madras Solar Energy Facility, Request for Amendment 1. The changes in the amendment request are limited to a request to extend the construction deadlines, from 2024/2026 to 2027/2029. For this type of change, we are obligated to evaluate whether changes in fact or law (including policy) change the basis for the prior approval, or provide a reason to change the prior evaluation/incorporate additional conditions or conditions to protect a new or different resource.

Here are quick facts about the project:

- 63 MW solar/battery facility, in Jefferson County, on 284 acres of EFU-zoned land; not yet built
- Interconnection to grid is proposed through an existing line traversing the site, resulting in 200 feet of new transmission line and point of interconnect
- Entire site considered Category 4 habitat (from prior evaluation in 2021) (exotic annual grassland, rabbitbrush shrub-steppe), based on having an ITP, otherwise would be considered Category 3
- Certificate holder is Madras PV1, LLC; parent company is Ecoplexus, Inc

We would like to propose a TEAMs call this week or next to discuss our questions on fish and wildlife habitat and T&E species and determine if ODFW has any other concerns. Please see the attached outline for details on the regulatory framework, the project, the amendment request, and our comments/questions for you.

Let me know if there is a date/time that works in the next week – I wouldn't expect for the discussion to take more than 30 minutes.

(Note – for meeting planning purposes, I don't think we need everyone on this email to attend the TEAMs call, but everyone is certainly welcome if you have time)

Thank you x 1 million!

Sarah T. Esterson
Senior Policy Advisor
550 Capitol St. NE | Salem, OR 97301
P: 503-385-6128
1-800-221-8035

Stay connected!

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, July 5, 2024 6:29 PM
To: BLEAKNEY Leann <lbleakney@nwcouncil.org>; CANE Jason * OSFM <Jason.Cane@osfm.oregon.gov>; MILLS David * OSFM <David.Mills@osfm.oregon.gov>; JOHNSON James * ODA <James.JOHNSON@oda.oregon.gov>; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; Brandon.PIKE@ode.oregon.gov; THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; BOWLES Jamie L * ODFW <Jamie.L.BOWLES@odfw.oregon.gov>; TOKARCZYK John A * ODF <John.A.TOKARCZYK@odf.oregon.gov>; MCCLAUGHRY Jason * DGMI <Jason.MCCLAUGHRY@dogami.oregon.gov>; hilary.foote@dlcd.oregon.gov; JININGS Jon * DLCD <Jon.JININGS@dlcd.oregon.gov>; RYAN Peter * DSL <Peter.RYAN@dsl.oregon.gov>; EVANS Daniel * DSL <Daniel.EVANS@dsl.oregon.gov>; SALGADO Jessica * DSL <Jessica.SALGADO@dsl.oregon.gov>; RASHID Yassir * PUC <Yassir.RASHID@puc.oregon.gov>; CRUSE Martha * DEQ <Martha.Cruse@deq.oregon.gov>; CLEARANCE ORSHPO * OPRD <ORSHPO.Clearance@oprd.oregon.gov>; BJORK Mary F * WRD <Mary.F.BJORK@water.oregon.gov>; mlepin@cityofmadras.us; jtownsend@cityofmadras.us; metolius1205@gmail.com; joesmietana@gmail.com
Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Subject: Email Summary of Public Notice of Receipt of Preliminary Request for Amendment 1 and Type B Review Request for Madras Solar Energy Facility Site Certificate

Good evening,

Below, please find the “Courtesy email” notification sent out Wednesday afternoon for the receipt of the Preliminary Request for Amendment 1 and Type B Review Request for the Madras Solar Energy Facility Site Certificate. I have also attached the Public Notice to this email.

The pRFA and the public notice are available to download and view from the Department's website at: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MSE.aspx

Thank you, and please do not hesitate to contact me with any questions.
-Chase

Chase McVeigh-Walker
Senior Siting Analyst
pronouns: he/him/his
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035
Stay connected!

From: Oregon Department of Energy <odoe@cd.energy.oregon.gov>
Sent: Wednesday, July 3, 2024 1:23 PM
To: ESTERSON Sarah * ODOE <sarah.esterson@energy.oregon.gov>
Subject: Email Summary of Public Notice of Receipt of Preliminary Request for Amendment 1 and Type B Review Request for Madras Solar Energy Facility Site Certificate

Click here if you are having trouble viewing this message.

OREGON DEPARTMENT OF ENERGY ENERGY FACILITY SITING COUNCIL

Email Summary of Public Notice of Receipt of Preliminary Request for Amendment 1 and Type B Review Request for Madras Solar Energy Facility Site Certificate

On June 25, 2024, the Department received preliminary Request for Amendment 1 to the Madras Solar Energy Facility Site Certificate (pRFA1), inclusive of a "Type B Review" Amendment Determination Request (Type B Review ADR).

The Madras Solar Energy Facility is an approved, but not yet constructed, solar photovoltaic energy generation facility with a nominal generating capacity of 63 MW and up to 63 MW of battery storage. Approved and not-yet-constructed related and supporting facilities include an electrical collection system, 34.5-kV to 230-kV step-up transformers, a substation, operations and maintenance enclosure, point of interconnection switching station, and a Battery Energy Storage System (BESS). The facility has a construction commencement deadline of June 25, 2024. The facility is located in Jefferson County, approximately 5 miles west of Madras.

Preliminary Request for Amendment 1 (pRFA1) seeks Council approval for a three year extension to the construction commencement and completion deadlines. This would change the construction commencement deadline from June 25, 2024 to June 25, 2027. The change would extend the deadline for completing construction to 18 months from the new construction start date. The pRFA1 also requests to change the parent company of the certificate holder from Ecoplexus Inc. to Fresh Air Power Development, LLC. The certificate holder will remain Madras PV1, LLC.

The certificate holder has requested a Type B review for this amendment request. A certificate holder can request Department determination of the Type B review process on an amendment request, but the certificate holder has the burden of justifying the appropriateness of the Type B review process through an evaluation of factors pursuant to OAR 345-027-0357(8). The Department is evaluating the Type B request and will issue a determination and post it to the project webpage.

The pRFA1 is available on the Department's website.

More Information, please contact Chase McVeigh-Walker, Senior Siting Analyst, at the phone, fax, email address, or mailing address listed below.

Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
Phone: 971-600-5323
Fax: (503) 373-7806
Email: chase.mcveigh-walker@energy.oregon.gov

You received this notice either because you previously signed up for email updates related to specific siting projects, rulemakings, or all Energy Facility Siting Council activities. You will automatically receive all future notices unless you unsubscribe via ClickDimensions or by contacting ODOE.

If you have any questions or comments about ClickDimensions please feel free to contact ODOE's Administrative Assistant Nancy Hatch at 503-428-7905, toll-free in Oregon at 800-221-8035, or email to Nancy.Hatch@energy.oregon.gov

Oregon Department of Energy
Leading Oregon to a safe, equitable, clean, and sustainable energy future.

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

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Attachment D: Draft Habitat Mitigation Plan

Madras Solar Energy Facility Habitat Mitigation Plan

November 2023

Madras PV1, LLC

Contents

Appendices

Table

1. Introduction

This *Habitat Mitigation Plan* (Plan) defines the actions that Madras PV1, LLC (certificate holder) will follow to mitigate potential adverse impacts to wildlife habitat from the construction and operation of the Madras Solar Energy Facility (Facility).

The certificate holder will construct and operate the Facility in Jefferson County, Oregon. The Facility is proposed on approximately 280 acres of privately-owned land and will generate electricity using solar photovoltaic modules (also known as "panels") connected to inverters, transformers, and a substation. The existing Portland General Electric Pelton Dam to Round Butte 230-kilovolt transmission line crosses over the Facility site, and the Facility will interconnect into this existing transmission line within the Facility site boundary.

This Plan addresses mitigation for the permanent impacts of Facility components. 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 in the Application for Site Certificate, certificate holder 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, shrub-steppe obligates) and specific species of individual taxa (for example, special-status species) were examined.

During the October 9, 2018, field survey, a certificate holder biologist familiar with regional flora and fauna ground-truthed the habitat occurrence and quality. Habitat boundaries were delineated and distinct habitats were categorized according to the habitat definitions in the Oregon Department of Fish and Wildlife (ODFW) Fish and Wildlife Habitat Mitigation Policy (Oregon Administrative Rule [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 277 acres of Category 4 habitat consisting of exotic annual grasslands and rabbitbrush shrub-steppe will be permanently occupied by Facility components (the "footprint"). Habitat Category 4 is an important habitat for fish and wildlife species, but not considered limited or essential [OAR 635-415-0025(4)]. The certificate holder has obtained an Incidental Eagle Take Permit (ITP) from the U.S. Fish and Wildlife Service to address potential disturbance of nesting eagles during construction. The ITP includes conservation measures that provide a net benefit to eagles by retrofitting power poles on other sites that are high risk to eagles. The actual areas of disturbance will be determined based on the final design layout of the Facility. The final design layout of the Facility has been provided to the Oregon Department of Energy (ODOE) and ODFW, along with the associated permanent impact acreages which are stated in this Plan.

The certificate holder commits to mitigating permanent impacts to Category 4 grassland and shrub-steppe habitat that cannot be avoided or minimized. Measures have been selected in consultation with ODOE and 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). Habitat impacts are summarized in Table 1.

This Plan is incorporated into the landowner's Conservation Easement. In addition, the landowner has agreed to limit livestock grazing to 10 head of cattle, 3 to 4 months a year. The landowner reports that

there has only been grazing on the HMA site for the past 5-6 years. In 2022, there were approximately 60 head of cattle on the site for 2 months of the year. In 2021, they had approximately 80 head of cattle on the site for 2 months of the year. And the three previous years they only had about 20 head of cattle on the site for 3-4 months.

Table 1. Permanent Disturbance by Habitat Category and Subtype within the Site Boundary

Habitat Category (per ODFW Designation)	Habitat Subtype	Permanently Disturbed (acres)
4	Grassland	147.84
	Shrub-steppe	129.09
	Subtotal	**276.93**
6	Gravel Roads	0.02
	Subtotal	**0.02**
Total		**276.95**

3. Mitigation

The mitigation goals for Category 4 habitat impacts require “no net loss of either habitat quantity or quality.” The certificate holder has selected measures in consultation with ODOE and ODFW which are consistent with ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025). The certificate holder has identified a potential third party to implement the mitigation measures in this Plan. An agreement is in process with the Jefferson County Soil and Water Conservation District (SWCD) to act as the third party.

3.1 Habitat Mitigation Area

The certificate holder has secured a 280-acre habitat mitigation area (HMA) that is under a conservation easement with the landowners. The HMA is a private property owned by the same party as the Facility site. It is in the same home range and physiographic province (Blue Mountains ecoregion) as the Facility. The landowner will have unlimited access to the existing road that traverses the HMA in order to access the HMA and adjacent landowner lands.

The certificate holder through the agreement with the Jefferson County SWCD will arrange protection and enhancement of 1 acre for every 1 acre of Category 4 habitat that is permanently impacted (1:1 acre mitigation ratio) to meet the ODFW goal of “no net loss” for Category 4 habitat. The offsite HMA selected for the Facility is large enough to achieve the ODFW habitat mitigation goals and standards described in OAR 635-415-0025.

3.2 Enhancement Actions

To meet ODFW’s goal of “no net loss in habitat quantity or quality,” Jefferson County SWCD and the landowner will implement actions to protect habitat within the HMA from degradation and improve the habitat quality. These actions include the following:

- The landowner will ensure that development of dwellings and private roads within the HMA shall be restricted. The existing two-track road that traverses the HMA is not an impervious surface and will remain as it is.

- The SWCD will modify the perimeter fencing to both contain cattle and allow mule deer to access and exit to the HMA based on consultation with ODFW.
- The SWCD will remove all western juniper (*Juniperus occidentalis*) that occur within the HMA, and may 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 all green limbs. They will monitor pre- and post-treatment conditions concurrent with monitoring described in Section 7 of this Plan. Any surviving juniper identified during monitoring in subsequent years will be removed and treated as needed within one calendar year.
- The SWCD will implement weed control for medusahead rye *(Taeniatherum caput-medusae*), Canada thistle (*Cirsium arvense*), Scotch thistle (*Onopordum acanthium*), and any other noxious weeds that occur within the HMA. The Oregon Department of Agriculture lists medusahead rye and Scotch thistle as Class B weeds, medusahead rye as a Class C weed, and Scotch thistle as a Class A weed. Control will be accomplished through use of herbicides targeted to medusahead rye and Scotch thistle. The herbicide is to be applied by a licensed applicator, using appropriate best management practices. Herbicide application for Scotch and Canada Thistles will occur during year 1 in the spring, and once a year thereafter during the spring (mid to late May), if necessary, until the weed has been controlled. Herbicide application for medusahead will occur during year 1 in the late summer/early fall using a pre-emergent herbicide that provides 1-3 years of control. Control of this weed will improve the quality of wildlife habitat in the HMA.
- If deemed necessary, the SWCD will reseed areas of bare ground and/or areas that lack species diversity in order to increase necessary herbaceous cover.

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 including monitoring reference sites and habitat types (Figures 1 and 2 in Appendix A).
- 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 clearly defines 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.

4. Description of the Mitigation Area

The 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. On April 2023, 280 acres of Category 4 shrub-steppe habitat was identified as available for conservation easement and enhancement (Figure 2). A professional biologist completed a baseline survey within the HMA on June 11, 2020, and a field survey on April 12, 2023 (Appendix B). A Jefferson County SWCD employee conducted a field survey in the summer of 2023 to assess and confirm habitat conditions and document existing noxious weeds and junipers. The entire parcel is a gently rolling, shrub-steppe habitat dominated by sheep Fescue perennial bunchgrass, low-density Phase 1 juniper trees, and small areas with noxious weeds. An unnamed, ephemeral tributary of Trout Creek traverses the parcel from southeast to northwest. Wetland vegetation occurs along portions of the creek. 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 and streams within the parcel are essential habitat for some wildlife species that rely on green vegetation year-round and are considered limited habitats within the arid portions of the Blue Mountains ecoregion. Fencing will be designed to keep limited numbers of cattle in and allow safe entry and exit for mule deer. 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.

5. Mitigation Area Pre Construction Requirements

Prior to construction of the Facility, the certificate holder shall complete the following steps:

1) HMA Habitat Assessment: Certificate holder has conducted a desktop review and field survey of the HMA, as determined appropriate by ODOE, and in consultation with ODFW. Certificate holder describes baseline conditions in Section 4 and Appendix B of this Plan. Figure 2 identifies the habitat subtype/vegetation characteristics of all acreage within the HMA, including noxious weeds.
2) Enhancement Action Review: Following review of the HMA Habitat Assessment, the certificate holder received input from ODOE and ODFW on enhancement action opportunities at the HMA. Enhancement actions were based on review of the HMA Habitat Assessment and HMA site visits conducted by the certificate holder, ODOE, and ODFW. Section 3.2 of this Plan includes a detailed description of final enhancement actions to be implemented and monitored at the HMA.
3) Success Criteria: The certificate holder proposes, 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 (Section 7.2 of this Plan).
4) Prior to construction of the Facility, the certificate holder will acquire the legal right to create, maintain, and protect the HMA for the life of the Facility by means of a conservation easement 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 this Plan.

6. Legal Instrument

Certificate holder has entered into a conservation easement with the landowner on February 28th 2023. This plan will be incorporated into the conservation easement.

7. 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 certificate holder.

7.1 Monitoring Procedures

Jefferson County SWCD or other contracted third party will protect, enhance, and maintain the HMA for the useful life of the Facility 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. The contracted third party will submit an annual memorandum with photo-documentation summarizing conditions and enhancement actions at the HMA.

The certificate holder has documented these sites to establish baseline conditions as they relate to the success criteria. Documentation of baseline conditions at reference sites was conducted using photo-documentation (Appendix C). The contracted third party will monitor changes in native vegetation cover (e.g., species and structural stage) and progress toward meeting the success criteria in HMA enhancement areas in compliance with terms of the Plan (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 were identified, in consultation with ODFW, near the enhancement areas to represent pre-enhancement conditions. Seven reference sites were identified that closely resemble the pre-enhancement characteristics of the identified enhancement areas.

The reference sites shall remain in the same location unless approval for use of a differing reference site is obtained by ODOE in consultation with ODFW. Figure 2 is a map presenting the pre-enhancement habitat category/vegetation characteristics and latitude and longitude of the reference sites. Jefferson County SWCD will complete the photo documentation for the seventh reference site prior to enhancement actions.

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.
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.
5) Annually evaluate the condition of wildlife-friendly fencing installed around the HMA to determine if new fencing or repairs are needed for successful habitat protection.

The contracted third party will report its findings and recommendations regarding the monitoring of the HMA to ODOE and ODFW, annually. The report will describe the habitat mitigation actions carried out within the HMA during the reporting year.

If the certificate holder 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 the HMA.

The contracted 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 qualified investigator 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.

7.2 Success Criteria

Mitigation of the permanent habitat impacts of the Facility may be considered successful if sufficient habitat is protected or enhanced within the mitigation area to meet the ODFW goal of no net loss of Category 4 habitat for the duration of Facility operation. The certificate holder 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 certificate holder or third party becomes aware of degradation, they shall describe why the maintenance actions were not effective and then propose and implement remedial action. Success criteria will be implemented prior to ground-disturbing activities, and in consultation with ODOE and ODFW, as described in Section 5, Step 3 of the Plan. The mitigation measures, as presented in this Plan, ensure that the Facility's permanent 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 permanent impacts. The certificate holder will protect the quantity and quality of habitat within the HMA area for the life of the Facility. Measuring success of the Plan at the HMA will include or be based on the following indicators:

- Increase in herbaceous cover (shrubs, forbes, and perennial grasses) within the HMA using photo documentation at reference sites.
- Maintenance of efforts to control and limit juniper encroachment or overstory.
- Response of rabbitbrush and other shrubs.
- Successful weed control (weed monitoring and treatment) within the HMA.

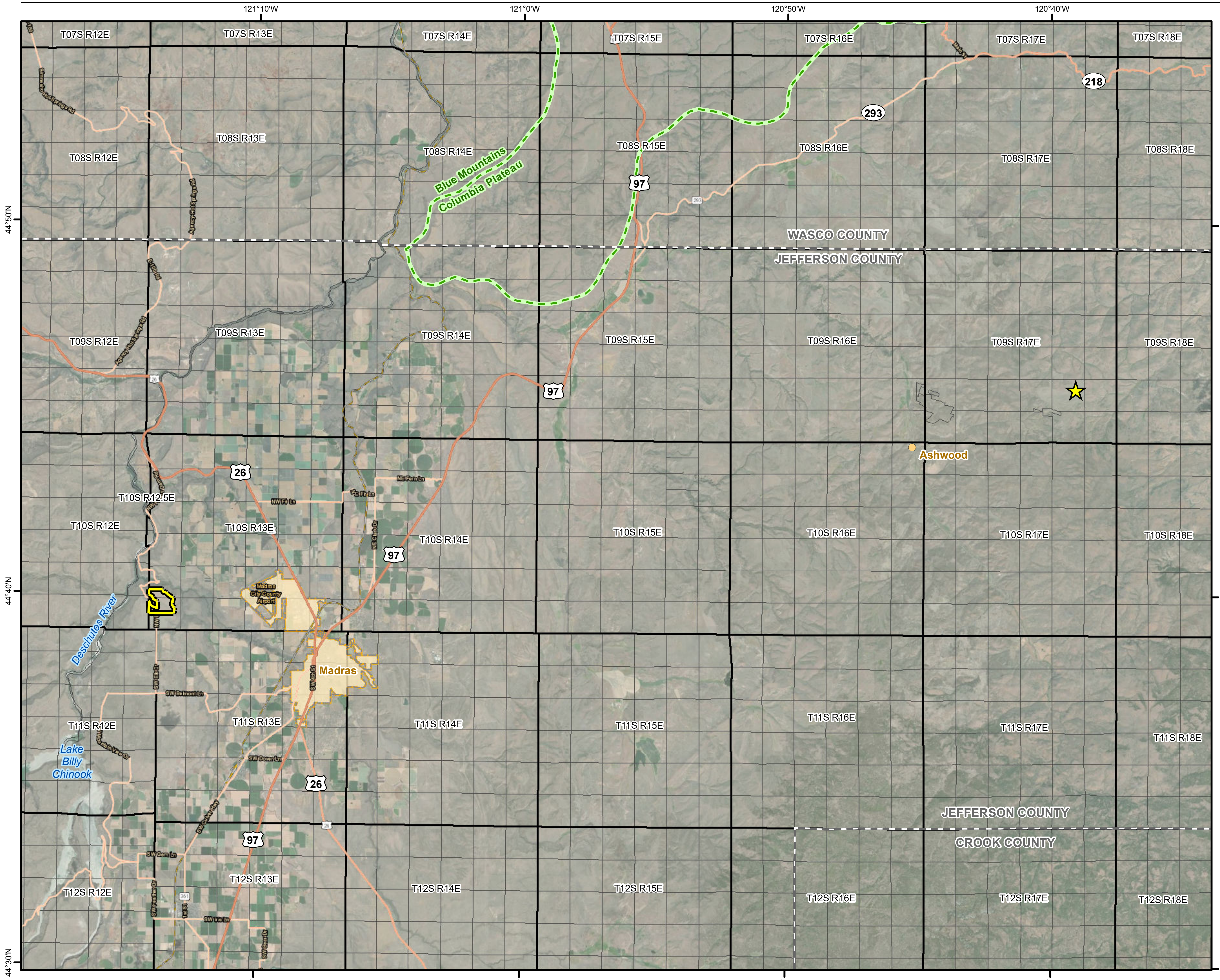
The certificate holder or third party will protect a sufficient quantity of habitat to meet the HMA requirements (1:1 acre mitigation ratio) based on the final configuration of the Facility. If the certificate holder or third party cannot demonstrate that the HMA is trending toward the habitat quality goals within 5 years, the certificate holder or third party will propose and implement remedial action. ODOE may require additional corrective measures.

8. Plan Amendment

This Plan may be amended from time to time by agreement of the certificate holder 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.

Appendix A
Figures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121°0'W
120°50'W
120°40'W
44°50'N
44°40'N
44°30'N
T07S R12E
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T07S R14E
T07S R15E
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Blue Mountains
Columbia Plateau
WASCO COUNTY
JEFFERSON COUNTY
JEFFERSON COUNTY
CROOK COUNTY
218
293
97
97
97
97
26
26
Ashwood
Madras
Deschutes River
Lake Billy Chinook

VICINITY MAP


Washington County
Hood River County
Sherman County
Sherman County
Gilliam County
Morrow County
Clackamas County
Wasco County
Marion County
Oregon
Jefferson County
Wheeler County
Linn County
Grant County
Facility Location
Deschutes County
Crook County
Lane County

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

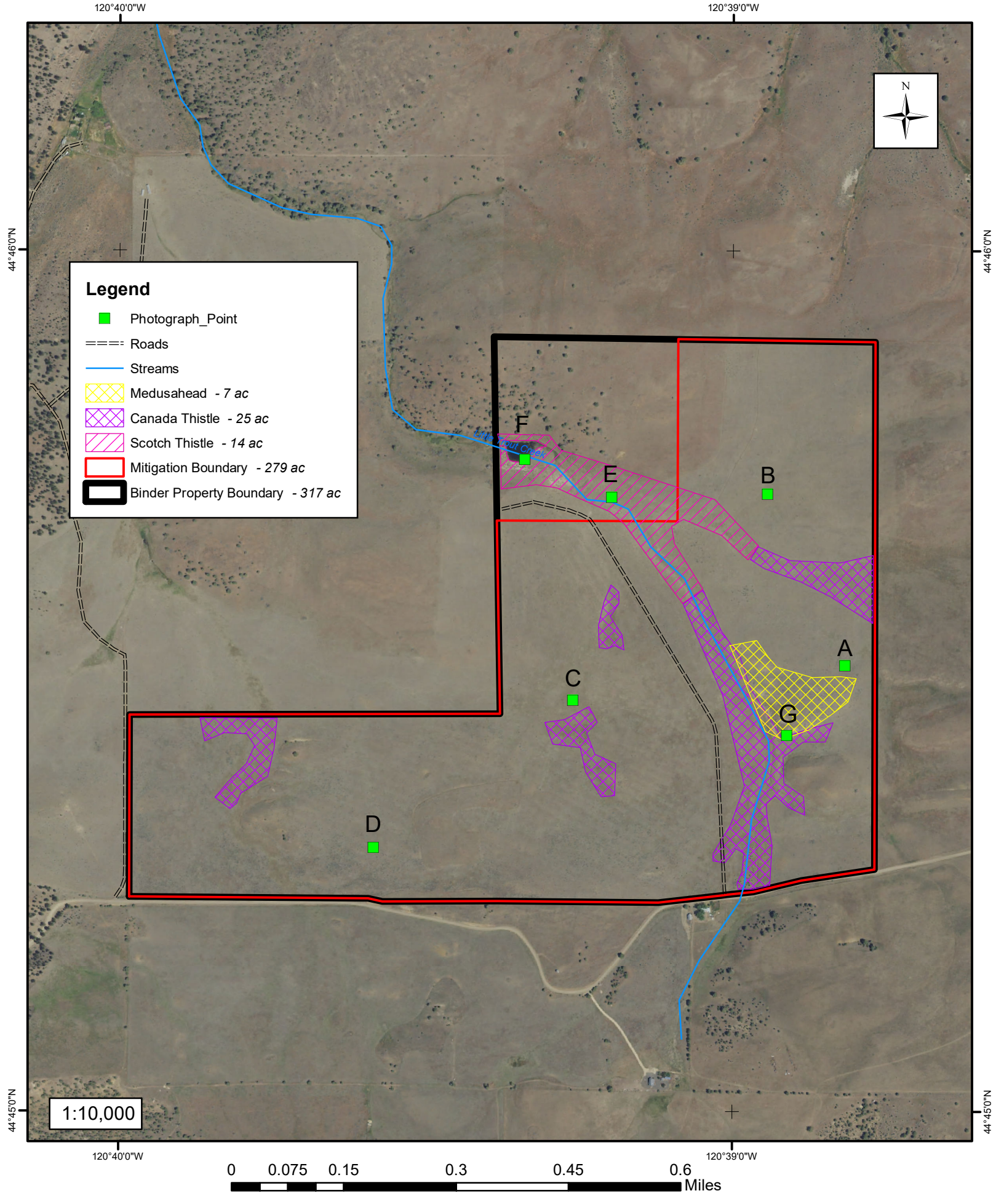
1 inch equals 3 miles

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

Figure 2. Madras Solar Energy Facility Habitat Mitigation Area (HMA)



Appendix B
Baseline Conditions Memorandum

Jacobs

Memorandum

2020 Fourth Avenue, Suite 300
Portland, Oregon 97201
United States
T +1.503.235.5000
F +1.503.736.2000
www.jacobs.com

Subject	**Baseline Conditions in the Habitat Mitigation Area**
Project Name	Madras Solar Energy Facility
Attention	Rosalie Annand/Ecoplexus, Inc.
From	Forrest Parsons/Jacobs Engineering Group Inc.
Date	September 29, 2023

This memorandum documents baseline conditions in the Madras Solar Energy Facility Habitat Mitigation Area (HMA).

Before conducting a site visit at the HMA, Jacobs conducted a desktop review using readily available public information from websites, online databases, and regulatory documents. The review focused on wildlife and habitat data obtained from the U.S. Fish and Wildlife *National Wetlands Inventory*, Oregon Department of Fish and Wildlife Compass Online Database, and recent aerial imagery.

A reconnaissance survey was initially conducted on June 11, 2020, to assess general habitat conditions and to photograph the HMA from the road. A joint site visit with Ecoplexus, the Oregon Department of Energy, and the Oregon Department of Fish and Wildlife (ODFW) was conducted on April 12, 2023, to discuss potential mitigation actions at the HMA. Following the discussion, baseline conditions were documented by Jacobs senior wildlife biologist, Forrest Parsons. Baseline conditions were documented by walking meandering transects throughout the HMA. Habitat conditions were documented by taking photographs in cardinal directions (north, east, south, west) at six reference sites inside the HMA that were representative of habitat conditions. A qualified Jefferson County U.S. Department of Agriculture Soil and Water Conservation District employee also conducted a field survey on July 25, 2023, to assess habitat conditions by documenting and mapping existing noxious weeds, weed population, and the extent of western juniper trees within the HMA.

The HMA is located approximately 5 miles northeast of Ashwood, Oregon, and entirely within the Blue Mountains ecoregion. The HMA is ODFW Category 4 gently rolling, low shrub shrub-steppe habitat dominated by rabbitbrush, native bunchgrasses, widely scattered low-density Phase 1 juniper trees, and areas of noxious weeds that include Canada thistle, Scotch thistle, and medusahead. An ODFW Category 2 unnamed, ephemeral tributary of Trout Creek generally traverses the parcel from southeast to northwest. Wetland vegetation occurs along portions of the creek indicating shallow groundwater. Wildlife observed within the HMA included common passerines such as horned lark and white-crowned sparrow. Pronghorn antelope were also observed within the HMA. Evidence of light to moderate grazing was observed throughout the HMA and primarily concentrated along the tributary of Trout Creek.

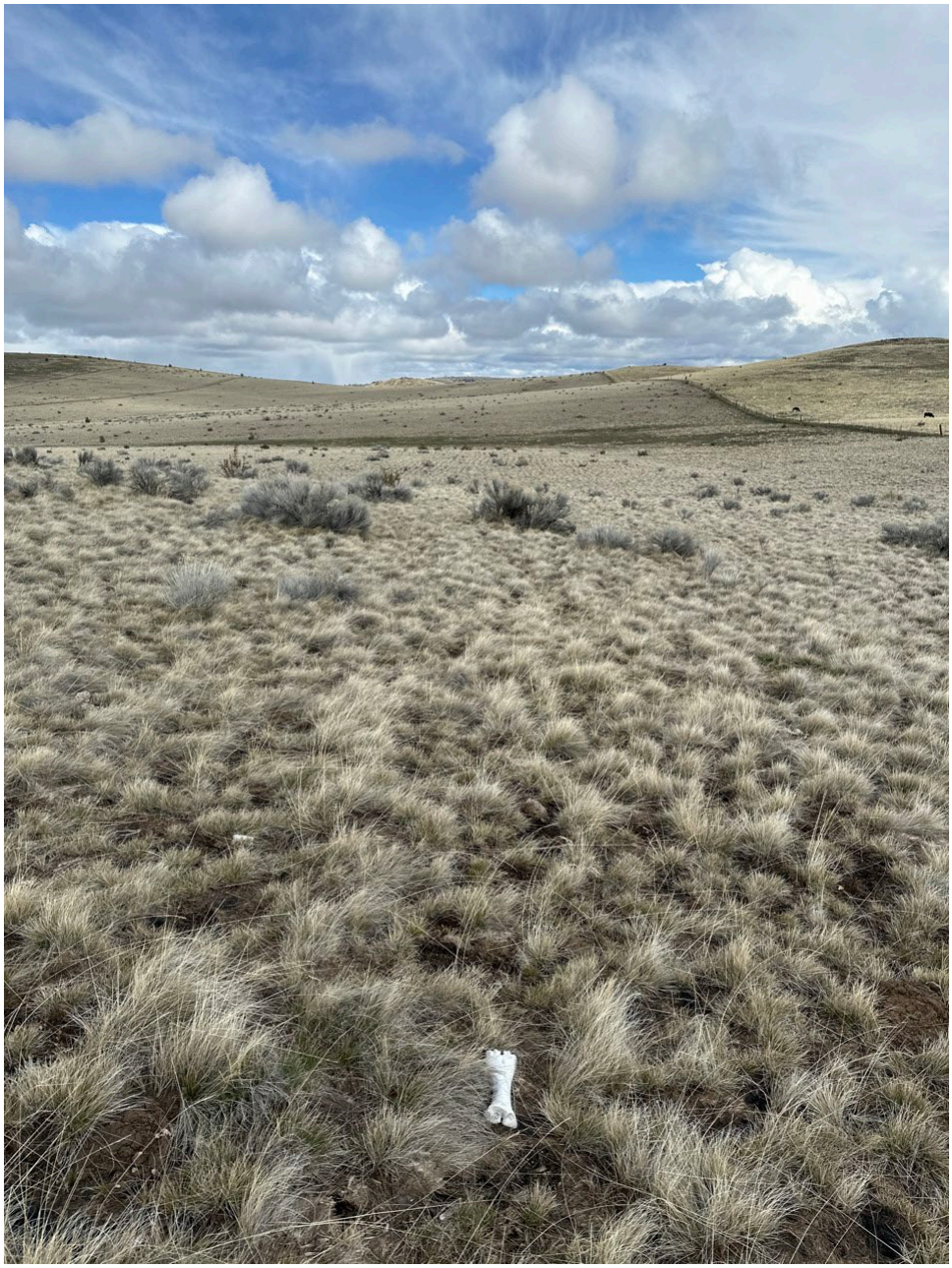
Appendix C
Site Photographs

Jacobs

Appendix C
Site Photographs

Project Title	**Madras Solar Energy Facility Habitat Mitigation Plan**
Location	Jefferson County, Oregon
Submittal Date	October 2023
Date Photos Taken	April 12, 2023

Photograph 1: Reference Point A Facing East



Photograph 2: Reference Point A Facing North

Photograph 3: Reference Point A Facing South

Photograph 4: Reference Point A Facing West

Photograph 5: Reference Point B Facing East

Photograph 6: Reference Point B Facing North

Photograph 7: Reference Point B Facing South

Photograph 8: Reference Point B Facing West

Photograph 9: Reference Point C Facing East

Photograph 10: Reference Point C Facing North

Photograph 11: Reference Point C Facing South

Photograph 12: Reference Point C Facing West

Photograph 13: Reference Point D Facing East

Photograph 14: Reference Point D Facing North

Photograph 15: Reference Point D Facing South

Photograph 16: Reference Point D Facing West

Photograph 17: Reference Point E Facing East

Photograph 18: Reference Point E Facing North

Photograph 19: Reference Point E Facing South

Photograph 20: Reference Point E Facing West

Photograph 21: Reference Point F Facing East

Photograph 22: Reference Point F Facing North

Photograph 23: Reference Point F Facing South

Photograph 24: Reference Point F Facing West

***Reference Point G photo documentation will occur prior to any enhancement actions**

Attachment E: 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

Amended by Department in October 2024

Madras Solar Energy Facility

Project No:	709202CH
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Contents

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 or Perennial 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
Common purslane			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
False brome			A
Field dodder	*Cuscuta campestris*	B	B
Field morningglory			B
Flixweed	*Descurainia sophia*		B
~~Henbit~~Hembit	*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~~ Squarrose 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
Whitetop			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 F-1: Draft Construction Wildfire Mitigation Plan

Attachment F.1. Draft Construction Wildfire Mitigation Plan

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Madras Solar Energy Facility

Draft Construction Wildfire Mitigation Plan

Madras Solar Energy Facility
June 2024

Prepared for

Madras PV1, LLC

600 Park Offices Drive, Ste. 285

Durham, NC, 27709

Prepared by

Tetra Tech, Inc.

Amended by Department October 2024

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Table of Contents

Acronyms and Abbreviations

Certificate Holder	Madras PV1 LLC
CFR	Code of Federal Regulations
CWPP	Community Wildfire Protection Plan
EMP	Emergency Management Plan
Facility	Madras Solar Energy Facility
NHMP	Jefferson County Multi-Jurisdictional Natural Hazards Mitigation Plan
OAR	Oregon Administrative Rules
Plan	Construction Wildfire Mitigation Plan

1 Finalization and Pre-Construction Tasks

This Construction Wildfire Mitigation Plan (Plan) was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(v), including providing evidence that the Madras Solar Energy Facility (Facility) complies with the approval standard in OAR 345-022-0115.

Section 1.0 of this plan includes measures to be completed to finalize the final Construction Wildfire Mitigation Plan (WMP). Items in Section 1.1. must be included in the final plan and Section 1.2 are actions that must be completed and documented prior to construction.

1.1 Finalizing Tasks in this Plan Prior To Construction (PRE):

A Construction WMP Finalization Compliance Checklist that identifies the following action items ~~is~~ will be included as~~t~~ Attachment 1 to this plan.

To finalize this Plan prior to construction, the certificate holder shall:

A. Prior to construction of the Facility, provide a summary update of wildfire risk at the site as designated under OAR 345-022-0115, if significantly different from Final Order on Amendment 1.

B. Incorporate guidance outlined in the wildfire annex of the Jefferson County Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP; Jefferson County 2022a), which is the Jefferson County Community Wildfire Protection Plan (CWPP; Jefferson County 2022b).
   i. Identify what provisions of these plans are applicable to Facility construction.

C. Consult with local fire districts, as well as local emergency management agencies to receive and incorporate input into the final Plan, as appropriate, about:
   i. The location and types of ~~temporary~~ fire breaks to reduce the spread of wildfire and to protect high-fire consequence areas/resources from fire onsite spreading off site or off site fires impacting the site. ~~needed in the event of a fire on or off sit~~e (Examples include buffer areas. ~~V~~vegetation free areas. ~~such as~~ permanent gravel pads or base for facility components ~~and~~ or roads ~~as well as facility~~(graveled facility- perimeter and interior roads act as permanent fire breaks). ~~Include any areas where fire breaks would be prioritized to protect fires spreading off site or impacting the facility site.~~
   ii. Appropriate set up for water truck(s)/sources, including:
      a. The capacity of water truck(s)/water sources;
      b. Specifications for the pump including psi and water discharge capacity;
      c. Type and specifications for hose nozzle;
      d. Length and size of water hose.
   iii. Designate protocols for staff or emergency providers to erect or create fire breaks in the event of a fire, Designate estimated response times for on-site staff and local emergency service providers,
   iv. Provide the names and contact information for each of the below and confirm that each has registered for the Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management:

a. Primary contact(s) for certificate holder managing construction activities,

b. Primary contacts(s) for construction contractor managing construction,

c. Contact information for on-site construction manager(s) and/or foremen,

d. Identification of individual(s) responsible for initiating Red Flag Weather Construction Protocols during Red Flag weather conditions and warnings as designated in this Plan.

D. Include:

i. The date construction will begin;

ii. The days and times construction will occur;

iii. A description of the general construction phasing;

iv. A description and maps of:

a. The location of access points to the facility,

~~a.~~b. The location, fire breaks and/or buffers (during Red Flad Warnings) around any high-fire consequence areas/resources;

c. A description of emergency access procedures, including:

- Hh~~h~~ow emergency responders and/or adjacent landowners may access site for fire protection equipment or to extinguish an on-site fire when personnel will not be onsite; and
- Specific actions taken during Red Flag Weather Warnings including actions around buffers any high-fire consequence areas/resources;

~~b.~~d. The location, fire breaks and/or buffers (during Red Flad Warnings) around any high-fire consequence areas/resources;

~~c.~~e. The location(s) and type of water source(s);

1. The capacity of water truck(s)/water sources;
2. Specifications for the pump including psi and water discharge capacity;
3. Type and specifications for hose nozzle;
4. Length and size of water hose.

~~d.~~f. Location of fire protection equipment.

v. Identification of the type of fire protection equipment and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code and this Plan;

E. Provide with the Plan a list of property owners or tenants at the in situ address within 0.5 miles of the site boundary and confirmation of the following:

i. Contact property owners or tenants at the properties 0.5 miles from site boundary to confirm if they are registered for the Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

ii. If owners or tenants are not registered, provide them with the information and encourage them to register for emergency notifications and confirm with Department.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

F. Attach the Fire Prevention Plan and Emergency Management Plan described in this WMP.

1.2 Prior To Construction Tasks (PRE)

A WMP Pre-Construction Compliance Checklist that identifies the following action items ~~is~~ will be included a~~s~~t Attachment 2 to this plan.

A. Prior to construction certificate holder, construction contractor(s) and sub-contractor(s), with an invitation sent to ODOE and local fire departments, ~~as applicable,~~ shall hold a kick-off training(s) to ensure that construction personnel are trained on:

i. Fire prevention measures included in this Plan and the Fire Prevention Plan described in this Plan, including but not limited to, managing vegetation, locations for hot work, BPMs for construction personnel, limitations of construction activities that may occur during Red Flag Warnings, and maintaining defensible spaces.

ii. Identification of the type and location of fire protection equipment and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code and designated in this Plan;

iii. Proper usage of fire control equipment, including accessing and using the water truck/water source, pump, hose and nozzle;

iv. Safety procedures for addressing fires and other emergencies on-site, including procedures to follow and BMPs for activities during Red Flag Warnings and fire Weather Watches.

B. Prior to construction notify and submit to the local fire department(s) of:

i. Primary contacts for the certificate holder and construction personnel;

ii. The date construction will begin;

iii. The days and times construction will occur;

iv. A description of the general construction phasing;

v. A description and maps of:

1. The location of access points to the facility, with a description of emergency access procedures, particularly when personnel will not be onsite;

2. The location(s) of water source(s) and specifications for water pump, hose and nozzle.

3. Location of fire protection equipment.

vi. Safety procedures for addressing fires and other emergencies on-site, including procedures to follow and BMPs for activities during Red Flag Warnings and Fire Weather Watches

2 Construction (CON) Wildfire Risk Minimization Tasks and Procedures

(D) Identify procedures to minimize risks to public health and safety, the health and safety of responders, and damages to resources protected by Council standards in the event that a wildfire occurs at the facility site, regardless of ignition source;

A Construction WMP Compliance Checklist that identifies the action items intended to be included in the final construction WMP ~~is~~ will be included a~~s~~t Attachment 3 to this plan. The measures in this Section 2.0 shall be finalized based upon Section 1.0 of this Plan and will be implemented during all construction activities.

During construction the certificate holder shall:

A. Fill out and submit to the Department in the semi-annual construction report the Construction WMP Compliance Checklist included in this Plan as Attachment 3.

B. Every 6 months, review property owner information to determine if there are new or different property owners or tenants within 0.5 miles of the site boundary. Provide confirmation in the semi-annual construction progress report.

i. Contact new property owners or tenants at the properties 0.5 miles from site boundary to confirm if they are registered for the Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

ii. If owners or tenants are not registered, provide them with the information and encourage them to register for emergency notifications.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

C. Contact 911 in the event of:

i. A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;

ii. A fire ignition on-site that spreads out of the fence line;

iii. Any fire off-site that does not have emergency responders on site.

1. To the extent that construction personnel can safely assist and/or provide equipment to help extinguish off-site fires until emergency responders are on site, it is encouraged to do so to assist in the spread of the fire, loss of life, property and damage to the environment.

D. During construction certificate holder, construction contractor(s) and subcontractor(s), as applicable, shall hold training(s) to ensure that construction personnel are trained on:

i. Identification of the type and location of fire protection equipment and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code and this Plan;

ii. Proper usage of fire control equipment designated in this Plan;

iii. The type and location(s) of water source(s) including how to use the water truck/water source, pump, hose and nozzle;

iv. Safety procedures for addressing fires and other emergencies on-site.

In addition to the measures described in this plan, the risk of a wildfire affecting the public safety, first responders, or Oregon Energy Facility Siting Council-protected resources would be minimized by the procedures listed in Table 1.

Table 1. Procedures to Minimize Impacts to Resources~~Wildfire Risk~~

Topic	Procedures
Public health and safety	The public will be excluded from the solar and substation facilities by fencing. Ground mounted inverters, and junction boxes will be surrounded by bollards to minimized inadvertent vehicle/farm equipment collisions with electrical equipment.
First Responders	Response to fires in the facility should focus on controlling spread to adjacent lands. Construction personnel will be trained in the use of fire extinguishers for responding to incipient stage fires on site.
Resource Protection	Resources covered by Oregon Energy Facility Siting Council standards near the project area include agricultural land, shrub steppe habitat, and cultural resources. The existing county roads will form a fire break between fields that will discourage the spread of wildfire between fields into wildlife habitat or cultural resources.

2.1 Wildfire Risk Assessment

This Plan has been prepared to meet the approval standard under OAR 345-022-0115(1)(b), which requires:

(5) *Identify areas within the site boundary that are subject to a heightened risk of wildfire, using current data from reputable sources, and discuss data and methods used in the analysis;*

~~Prior to construction of the Facility, provide a summary update of wildfire risk at the site as designated under OAR 345-022-0115, if significantly different from Final Order on Amendment 1.~~

2.2 ~~Inspection and~~ Vegetation Management

(8) Describe the procedures, standards, and time frames that the applicant will use to inspect facility

components and manage vegetation in the areas identified under subsection (a) of this section;

2.2.1 Vegetation/Defensible Space Management, and Ignition Source BMPs

The Certificate Holder and contractor(s) will maintain vegetation within the Site Boundary and will also maintain a defensible space clearance along Facility features. Defensible space will be free of combustible vegetation or other materials. Roads and parking areas will be maintained to be free of vegetation tall enough to contact the undercarriage of the vehicle.

During construction clearing, grubbing, and grading, the Contractor will a create noncombustible space for at least 10 feet within the fence line and another minimum 10-foot Limits of Disturbance buffer outside the fence line for a total of a minimum of 20 feet of noncombustible buffer around the perimeter of the site. In addition, it is not anticipated that any Hot Work permit will be required in the construction of the photovoltaic (PV) field. Vegetation in work areas, if not removed, will be maintained to not exceed 10-12 inches in height. Vegetation near, at, or taller than the maximum height shall be removed or mowed. Mowing must be done in advance of fire season or accordance to any fire restrictions.

Any vegetation removed from the site will be disposed of and not stored onsite. Certificate holder and construction contractors will prevent the accumulation of combustible "burn piles" on site.

The following best management practices to minimize fire risk from vehicle travel and fueling activities would be implemented at the site during construction:

- The movement of vehicles will be planned and managed to minimize fire risk.
- The contractor(s) will be responsible for identifying and marking paths for all off-road vehicle travel. All off-road vehicle travel will be required to stay on the identified paths. No off-road vehicle travel will be permitted while working alone. Travel off road or parking in vegetated areas will be restricted during fire season.
- Areas with grass that are as tall or taller than the exhaust system of a vehicle must be wetted before vehicles travel through it.
- Workers will be instructed to shut off the engine of any vehicle that gets stuck, and periodically inspect the area adjacent to the exhaust system for evidence of ignition of vegetation. Stuck vehicles will be pulled out rather than "rocked" free and the area will be inspected again after the vehicle has been moved.
- All combustion engines (including but not limited to off road vehicles, chainsaws, and generators) will be equipped with a spark arrester that meets U.S. Forest Service Standard 5100-1.
- The contractor(s) will designate a location for field fueling operations at the temporary construction yards. Any fueling of generators, pumps, etc. shall take place at this location only.
- Fuel containers, if used, shall remain in a vehicle or equipment trailer, parked at a designated location alongside a county right-of-way. No fuel containers shall be in the vehicles that exit the right-of-way except the five-gallon container that is required for the water truck pump.
- Smoking shall only be allowed in designated smoking areas at the Facility.

2.3 Preventative and Minimization Actions for Wildfire Risk

(C) Identify preventative actions and programs that the applicant will carry out to minimize the risk of facility components causing wildfire, including procedures that will be used to adjust operations during periods of heightened wildfire risk;

2.3.1 Preventative Actions: Construction Facility Design and Maintenance

Unless already paved, access roads will be graveled. The fenced areas around the collector substation, operations and maintenance structure, and meteorological stations, will be graveled, with no vegetation present. All newly constructed roads will be graded and graveled to meet load requirements for all equipment. Service roads, approximately 14 feet wide with 2-foot shoulders on each side, will be constructed within the solar array fence line, to facilitate access for construction and maintenance purposes. Vegetation will be cleared and maintained along service roads to provide a vegetation clearance area for fire safety. Service roads will be all-weather, compacted soil or gravel. Vegetation maintenance along service roads will include mowing as needed for fire safety requirements. Facility access roads will be sufficiently sized for emergency vehicle access. All road specifications, vegetation management practices, and other fire safety requirements will be reviewed with and designed in compliance with the fire district.

2.3.2 Preventative Programs

The Certificate Holder will implement the following programs to minimize fire risk during operations of the Facility.

2.3.2.1 ~~OSHA-Compliant~~ Fire Prevention Plan

All workers, contracting employees, and other personnel performing official duties at the Facility will conduct work under a Fire Prevention Plan that will be provided with the final WMP, the plan will ensure ~~that meets applicable portions of 29 Code of Federal Regulations (CFR) 1910.39, 29 CFR 1910.155, and 29 CFR 1910, subpart L. The plan will ensure~~ that:

- Workers are trained in fire prevention, good housekeeping, and use of a fire extinguisher
- Workers are trained in the evacuation procedures.
- Necessary equipment is available to fight incipient stage fires. Fire beyond incipient stage shall be managed using local fire response organizations and calling 911.
- Provide necessary safety equipment for handling and storing combustible and flammable material.
- Ensure equipment is maintained to prevent and control sources of ignition.
- Do not allow smoking or open flames in an area where combustible materials are located or during Red Flag Warnings.
- Implement a Hot Work Procedure and permit program, as outlined below.

2.3.2.2 High Risk Locations, Hot Work, Fire Weather Monitoring and Red Flag Warning Protocols

At all times, all hot work (any cutting, welding, or other activity that creates spark or open flame) must

be conducted on roads or on non-combustible surfaces. Fire suppression equipment shall be immediately available during hot work activities. Following the completion of hot work, the Certificate Holder or contractor(s) must maintain a fire watch for 60 minutes to monitor for potential ignition.

High Risk Construction Locations include:

- Areas where Hot Work occurs;
- Operation of power driven machinery and tools or vehicles in vegetated areas;
- Smoking areas.

High-fire consequence areas/resources, if any, and buffer area limiting activities during Red Flag Weather Warnings include:

- Exiting Transmission Lines (reference to map). Existing ROW without facility components serves as buffer.

~~Burn probability, expected flame length, and overall risk may increase during periods of the fire season.~~ A fire weather watch indicates the potential for weather conducive to large fore spread in the next 12 to 72 hours. A Red Flag Warning is issued when current weather conditions are conducive to large fire growth in the next 24 hours. Frontier Regional Emergency Alert Program is the emergency notification system for Jefferson County Emergency Management and provides notifications of emergencies, Red Flag Warnings, and evacuations. Personnel on Site designated in this Plan will monitor Fire Weather Watches and sign up for notifications for Red Flag Warnings via the Frontier Regional Emergency Alert Program.

During Red Flag Warning Weather Conditions, the individual(s) responsible for monitoring Red Flag Warnings and initiating Red Flag Weather Construction Protocols shall: ~~.~~

1. Communicate that a Red Flag Warning has been issued to on-site staff,
2. Ensure that water source or hose to water source pump and nozzle, are accessible to construction activities,
3. Halt hot work in high risk locations designated in this Plan, ~~,~~
~~3.~~4. Halt construction activities within 200 feet of buffer areas for high-fire consequence areas/resources;
~~4.~~5. Drive or park on roads to avoid sparking a fire in grass or brush,
~~5.~~6. Halt construction activities that may increase fire risk,
~~6.~~7. Contact 911 in the event of:
    i. A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;
    ii. A fire ignition on-site that spreads out of the fence line;
    iii. Any fire off-site that does not have emergency responders on site.
        1. To the extent that construction personnel can safely assist and/or provide equipment

to help extinguish off-site fires until emergency responders are on site, it is encouraged to do so to assist in the spread of the fire, loss of life, property and damage to the environment.

2.3.2.3 Emergency Management Plan

The Emergency Management Plan (EMP) will be prepared prior to construction by the certificate holder and construction contractor and will contain policies and procedures for preparing for and responding to a range of potential emergencies, including fires. Implementation of the EMP will ensure risks to public health and safety and risks to emergency responders are minimized. Any potential fires inside the solar array will be controlled by trained staff who will be able to access the Facility around the clock. These measures will help keep external fires out or internal fires in. The EMP will cover response procedures that consider the dry nature of the region and address risks on a seasonal basis. The plan will also specify communication channels the Certificate Holder intends to pursue with local fire protection agency personnel, for example, a construction kick-off meeting to discuss emergency planning as described in this Plan, and invitations to observe any emergency drill conducted at the Facility.

In addition to the emergency responses to be stipulated in the EMP, personnel will be trained on the RACE procedure to implement in the event of a fire start. The RACE procedure includes:

- **Rescue** anyone in danger (if safe to do so);
- **Alarm** – call the control room, who will then determine if 911 should be alerted;
- **Contain** the fire (if safe to do so); and
- **Extinguish** the incipient fire stage (if safe to do so).

Personnel on site will carry fire suppression equipment during the fire season in their vehicles. This equipment shall include, at a minimum:

- Fire Extinguisher: Dry chemical. 2.5 or 2.8 pound. 1A-10B: C U/L rating, properly mounted or secured;
- Pulaski
- Hand Shovel: Round point. 26 to 28 in "D" Handle, blade - 12 inches long and 10 inches wide;
- Collapsible Pail or Backpack Pump: 5-gallon capacity; and
- Drip Can: 5-gallon capacity.

This fire suppression equipment shall be stored on-site and available to personnel during all construction activities and seasons.

Water supply designated for fire protection such as a water truck(s), water buffalo, or tank with minimum 500-gallon capacity will be on-site during all construction activities and will include a pump, hose, and nozzle. The water truck or water supply shall include the following and be maintained at full or near full, unless approved by the Department:

A. Pump should be maintained ready to operate and capable to provide a discharge of not less than 20 gallons per minute at 115 psi at pump level. Note: Volume pumps will not produce the necessary pressure to effectively attack a fire start. Pressure pumps are recommended.

B. Water supply shall be a minimum of 300 gallons if a self-propelled engine.

C. Water supply shall be a minimum of 500 gallons if not self-propelled (pond, stream, tank, sump, trailer, etc.)

D. Provide enough hose (500 feet minimum) not less than 3/4" inside diameter to reach areas where power driven machinery has worked.

E. Water supply, pump, and at least 250' of hose with nozzle must be maintained as a connected, operating unit ready for immediate use.

Personnel will receive training on use of suppression equipment.

All personnel shall be equipped with communication equipment capable of reaching the control room from all locations within the Site Boundary.

3.0 Plan Updates

This Plan may be amended from time to time by agreement of the certificate holder 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.

4.0 References

Jefferson County. 2022a. Multi-Jurisdictional Natural Hazard Mitigation Plan. Report for: Jefferson County, Culver, Lake Chinook Fire District, Madras and Metolius. Jefferson County, Oregon: Jeferson County, Central Oregon Intergovernmental Council. https://www.jeffco.net/media/27581

Jefferson County. 2022b. 2022 Jefferson County Community Wildfire Protection Plan. Central Oregon Intergovernmental Council. https://www.jeffco.net/media/26456

Attachment F-2: Draft Operational Wildfire Mitigation Plan

Attachment F.2. Draft Operations Wildfire Mitigation Plan

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Madras Solar Energy Facility

Draft Operations Wildfire Mitigation Plan

Madras Solar Energy Facility
June 2024

Prepared for

Madras PV1, LLC

600 Park Offices Drive, Ste. 285

Durham, NC, 27709

Prepared by

TETRA TECH

Tetra Tech, Inc.

Amended by Department October 2024

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Table of Contents

Acronyms and Abbreviations

APLIC	Avian Power Line Interaction Committee
Certificate Holder	Madras PV1 LLC
CFR	Code of Federal Regulations
CWPP	Community Wildfire Protection Plan
EMP	Emergency Management Plan
Facility	Madras Solar Energy Facility
NHMP	Jefferson County Multi-Jurisdictional Natural Hazards Mitigation Plan
OAR	Oregon Administrative Rules
Plan	Operations Wildfire Mitigation Plan
SCADA	supervisory, control, and data acquisition

1 Finalization and Pre-Operational Tasks

This Wildfire Mitigation Plan (Plan) was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(v), including providing evidence that the Madras Solar Energy Facility (Facility) complies with the approval standard in OAR 345-022-0115.

Section 1.1 of this plan includes measures to be completed to finalize the final Operational Wildfire Mitigation Plan (WMP). Items in Section 1.1. must be included in the final plan and Section 1.2 are actions that must be completed and documented prior to operation.

1.1 Finalizing Tasks in this Plan Prior To Operation (PRE):

An Operational WMP Finalization Compliance Checklist that identifies the following action items ~~is~~ will be included as~~t~~ Attachment 1 to this plan.

To finalize this Plan prior to operation, the certificate holder shall:

A. Prior to operation of the Facility, in the Final Operational WMP, the certificate holder will provide a summary update of wildfire risk at the site as designated under OAR 345-022-0115, if significantly different from Final Order on Amendment 1.

~~A.~~B. Incorporate guidance outlined in the wildfire annex of the Jefferson County Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP; Jefferson County 2022a), which is the Jefferson County Community Wildfire Protection Plan (CWPP; Jefferson County 2022b).

i. Identify what provisions of these plans are applicable to Facility operation.
ii. Certificate holder will incorporate guidance regarding the fuel breaks for defensible/survivable space per the Jefferson County adopted NHMP and OAR 629-044-1085, as applicable.
iii. Certificate holder will incorporate guidance from Chapter 4: Emergency Operations of the Jefferson County NHMP regarding wildland fire suppression procedures as needed (Jefferson County 2016).

~~B.~~C. Consult with local fire districts, as well as local emergency management agencies to receive and incorporate input into the final Plan, as appropriate, about:

i. The location and types of ~~temporary~~ fire breaks that could be added to the facility to reduce the spread of wildfire and to protect high-fire consequence areas/resources from fire onsite spreading off site or off site fires impacting the site. (~~V~~Examples include buffer areas, vegetation free areas, ~~such as~~ permanent gravel pads or base for facility components ~~and~~ or roads (graveled facility perimeter and interior roads act as permanent fire breaks).~~as well as facility perimeter and interior roads act as permanent fire breaks). Include any areas where fire breaks would be prioritized to protect fires spreading off site or impacting the facility site.~~

ii. Designate protocols for staff or emergency providers to erect or create fire breaks in the event of a fire,

iii. Designate estimated response times for on-site staff and local emergency service providers,

iv. Provide the names and contact information for each of the below and confirm that each has registered for the Frontier Regional Emergency Alert Program, the

emergency notification system for Jefferson County Emergency Management:

a. Primary contact(s) for certificate holder managing operational activities,

b. Contact information for any on-site or operational manager(s),

c. Identification of individual(s) responsible for initiating Red Flag Weather Protocols during Red Flag weather conditions and warnings as designated in this Plan.

~~C.~~D. Provide with Plan site map(s) that identify:

i. The location of facility components, ~~and~~ emergency shut offs, location of any chemicals that have flammable properties and hazardous material storage areas;~~;~~

~~ii.~~ The location of access points to the facility;

ii. The location, fire breaks and/or buffers (during Redl Flad Warnings) around any high-fire consequence areas/resources;

iii. A description of emergency access procedures, including:

a. H~~h~~ow emergency responders and/or adjacent landowners may access site for fire protection equipment or to extinguish an on-site fire when personnel will not be onsite; and

~~a.~~b. Specific actions taken during Red Flag Weather Warnings including actions around buffers any high-fire consequence areas/resources;

~~iii.~~iv. The location(s) of water source(s) that will be on-site during fire season; Appropriate set up for water truck(s)/sources, on site during fire season:

a. The capacity of water truck(s)/water sources;

b. Specifications for the pump including psi and water discharge capacity;

c. Type and specifications for hose nozzle;

d. Length and size of water hose.

~~iv. The identification or location of any chemicals that have flammable properties and hazardous material storage areas;~~

v. Identification of the type and location of fire protection equipment.

~~D.~~E. Provide with the Plan a list of property owners or tenants at the in-situ address within 0.5 miles of the site boundary and confirmation of the following:

i. Contact property owners or tenants at the properties 0.5 miles from site boundary to confirm if they are registered for Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

ii. If owners or tenants are not registered, provide them with the information and encourage them to register for emergency notifications.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

F. Attach the Fire Prevention Plan, Equipment Inspection Checklists, Emergency Management Plan described in this WMP.

~~E.~~

1.2 Prior To Operation Tasks (PRO)

A WMP Pre-Operational Compliance Checklist that identifies the following action items ~~is~~ will be included a~~s~~t Attachment 2 to this plan.

A. Organize and hold an on-site meeting and training with certificate holder and operational personnel, inviting equipment manufacturers, specialty contractors, local fire department(s), emergency management office personnel, ODOE, and any other emergency management agency that covers:

i. The location of electrical facility components and the fire safety measures associated with each component;

1. Based on the type of battery storage technology selected, provide battery-specific safety protocols, including how to appropriately address chemical fires, in the event of an emergency.

ii. The type and location of fire protection equipment and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code;

iii. The location(s) of water source(s) and proper usage, storing and maintenance for the pump, hose nozzle; and water hose

B. Provide site map(s) and information to the local fire department(s) that identify:

i. The location of facility components and emergency shut offs, location of any chemicals that have flammable properties and hazardous material storage areas;

ii. The location of access points to the facility;

iii. A description of emergency access procedures, including how emergency responders and/or adjacent landowners may access site for fire protection equipment or to extinguish an on-site fire when personnel will not be onsite;

iv. The location(s) of water source(s) that will be on-site during fire season; Appropriate set up for water truck(s)/sources, on site during fire season, including:

1. The capacity of water truck(s)/water sources;
2. Specifications for the pump including psi and water discharge capacity;
3. Type and specifications for hose nozzle;
4. Length and size of water hose.

~~The identification or location of any chemicals that have flammable properties and hazardous material storage areas~~;

v. The type and location of fire protection equipment on site.

2 Operational (OPR) Wildfire Risk Minimization Procedures

(D) Identify procedures to minimize risks to public health and safety, the health and safety of responders, and damages to resources protected by Council standards in the event that a wildfire occurs at the facility site, regardless of ignition source;

An Operational WMP Compliance Checklist that identifies the following action items ~~is~~ will be included a~~s~~t Attachment 3 to this plan. The measures in Section 2.0 shall be finalized based upon Section 1.0 of this Plan and will be implemented during operation of the facility.

During operation of the facility the certificate holder shall:

A. Fill out and submit to the Department in the annual report the Operational WMP Compliance Checklist included in this Plan as Attachment 1.

B. Annually, the certificate holder will review property owner information to determine if there are new or different property owners or tenants within 0.5 miles of the site boundary. Provide confirmation in the annual report.

i. Contact new property owners or tenants at the properties 0.5 miles from site boundary to confirm if they are registered for the Frontier Regional Emergency Alert Program, the emergency notification system for Jefferson County Emergency Management.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

ii. If owners or tenants are not registered, provide them with the information and encourage them to register for emergency notifications.

https://www.jeffco.net/ps/page/emergency-management#:~:text=Emergency%20management%20is%20best%20defined%20as%20the%20managerial%20function%20charged

https://member.everbridge.net/892807736724035/login

C. Contact 911 in the event of:

i. A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;

ii. A fire ignition on-site that spreads out of the fence line;

iii. Any fire off-site that does not have emergency responders on site.

a. To the extent that operational personnel can safely assist and/or provide equipment to help extinguish off-site fires until emergency responders are on site, it is encouraged to do so to assist in the spread of the fire, loss of life, property and damage to the environment.

D. After the first year of operation and every other year after (every two years) during operation certificate holder and operational personnel shall invite, equipment manufacturers, or specialty contractors, local fire department(s), emergency management office personnel, ODOE, and any other emergency management agency to a training that will cover:

i. The type and location of fire protection equipment and fire protection equipment maintenance requirements, in accordance with the Oregon Fire Code and this Plan;

ii. The location of electrical facility components and the fire safety measures associated with each component;

a. Based on the type of battery storage technology selected, provide battery-specific safety protocols, including how to appropriately address chemical fires, in the event of an emergency.

iii. Proper usage of fire control equipment;

iv. The location(s) of water source(s), specifications and proper usage for the water pump, hose, and nozzle.

v. Safety procedures for addressing fires and other emergencies on-site, including procedures to follow and BMPs for activities during Red Flag Warnings and Fire Weather Watches

In addition to the measures described in this plan, the risk of a wildfire affecting the public safety, first responders, or Oregon Energy Facility Siting Council-protected resources would be minimized by the procedures listed in Table 1.

Table 1. Procedures to Minimize ~~Wildfire Risk~~Impacts to Resources

Topic	Procedures
Public health and safety	The public will be excluded from the solar and substation facilities by fencing. Ground mounted inverters, and junction boxes will be surrounded by bollards to minimized inadvertent vehicle/farm equipment collisions with electrical equipment.
	Response to fires in the facility should focus on controlling spread to adjacent lands.

First Responders	Operational personnel will be trained in the use of fire extinguishers for responding to incipient stage fires on site.
Resource Protection	Resources covered by Oregon Energy Facility Siting Council standards near the project. area include agricultural land, shrub steppe habitat, and cultural resources. The existing county roads will form a fire break between fields that will discourage the spread of wildfire between fields into wildlife habitat or cultural resources.

2.1 Wildfire Risk Assessment Update

This Plan has been prepared to meet the approval standard under OAR 345-022-0115(1)(b), which requires:

(5) *Identify areas within the site boundary that are subject to a heightened risk of wildfire, using current data from reputable sources, and discuss data and methods used in the analysis;*

~~Prior to operation of the Facility, in the Final Operational WMP, the certificate holder will provide a summary update of wildfire risk at the site as designated under OAR 345-022-0115, if significantly different from Final Order on Amendment 1.~~

2.2 Inspection and Management

(8) Describe the procedures, standards, and time frames that the applicant will use to inspect facility components and manage vegetation in the areas identified under subsection (a) of this section;

2.2.1 Facility Inspections

Facility components will be inspected quarterly. ~~The supervisory, control, and data acquisition (SCADA) system collects operating and performance data from the facility as a whole and allows remote operation.~~ The Certificate Holder will monitor the Facility components, such as the substation and solar arrays, 24 hours a day, 7 days a week including shutdown capabilities via the SCADA system. These operational monitoring and maintenance measures are also discussed in Section 5.2.

On-site inspections of Facility equipment will occur quarterly. On-site inspections will include checklists provided by the original equipment manufacturer and the use of utility industry best practices. ~~Smoke/fire detectors will be placed around the site that will be tied to the SCADA system and will contact local firefighting services as needed.~~

The Facility components that could cause electrical fires are solar inverters, substation, and overhead electrical lines. The Applicant will inspect these components during operations as outlined in Table 2.

Table 2. Operational Inspections for Electrical Components

Inspection	Procedure	Standard	Time frame
Solar Inverter and panels	Visual inspection of inverter and surrounding area.	SPCC Plan[1] Manufacturer's maintenance recommendations	Monthly SPCC Bi-annual Preventative Maintenance
Substation	Visual inspection of MPT, Avian Power Line Interaction Committee (APLIC) measures, and	Manufacturer's maintenance recommendations APLIC[2]	Yearly (APLIC)

Inspection	Procedure	Standard	Time frame
	surrounding area.		
Overhead electrical lines	Visual inspection of components, grounding, APLIC measures, vertical clearance distance between conductor and vegetation.	National Energy Reliability Corporation (NERC)[3] APLIC	Bi-annual

1. The Operational SPCC Plan for the Facility will require these components to be inspected monthly for spills. During these inspections, Operational Staff will also visually inspect the component and surrounding area.

2. Certificate Holder will develop an inspection checklist and program of electrical equipment based on manufacturer's recommendations for individual components.

3. Vegetation maintenance standard FAC-003-0.

2.2.2 Vegetation Management and Defensible Spaces

The Certificate Holder will maintain vegetation within the fence line and will also maintain a 10- foot noncombustible, defensible space clearance along the fenced perimeter of the Site Boundary. Defensible space will be free of combustible vegetation or other materials. Roads and parking areas will be maintained to be free of vegetation tall enough to contact the undercarriage of the vehicle.

A physical vegetation survey assessment of the fenced area will be completed at least twice a year to monitor for vegetation clearances, maintenance of fire breaks, and monitor for wildfire hazards.

One of the vegetation survey assessments will occur in May or June, prior to the start of the dry season, a time when wildfire risk is heightened. The survey will be conducted by the Site Operations Manager and will be used to assess the frequency of upcoming vegetation maintenance and identify areas that may need additional attention. The Site Operations Manager will visually assess and document vegetation height, abundance, and areas where vegetation should not be present such as crushed rock bed around collector substations. The vegetation survey assessment will determine that clearances and fire breaks (vegetative clearance areas and areas determined to remain clear to act as permanent fire breaks or areas where temporary fire breaks may be deployed in the event of a fire) are satisfactory, and if not, the mitigation procedures will be implemented (e.g., vegetation management) to ensure clearances and fire breaks are satisfactory. The vegetation survey will document:

- Location;
- Species;
- Estimated growth rate;
- Abundance;
- Clearance/setbacks; and
- Risk of fire hazard.

Additional vegetation surveys may be required throughout the season based on seasonally heightened fire risk. Vegetation maintenance procedures and best management practices will be

followed during operation of the Facility to ensure that vegetation does not grow in a manner that blocks or reduces solar radiation reaching the solar panels and reduce the risk of starting a fire. Vegetation control will employ best management practices and techniques that are most appropriate for the local environment. These may include physical vegetation control such as mowing or introduction of a non-invasive species that is low growing. In rare circumstances where it is necessary to use herbicides, an effort will be made to minimize use and only apply biodegradable, U.S. Environmental Protection Agency-registered, organic solutions that are non-toxic to wildlife. Any herbicides used for vegetation management the site will be selected and used in a manner that fully complies with all applicable laws and regulations.

Vegetation within the fence line and below the solar arrays will be maintained to a height of 10-12 inches. Vegetation near, at, or taller than the maximum height shall be removed or mowed. Mowing must be done in advance of fire season or accordance to any fire restrictions. At no point shall vegetation come in contact with electrical equipment. Any vegetation removed from the site will be disposed of and not stored onsite. Certificate holder and contractors will prevent the accumulation of combustible "burn piles" on site.

Exposed electrical wires should be running under the solar panels at the midpoint or higher than the center of the panel. Vegetation will be removed within 10-foot perimeter of the inverter/transformer pads. Gravel or similar noncombustible base will be located within the 10-foot perimeter of these pads. Vegetation will be removed from inside the Facility collector substation fence line. Gravel or similar noncombustible base shall be used.

To reduce the availability of fuels for wildfire near electrical components, the Certificate Holder will install a non-flammable gravel base around solar inverters substations and implement ongoing vegetation management outlined in Table 3 to ensure that vegetation does not grow in these graveled areas.

Table 3. Vegetation Management Procedures by Facility Component

Vegetation Management	Procedure	Standard	Time frame
Solar Inverter	Herbicide application on gravel pad around inverter to prevent vegetation growth.	IEEE 80 NEC 70	Yearly, depending on vegetation condition.
Substation	Herbicide application on substation gravel pad. Highly compacted gravel foundations of substations are not suitable for vegetation ground.	IEEE 80 NEC 70	Yearly, depending on vegetation condition.
Overhead electrical lines	Mow vegetation to achieve clearance requirements between conductor and ground.	NERC	Yearly, depending on vegetation condition.

2.3 Preventative and Minimization Actions for Wildfire Risk

(C) Identify preventative actions and programs that the applicant will carry out to minimize the risk of facility components causing wildfire, including procedures that will be used to adjust operations during periods of heightened wildfire risk;

2.3.1 Preventative Actions

The Certificate Holder will minimize risk of Facility components causing wildfire through preventative actions. In the design of the Facility, the Certificate Holder will implement the design considerations and best practices outlined in Table 4 to minimize electrical fire risk from facility components.

Table 4. Design Considerations for Fire Safety by Facility Component

Consideration	Solar Inverter	Substation	Overhead Lines
Electrical connections by qualified electricians	X	X	X
Inspections for mechanical integrity prior to energizations	X	X	X
Lighting protection	X	X	X
Corrosion protection	X	X	X
Strain relief of connecting cabling	X	X	X
Protection against moisture	X	X	X
Grounding systems	X	X	X
Limits on input voltage and power	X	X	X
Safety setback from structures	X[1]	X[1]	X[2]
Technology specific design standards	X[3]	X[4]	X[3]

1. 50-foot setback from structures.
2. Vertical and horizontal clearances from structures depends on voltage of conductor.
3. NFPA 70.
4. IEEE 979.

2.3.2 Facility Design Features

During Facility operations, the areas within the Site Boundary that are subject to a heightened risk of wildfire include the solar array areas. The solar array areas will have low-growing vegetation maintained below the solar arrays during the operational period of the Facility. Measures for reducing the risk of fire ignition and reducing the risk of equipment damage were a wildfire to occur are discussed further in Section 5.2, including the Facility's vegetation management program (see Section 4.2), and through the emergency response procedures that will be described in the Emergency Management Plan (EMP) and in this Plan. The EMP will be developed for the Facility and is outlined below in Section 5.2.5. The collector substation area, transformer pads, and the permanent, fenced parking and storage area will have reduced risk for fire due to the fact that these areas will have a gravel base with no vegetation within a 10-foot perimeter to reduce fire risk.

The Facility components will meet National Electrical Code and Institute of Electrical and Electronics

Engineers standards and will not pose a significant fire risk. The solar array will have shielded electrical cabling, as required by applicable code, to prevent electrical fires. In addition, the collector system and substation will have redundant surge arrestors to deactivate the Facility during unusual operational events that could start fires. The collector substation and the switchyard will have also sufficient spacing between equipment to prevent the spread of fire.

Unless already paved, access roads will be graveled. The fenced areas around the collector substation, operations and maintenance (O&M) building, meteorological stations, and energy storage system will be graveled, with no vegetation present. All newly constructed roads will be graded and graveled to meet load requirements for all equipment. Service roads, approximately 14 feet wide with 2-foot shoulders, will be constructed within the solar array fence line, to facilitate access for maintenance purposes. Approximately 20-foot-wide service roads will be constructed outside the solar array fence line to reach the separately fenced substations. Vegetation will be cleared and maintained along service roads to provide a vegetation clearance area for fire safety. Service roads will be all-weather, compacted soil or gravel, with an internal turning radius of 60 feet. Vegetation maintenance along service roads will include mowing as needed for fire safety requirements. Facility access roads will be sufficiently sized for emergency vehicle access. Vegetation free areas such as gravel pads or base and facility perimeter and interior roads act as a permanent fire break which could minimize the spread of fires on site or impacts from an external wildfire.

Smoke/fire detectors will be placed around the site that will be tied to the SCADA system and will contact local firefighting services. The SCADA system collects operating and performance data from the solar array and from the facility as a whole and allows remote operation from the O&M building. The limited vegetation present within the Site Boundary during operations will also help to minimize spread of fire. Any potential fires inside the Site Boundary will be controlled by trained staff who will be able to access the Facility around the clock. These measures will help keep external fires out or internal fires in.

2.3.3 Preventative Programs

The Certificate Holder will implement the following programs to minimize fire risk during operations of the Facility.

2.3.3.1 ~~*OHSA-Compliant*~~ *Fire Prevention Plan*

All workers, contracting employees, and other personnel performing official duties at the Facility will conduct work under a Fire Prevention Plan that ~~meets applicable portions of 29 Code of Federal Regulations (CFR) 1910.39, 29 CFR 1910.155, and 29 CFR 1910, subpart L. The plan~~ will ensure that:

- Workers are trained in fire prevention, good housekeeping, and use of a fire extinguisher.
- Necessary equipment is available to fight incipient stage fires. Fire beyond incipient stage shall be managed using local fire response organizations and calling 911.
- Provide necessary safety equipment for handling and storing combustible and flammable material.
- Ensure equipment is maintained to prevent and control sources of ignition.

- Do not allow smoking or open flames in an area where combustible materials are located or during Red Flag Warning.
- Implement a Hot Work Procedure and permit program as outlined below.

2.3.3.2 *Electrical Safety Program*

All operational workers will be trained in electrical safety and the specific hazards of the facility. This training will address:

- Minimum experience requirements to work on different types of electrical components;
- Electrical equipment testing and troubleshooting;
- Switching system;
- Provisions for entering high voltage areas (e.g., substation);
- Minimum approach distances; and
- Required personal protective equipment.

2.3.3.3 *Lock Out/Tag Out Program*

During maintenance activities on electrical equipment is the de-energized and physically locked or tagged in the de-energized positions to inadvertent events that could result in arc flash.

2.3.3.4 *High Risk Locations, Hot Work, Fire Weather Monitoring, and Red Flag Warning Protocols*

At all times, all hot work (any cutting, welding, or other activity that creates spark or open flame) must be conducted on roads or on non-combustible surfaces. Fire suppression equipment shall be immediately available during hot work activities. Following the completion of hot work, the Certificate Holder or contractor(s) must maintain a fire watch for 60 minutes to monitor for potential ignition.

High Risk Construction Locations include:

- Areas where Hot Work occurs;
- Operation of power-driven machinery and tools or vehicles in vegetated areas;
- Smoking areas.

High-fire consequence areas/resources, if any, and buffer area limiting activities during Red Flag Weather Warnings include:

- Exiting Transmission Lines (reference to map). Existing ROW without facility components serves as buffer.

At least during each fire season (approximately from June – October) during operations, the certificate holder will ensure that a water source meeting the specifications in this plan will be on-site.

~~Burn probability, expected flame length, and overall risk may increase during periods of the fire season.~~ A fire weather watch indicates the potential for weather conducive to large fore spread in the next 12 to 72 hours. A Red Flag Warning is issued when current weather conditions are conducive to large fire growth in the next 24 hours. Frontier Regional Emergency Alert Program is the emergency

notification system for Jefferson County Emergency Management and provides notifications of emergencies, Red Flag Warnings, and evacuations. Personnel on Site designated in this Plan will monitor Fire Weather Watches and sign up for notifications for Red Flag Warnings via the Frontier Regional Emergency Alert Program.

During Red Flag Warning Weather Conditions, the individual(s) responsible for monitoring Red Flag Warnings and initiating Red Flag Weather Protocols for operations on site shall:

1. Communicate that a Red Flag Warning has been issued to operations personnel and any on-site staff,
2. Halt hot work in high-risk locations designated in this Plan,
3. Halt construction/O&M activities within 200 feet of buffer areas for high-fire consequence areas/resources;
4. Ensure that water source or hose to water source pump and nozzle, are accessible to operational activities that may,
5. Drive or park on roads to avoid sparking a fire in grass or brush,
6. Halt construction activities that may increase fire risk,
7. Contact 911 in the event of:
    i. A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;
    ii. A fire ignition on-site that spreads out of the fence line;
    iii. Any fire off-site that does not have emergency responders on site.
        a. To the extent that any on-site personnel can safely assist in extinguishing off-site fires until emergency responders are on site, it is encouraged to do so to assist in the spread of the fire, loss of life, property and damage to the environment.

2.3.3.5 *Emergency Management Plan*

Emergency management will cover response procedures that consider the dry nature of the region and address risks on a seasonal basis. The final Plan will specify communication channels the Certificate Holder intends to pursue with local fire protection agency personnel, for example, an annual or biannual meeting to discuss emergency planning, and invitations to observe any emergency drill conducted at the Facility.

Personnel will be trained on the RACE procedure to implement in the event of a fire start. The RACE procedure includes:

- **Rescue** anyone in danger (if safe to do so);
- **Alarm** – call the control room, who will then determine if 911 should be alerted;
- **Contain** the fire (if safe to do so); and
- **Extinguish** the incipient fire stage (if safe to do so).

The following fire suppression equipment will be stored on-site and be available to personnel on site during the fire season in their vehicles. This equipment shall include, at a minimum:

- Fire Extinguisher: Dry chemical. 2.5 or 2.8 pound. 1A-10B: C U/L rating, properly mounted or secured;
- Pulaski
- Hand Shovel: Round point. 26 to 28 in "D" Handle, blade - 12 inches long and 10 inches wide;
- Collapsible Pail or Backpack Pump: 5-gallon capacity; and
- Drip Can: 5-gallon capacity.

Another safety mitigation measure is to have available onsite during operational activities in times of heightened wildfire risk (designated Fire Season or June to October each year) are water truck(s)/water source, water buffalo, or tank with minimum 500-gallon capacity. The water truck or water supply shall include the following, unless approved by the Department:

A. Pump should be maintained ready to operate and capable to provide a discharge of not less than 20 gallons per minute at 115 psi at pump level. Note: Volume pumps will not produce the necessary pressure to effectively attack a fire start. Pressure pumps are recommended.

B. Water supply shall be a minimum of 300 gallons if a self-propelled engine.

C. Water supply shall be a minimum of 500 gallons if not self-propelled (pond, stream, tank, sump, trailer, etc.)

D. Provide enough hose (500 feet minimum) not less than 3/4" inside diameter to reach areas where power driven machinery has worked.

E. Water supply, pump, and at least 250' of hose with nozzle must be maintained as a connected, operating unit ready for immediate use.

Personnel will receive training on use of suppression equipment. All personnel shall also be equipped with communication equipment capable of reaching the control room from all locations within the Site Boundary.

2.4 Plan Updates and Future Best Management Practices

2.4.1 Plan Updates and Modification

(E) Describe methods the applicant will use to ensure that updates of the plan incorporate best practices and emerging technologies to minimize and mitigate wildfire risk.

During operation of the facility the certificate holder shall:

A. Fill out and submit to the Department in the annual report the Operational WMP Compliance Checklist included in this Plan as Attachment 3.

Updates to this Plan will account for changes in local fire protection agency personnel and changes in best practices for minimizing and mitigating fire risk. It is recommended to consult with Jefferson County, Jefferson County Fire District #1, and the Jefferson County Emergency Manager including updates to the Jefferson County NHMP (Jefferson County 2022a) and Jefferson County CWPP (Jefferson County 2022b).

If, after the review of the Plan, a determination is made that no updates are required, an explanation of this determination will be provided in the annual compliance report. If substantive updates are made to the Plan, a copy will be provided to the Oregon Department of Energy with the annual compliance report required under OAR 345-026-008(2).

Certificate Holder will review wildfire risk and update this Plan for the Site Boundary. Evaluation of wildfire risk will be consistent with the requirements of OAR 345-0220115(1) using current data from reputable sources.

The Applicant may consider revisions to this plan at its sole discretion to incorporate future best practices or emerging technology depending on whether the new technology is cost effective and suitable for the site conditions. The Certificate Holder will track the industry groups and applicable design standards outlined in Table 5 to identify future technologies or best practices that could be implemented at the Facility.

This Plan may be amended from time to time by agreement of the certificate holder 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.

Table 5. Resources for Future Best Practices

Reference	Description	Method
American Clean Power	Industry ground that establishes best practices for renewable energy projects.	The Applicant is a member of ACP and participates in best practice development[1].
National Electric Reliability	National Energy Reliability Corporation develops electrical standards for large energy facilities.	The Applicant will follow NERC Standard FAC-003-0 for its vegetation management program of transmission lines[2], or updates to this standard as approved by NERC.
Oregon Specialty Building Codes	Building codes applicable to inhabitable spaces, including the O&M building and the substation enclosure.	Remodeling to the O&M and enclosure structure that requires permits will follow any updates to the OSPC at that time.
APLIC	Avian protection methods for electrical facility reduces fires related to bird/mammal nests on electrical equipment.	The Applicant is a member of APLIC[3]. An operational wildlife monitoring program will inspect for wildlife nesting on facilities that could cause fire, and take actions following applicable laws (e.g., MBTA).

1. Link to ACP Standards & Practices: https://cleanpower.org/resources/types/standards-and-practices/.
2. NERC FAC-003-0: https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-003-0.pdf.
3. Link to APLIC member organization: https://www.aplic.org/member_websites.php.

3 References

Jefferson County. 2022a. Multi-Jurisdictional Natural Hazard Mitigation Plan. Report for: Jefferson County, Culver, Lake Chinook Fire District, Madras and Metolius. Jefferson County, Oregon: Jeferson County, Central Oregon Intergovernmental Council, https://www.jeffco.net/media/27581

Jefferson County. 2022b. 2022 Jefferson County Community Wildfire Protection Plan. Central Oregon Intergovernmental Council. https://www.jeffco.net/media/26456

Attachment G: Updated Decommissioning Cost Estimate and Assumptions

Estimate Summary
TETRA TECH EC, INC.
Job Code: Madras Solar
Description: Decommissioning Estimate

CBS Position Code	Quantity	UM	Cost Item Description	UM/Day	Cost Source	Currency	Unit Cost	Total Cost
1	1.00	Lump Sum	MADRAS SOLAR RETIREMENT	0.00	Detail	U.S. Dollar	4,098,069.58	4,098,069.58
1.1	1.00	Lump Sum	Equipment & Facilities Mob / Demob	0.20	Detail	U.S. Dollar	88,812.56	88,812.56
1.1.1	1.00	Lump Sum	Equipment Mob	0.00	Detail	U.S. Dollar	40,600.00	40,600.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
UERNTRLG	Rental Equip Transp-Large		4.00	Each	U.S. Dollar	10,000.00	40,000.00
UERNTRSM	Rental Equip Transp-Small		4.00	Each	U.S. Dollar	150.00	600.00

1.1.2	1.00	Lump Sum	Site Facilities	0.00	Detail	U.S. Dollar	2,200.00	2,200.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
UOCONMOB	Connex Box Mob		2.00	Each	U.S. Dollar	300.00	600.00
UOTRLTRN	Trailer Trnsp/Setup/Trdwn		2.00	Each	U.S. Dollar	800.00	1,600.00

1.1.3	3.00	Day	Crew Mob & Site Setup	1.00	Detail	U.S. Dollar	9,202.51	27,607.53

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	480.00	16.00	Each (hourly)	U.S. Dollar	43.52	20,891.66
L010101	OPERATOR	120.00	4.00	Each (hourly)	U.S. Dollar	55.97	6,715.87

1.1.4	2.00	Day	Crew Demob & Site Cleanup	1.00	Detail	U.S. Dollar	9,202.51	18,405.02

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	320.00	16.00	Each (hourly)	U.S. Dollar	43.52	13,927.78
L010101	OPERATOR	80.00	4.00	Each (hourly)	U.S. Dollar	55.97	4,477.25

1.2	1.00	Lump Sum	Project Site Support	0.01	Detail	U.S. Dollar	183,618.79	183,618.79
1.2.1	4.00	Month	Site Facilities	0.00	Detail	U.S. Dollar	1,305.00	5,220.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
URCONNEX	Connex Box		4.00	Month	U.S. Dollar	150.00	600.00
UROFFTRL	Office Trailer -12x60		4.00	Month	U.S. Dollar	500.00	2,000.00
UO1STAID	1st Aid Supplies		4.00	Month	U.S. Dollar	300.00	1,200.00
UOOFFSUP	Office Supplies($/prs/mo)		4.00	Month	U.S. Dollar	55.00	220.00
URPRTAJH	Port-a-John Unit(s) (4)		4.00	Month	U.S. Dollar	300.00	1,200.00

1.2.2	4.00	Month	Field Management	0.05	Detail	U.S. Dollar	44,599.70	178,398.79

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L90FXX02	Field - Proj Superintendent	880.00	1.00	Each (hourly)	U.S. Dollar	83.18	73,200.16
RPUTRK05	F-250 4X4 3/4 TON PICKUP	1,760.00	2.00	Each (hourly)	U.S. Dollar	15.14	26,646.40
L90FXX03	Field - SHSO	880.00	1.00	Each (hourly)	U.S. Dollar	89.26	78,552.23

1.3	1.00	Lump Sum	Substation / Switchyard Retirement	0.04	Detail	U.S. Dollar	192,049.71	192,049.71
1.3.1	1.00	Day	Fence Removal	1.00	Detail	U.S. Dollar	1,429.00	1,429.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L010101	OPERATOR	10.00	1.00	Each (hourly)	U.S. Dollar	55.97	559.66
L060100	GENERAL LABORER	10.00	1.00	Each (hourly)	U.S. Dollar	43.52	435.24
RBACKH09	Deere 710J BACKHOE, 1.62CY	10.00	1.00	Each (hourly)	U.S. Dollar	43.41	434.10

1.3.2	1.00	Each	Transformer Removal	0.17	Detail	U.S. Dollar	96,135.90	96,135.90
1.3.2.1	1.00	Each	Oil Removal & Disposal	1.00	Detail	U.S. Dollar	58,245.49	58,245.49

CBS Position Code	Quantity	UM	Description	UM/Day	Cost Source	Currency	Unit Cost	Total Cost
			Cost Item					
1.3.2.1.1	1.00	Each	Oil Removal	1.00	Detail	U.S. Dollar	870.49	870.49

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	20.00	2.00	Each (hourly)	U.S. Dollar	43.52	870.49

1.3.2.1.2	14,000.00	Gallon	Oil Disposal	0.00	Detail	U.S. Dollar	4.00	56,000.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USDISPOSAL	Disposal Fee's		56,000.00	Each	U.S. Dollar	1.00	56,000.00

1.3.2.1.3	1.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	1,375.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		1,375.00	Each	U.S. Dollar	1.00	1,375.00

1.3.2.2	1.00	Each	Dismantle & Loadout Transformer	0.20	Detail	U.S. Dollar	37,890.42	37,890.42

1.3.2.2.1	1.00	Each	Dismantle, Cut & Size	0.20	Detail	U.S. Dollar	32,390.42	32,390.42

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	200.00	4.00	Each (hourly)	U.S. Dollar	43.52	8,704.86
L010101	OPERATOR	100.00	2.00	Each (hourly)	U.S. Dollar	55.97	5,596.56
*REXCAV06A	Excav 100K w/ Bucket & Grapple	50.00	1.00	Each (hourly)	U.S. Dollar	150.41	7,520.50
*REXCAV06E	Excav 100K w/ Shear	50.00	1.00	Each (hourly)	U.S. Dollar	211.37	10,568.50

1.3.2.2.2	4.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	5,500.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		5,500.00	Each	U.S. Dollar	1.00	5,500.00

1.3.3	1.00	Each	Remove Control Building	2.00	Detail	U.S. Dollar	2,624.50	2,624.50

1.3.3.1	1.00	Each	Demo	2.00	Detail	U.S. Dollar	1,249.50	1,249.50

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	5.00	1.00	Each (hourly)	U.S. Dollar	43.52	217.62
L010101	OPERATOR	5.00	1.00	Each (hourly)	U.S. Dollar	55.97	279.83
*REXCAV06A	Excav 100K w/ Bucket & Grapple	5.00	1.00	Each (hourly)	U.S. Dollar	150.41	752.05

1.3.3.2	1.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	1,375.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		1,375.00	Each	U.S. Dollar	1.00	1,375.00

1.3.4	2.00	Day	UG Utility & Ground Removal	1.00	Detail	U.S. Dollar	1,429.00	2,858.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L010101	OPERATOR	20.00	1.00	Each (hourly)	U.S. Dollar	55.97	1,119.31
L060100	GENERAL LABORER	20.00	1.00	Each (hourly)	U.S. Dollar	43.52	870.49
RBACKH09	Deere 710J BACKHOE, 1.62CY	20.00	1.00	Each (hourly)	U.S. Dollar	43.41	868.20

1.3.5	600.00	Cubic Yard	Remove Foundations To Subgrade	73.68	Detail	U.S. Dollar	30.78	18,468.03

1.3.5.1	600.00	Cubic Yard	Excavate / Remove Foundation - Various Depth	280.00	Detail	U.S. Dollar	17.60	10,557.97

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	21.43	1.00	Each (hourly)	U.S. Dollar	43.52	932.66
L010101	OPERATOR	42.86	2.00	Each (hourly)	U.S. Dollar	55.97	2,398.52
*REXCAV06C	Excav 100K w/ Hammer	21.43	1.00	Each (hourly)	U.S. Dollar	186.84	4,003.71

Cost Item								
CBS Position Code	Quantity UM	Description		UM/Day	Cost Source	Currency	Unit Cost	Total Cost
*REXCAV06A	Excav 100K w/ Bucket & Grapple		21.43	1.00 Each (hourly)	U.S. Dollar		150.41	3,223.07
1.3.5.2	600.00 Cubic Yard	Concrete Transport Offsite		100.00	Detail	U.S. Dollar	13.18	7,910.06
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
RDUTRK06	CAT D350D, 18CY-24CY		60.00	1.00 Each (hourly)	U.S. Dollar		86.39	5,183.40
L080940	TEAMSTER		60.00	1.00 Each (hourly)	U.S. Dollar		45.44	2,726.66
1.3.6	1.00 Lump Sum	Misc. Material Disposal		0.00	Detail	U.S. Dollar	2,200.00	2,200.00
1.3.6.1	1.00 Each	Trucking - Per Load		0.00	Detail	U.S. Dollar	1,375.00	1,375.00
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USTRUCKING	Trucking Sub			1,375.00 Each	U.S. Dollar		1.00	1,375.00
1.3.6.2	15.00 Ton	Disposal Cost		0.00	Detail	U.S. Dollar	55.00	825.00
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USDISPOSAL	Disposal Fee's			825.00 Each	U.S. Dollar		1.00	825.00
1.3.7	1.00 Lump Sum	Restore Yard		0.12	Detail	U.S. Dollar	68,334.28	68,334.28
1.3.7.1	4.00 Acre	Backfill / Regrade		2.00	Detail	U.S. Dollar	1,824.72	7,298.87
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER		40.00	2.00 Each (hourly)	U.S. Dollar		43.52	1,740.97
L010101	OPERATOR		40.00	2.00 Each (hourly)	U.S. Dollar		55.97	2,238.62
REXCAV06B	Gradall - Excavator		20.00	1.00 Each (hourly)	U.S. Dollar		95.20	1,904.07
*RDOZER08	CAT D6 LGP Dozer		20.00	1.00 Each (hourly)	U.S. Dollar		70.76	1,415.20
1.3.7.2	2,000.00 Cubic Yard	Vegetative Cover		300.00	Detail	U.S. Dollar	28.52	57,035.41
1.3.7.2.1	2,000.00 Cubic Yard	Topsoil, Delivered		0.00	Detail	U.S. Dollar	20.00	40,000.00
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
IMSOIL	Topsoil			2,000.00 Cubic Yard	U.S. Dollar		20.00	40,000.00
1.3.7.2.2	2,000.00 Cubic Yard	Placement		300.00	Detail	U.S. Dollar	8.52	17,035.41
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L010101	OPERATOR		133.33	2.00 Each (hourly)	U.S. Dollar		55.97	7,462.08
RDOZER08	CAT D6N XL		133.33	2.00 Each (hourly)	U.S. Dollar		71.80	9,573.33
1.3.7.3	4.00 Acre	Re-Seed With Native Vegetation		0.00	Detail	U.S. Dollar	1,000.00	4,000.00
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USLANDSCAPE	Landscape Sub			4.00 Acre	U.S. Dollar		1,000.00	4,000.00
1.4	1.00 Lump Sum	Transmission Line Retirement		0.12	Detail	U.S. Dollar	41,248.99	41,248.99
1.4.1	4.00 Each	Structure and Cable Span Removal		1.00	Detail	U.S. Dollar	4,921.57	19,686.28
1.4.1.1	4.00 Each	Cut / Lower Structure		2.00	Detail	U.S. Dollar	2,050.21	8,200.86
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER		80.00	4.00 Each (hourly)	U.S. Dollar		43.52	3,481.94
L010101	OPERATOR		20.00	1.00 Each (hourly)	U.S. Dollar		55.97	1,119.31
*RXMISC14	MAN LIFT GAS 125ft		20.00	1.00 Each (hourly)	U.S. Dollar		60.32	1,206.40
*RXMISC23	GROVE RT 200 TON		20.00	1.00 Each (hourly)	U.S. Dollar		119.66	2,393.20
1.4.1.2	4.00 Each	Cut / Size Structure & Loadout		2.00	Detail	U.S. Dollar	2,183.86	8,735.43
Resource Code	**Description**		**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER		120.00	6.00 Each (hourly)	U.S. Dollar		43.52	5,222.92

CBS Position Code	Quantity UM	Description	Cost Item UM/Day	Cost Source	Currency	Unit Cost	Total Cost
L010101	OPERATOR	20.00	1.00 Each (hourly)	U.S. Dollar		55.97	1,119.31
*RXMISC23	GROVE RT 200 TON	20.00	1.00 Each (hourly)	U.S. Dollar		119.66	2,393.20
1.4.1.3	2.00 Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	2,750.00
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USTRUCKING	Trucking Sub		2,750.00 Each	U.S. Dollar		1.00	2,750.00

Notes: **********
Assume 9 ton per steel structure
****

1.4.2	4.00 Each	Remove Foundations To Subgrade	0.98	Detail	U.S. Dollar	5,390.68	21,562.71
1.4.2.1	4.00 Each	Excavate / Remove Foundation - Various Depth	1.00	Detail	U.S. Dollar	5,362.30	21,449.19
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER	80.00	2.00 Each (hourly)	U.S. Dollar		43.52	3,481.94
L010101	OPERATOR	80.00	2.00 Each (hourly)	U.S. Dollar		55.97	4,477.25
*REXCAV06C	Excav 100K w/ Hammer	40.00	1.00 Each (hourly)	U.S. Dollar		186.84	7,473.60
*REXCAV06A	Excav 100K w/ Bucket & Grapple	40.00	1.00 Each (hourly)	U.S. Dollar		150.41	6,016.40
1.4.2.2	6.46 Cubic Yard	Concrete Transport Offsite	75.00	Detail	U.S. Dollar	17.58	113.52
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
RDUTRK06	CAT D350D, 18CY-24CY	0.86	1.00 Each (hourly)	U.S. Dollar		86.39	74.39
L080940	TEAMSTER	0.86	1.00 Each (hourly)	U.S. Dollar		45.44	39.13
1.5	4.00 Mile	Surface Tray & Cable	0.50	Detail	U.S. Dollar	14,330.31	57,321.24
1.5.1	4.00 Mile	Remove Tray & Cable	0.50	Detail	U.S. Dollar	9,830.31	39,321.24
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER	80.00	1.00 Each (hourly)	U.S. Dollar		43.52	3,481.94
L010101	OPERATOR	160.00	2.00 Each (hourly)	U.S. Dollar		55.97	8,954.49
*REXCAV06E	Excav 100K w/ Shear	80.00	1.00 Each (hourly)	U.S. Dollar		211.37	16,909.60
*REXCAV06D	Excav 100K	80.00	1.00 Each (hourly)	U.S. Dollar		124.69	9,975.20
1.5.2	12.00 Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,500.00	18,000.00
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USTRUCKING	Trucking Sub		18,000.00 Each	U.S. Dollar		1.00	18,000.00
1.6	1.00 Lump Sum	DC Storage Retirement	0.03	Detail	U.S. Dollar	193,957.13	193,957.13
1.6.1	63.00 MW	Battery Removal & Disposal	2.42	Detail	U.S. Dollar	2,195.16	138,295.07
1.6.1.1	26.00 Day	Remove Batteries, Load For Transport	1.00	Detail	U.S. Dollar	2,023.17	52,602.47
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
L060100	GENERAL LABORER	1,040.00	4.00 Each (hourly)	U.S. Dollar		43.52	45,265.27
RLIFTS05	JCB 508C, 8,000lbs FRKLFT	260.00	1.00 Each (hourly)	U.S. Dollar		28.22	7,337.20
1.6.1.2	21.00 Each	Transport Batteries	0.00	Detail	U.S. Dollar	1,480.60	31,092.60
1.6.1.2.1	21.00 Each	Roll Off Liners	0.00	Detail	U.S. Dollar	105.60	2,217.60
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
UODCLINER	Rolloff Liner		21.00 Each	U.S. Dollar		105.60	2,217.60
1.6.1.2.2	21.00 Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	28,875.00
Resource Code	**Description**	**Hours**	**Quantity UM**	**Currency**		**Unit Cost**	**Total Cost**
USTRUCKING	Trucking Sub		28,875.00 Each	U.S. Dollar		1.00	28,875.00

CBS Position Code	Quantity	UM	Description	Cost Item UM/Day	Cost Source	Currency	Unit Cost	Total Cost
1.6.1.3	273.00	Ton	Disposal Fee's	0.00	Detail	U.S. Dollar	200.00	54,600.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USDISPOSAL	Disposal Fee's		54,600.00	Each	U.S. Dollar	1.00	54,600.00

1.6.2	63.00	MW	Structure & Components Removal	13.19	Detail	U.S. Dollar	883.52	55,662.06
1.6.2.1	207.00	Ton	Structure Demo	43.33	Detail	U.S. Dollar	129.41	26,787.06

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
*REXCAV06A	Excav 100K w/ Bucket & Grapple	47.77	1.00	Each (hourly)	U.S. Dollar	150.41	7,184.97
*REXCAV06E	Excav 100K w/ Shear	47.77	1.00	Each (hourly)	U.S. Dollar	211.37	10,096.98
L010101	OPERATOR	95.54	2.00	Each (hourly)	U.S. Dollar	55.97	5,346.87
L060100	GENERAL LABORER	95.54	2.00	Each (hourly)	U.S. Dollar	43.52	4,158.24

1.6.2.2	21.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	28,875.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		28,875.00	Each	U.S. Dollar	1.00	28,875.00

1.7	1.00	Lump Sum	Solar Array Retirement	0.01	Detail	U.S. Dollar	1,957,398.85	1,957,398.85
1.7.1	23,306.00	Linear Feet	Fence Removal	5,124.80	Detail	U.S. Dollar	1.39	32,308.98
1.7.1.1	23,306.00	Linear Feet	Fence Removal	5,124.80	Detail	U.S. Dollar	1.09	25,433.98

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L010101	OPERATOR	136.43	3.00	Each (hourly)	U.S. Dollar	55.97	7,635.42
L060100	GENERAL LABORER	272.86	6.00	Each (hourly)	U.S. Dollar	43.52	11,876.10
RBACKH09	Deere 710J BACKHOE, 1.62CY	136.43	3.00	Each (hourly)	U.S. Dollar	43.41	5,922.46

1.7.1.2	5.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	6,875.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		6,875.00	Each	U.S. Dollar	1.00	6,875.00

1.7.2	19.00	Each	Inverter / Transformer Removal	2.00	Detail	U.S. Dollar	2,253.96	42,825.15
1.7.2.1	19.00	Each	Disconnect Electrical	4.00	Detail	U.S. Dollar	298.34	5,668.55

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L010110	ELECTRCIAN	47.50	1.00	Each (hourly)	U.S. Dollar	60.67	2,882.00
L060100	GENERAL LABORER	47.50	1.00	Each (hourly)	U.S. Dollar	43.52	2,067.40
RPUTRK05	F-250 4X4 3/4 TON PICKUP	47.50	1.00	Each (hourly)	U.S. Dollar	15.14	719.15

1.7.2.2	19.00	Each	Loadout Inverter & Transformer	4.00	Detail	U.S. Dollar	580.61	11,031.60

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER	95.00	2.00	Each (hourly)	U.S. Dollar	43.52	4,134.81
L010101	OPERATOR	47.50	1.00	Each (hourly)	U.S. Dollar	55.97	2,658.37
RHYDCR06	GROVE RT880 73 TON	47.50	1.00	Each (hourly)	U.S. Dollar	89.23	4,238.43

1.7.2.3	19.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	26,125.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		26,125.00	Each	U.S. Dollar	1.00	26,125.00

1.7.3	19.00	Each	Remove Foundations To Subgrade	0.77	Detail	U.S. Dollar	2,954.89	56,142.82

Notes: **********
Assumption: 24x36x1 concrete pad per inverter/ transformer
****

1.7.3.1	1,824.00	Cubic Yard	Excavate / Remove Foundation	280.00	Detail	U.S. Dollar	17.60	32,096.24

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost

CBS Position Code	Quantity	UM	Description	Cost Item UM/Day	Cost Source	Currency	Unit Cost	Total Cost
L060100	GENERAL LABORER		65.14	1.00 Each (hourly)	U.S. Dollar		43.52	2,835.30
L010101	OPERATOR		130.29	2.00 Each (hourly)	U.S. Dollar		55.97	7,291.52
*REXCAV06C	Excav 100K w/ Hammer		65.14	1.00 Each (hourly)	U.S. Dollar		186.84	12,171.29
*REXCAV06A	Excav 100K w/ Bucket & Grapple		65.14	1.00 Each (hourly)	U.S. Dollar		150.41	9,798.14
1.7.3.2	1,824.00	Cubic Yard	Concrete Transport Offsite	100.00	Detail	U.S. Dollar	13.18	24,046.58

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
RDUTRK06	CAT D350D, 18CY-24CY	182.40	1.00	Each (hourly)	U.S. Dollar	86.39	15,757.54
L080940	TEAMSTER	182.40	1.00	Each (hourly)	U.S. Dollar	45.44	8,289.04

1.7.4	137,000.00	Each	Solar Panel Removal & Disposal	4,800.00	Detail	U.S. Dollar	7.65	1,048,234.26
1.7.4.1	137,000.00	Each	Solar Panel Removal	4,800.00	Detail	U.S. Dollar	3.23	442,309.26

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
RLIFTS05	JCB 508C, 8,000lbs FRKLFT	1,712.50	6.00	Each (hourly)	U.S. Dollar	28.22	48,326.75
L010101	OPERATOR	1,712.50	6.00	Each (hourly)	U.S. Dollar	55.97	95,841.06
L060100	GENERAL LABORER	6,850.00	24.00	Each (hourly)	U.S. Dollar	43.52	298,141.46

Notes: **********
Assumed production: 20 panels per laborer per hour,
Includes packaging and preparing for shipment offsite.
****

1.7.4.2	214.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	294,250.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		294,250.00	Each	U.S. Dollar	1.00	294,250.00

Notes: **********
Assumption: 45,000 lbs per load
****

1.7.4.3	4,795.00	Ton	Disposal Cost	0.00	Detail	U.S. Dollar	65.00	311,675.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USDISPOSAL	Disposal Fee's		311,675.00	Each	U.S. Dollar	1.00	311,675.00

Notes: **********
Assumption: 82,000 modules x 70 lbs each
****

1.7.5	1.00	Lump Sum	Solar Rack (Trackers) & Post Removal	0.07	Detail	U.S. Dollar	777,887.65	777,887.65
1.7.5.1	2,284.00	Each	Solar Rack (Trackers) & Post Removal	160.00	Detail	U.S. Dollar	280.38	640,387.65

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
L010101	OPERATOR	2,284.00	16.00	Each (hourly)	U.S. Dollar	55.97	127,825.38
L060100	GENERAL LABORER	2,284.00	16.00	Each (hourly)	U.S. Dollar	43.52	99,409.50
*REXCAV06A	Excav 100K w/ Bucket & Grapple	1,142.00	8.00	Each (hourly)	U.S. Dollar	150.41	171,768.22
*REXCAV06E	Excav 100K w/ Shear	1,142.00	8.00	Each (hourly)	U.S. Dollar	211.37	241,384.54

Notes: **********
Assumed production: .5 hour per rack per crew. Crew to include
1 excavator w/shear, 1 excavator w/grapple, 2 operators and 2
laborers. Includes post removal and sizing of steel for sale as scrap,
and loadout to haul trucks.
6 piles & 60 modules per rack.
****

1.7.5.2	100.00	Each	Trucking - Per Load	0.00	Detail	U.S. Dollar	1,375.00	137,500.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USTRUCKING	Trucking Sub		137,500.00	Each	U.S. Dollar	1.00	137,500.00

Notes: **********
Assumption: 45,000 lbs per load
****

CBS Position Code	Quantity	UM	Description	UM/Day	Cost Source	Currency	Unit Cost	Total Cost
			Cost Item					
1.8	1.00	Lump Sum	Site Restoration - Partial Site Seeding	0.08	Detail	U.S. Dollar	113,047.77	113,047.77
1.8.1	5,000.00	Linear Feet	Decompact Roads	2,500.00	Detail	U.S. Dollar	1.01	5,069.02

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
*RDOZER08	CAT D6 LGP Dozer	40.00	2.00	Each (hourly)	U.S. Dollar	70.76	2,830.40
L010101	OPERATOR	40.00	2.00	Each (hourly)	U.S. Dollar	55.97	2,238.62

Notes: **********
Decompaction to include discing and regrading
****

1.8.2	82.00	Acre	Spot Grade Disturbed Areas	8.00	Detail	U.S. Dollar	316.81	25,978.74

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
*RDOZER08	CAT D6 LGP Dozer	205.00	2.00	Each (hourly)	U.S. Dollar	70.76	14,505.80
L010101	OPERATOR	205.00	2.00	Each (hourly)	U.S. Dollar	55.97	11,472.94

Notes: **********
Assumtion: 274 acres total property area.
Assume that 30% of the area distrubed by construction
will be regraded.
****

1.8.3	82.00	Acre	Re-Seed With Native Vegetation - Roads & Areas Disturbed By Construction	0.00	Detail	U.S. Dollar	1,000.00	82,000.00

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USLANDSCAPE	Landscape Sub		82.00	Acre	U.S. Dollar	1,000.00	82,000.00

Notes: **********
Assumtion: 274 acres total property area.
Assume that 30% of the area distrubed by construction
will be re-seeded.
****

1.9	1.00	Lump Sum	Contractor Markups	0.00	Detail	U.S. Dollar	527,320.39	527,320.39
1.9.1	1.00	Lump Sum	Home Office, Project Management (5% Of Cost)	0.00	Detail	U.S. Dollar	141,372.75	141,372.75

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USMARKUP5	5% Markup		2,827,455.00	Each	U.S. Dollar	0.05	141,372.75

1.9.2	1.00	Lump Sum	Contractor OH & Fee (13% Of Cost)	0.00	Detail	U.S. Dollar	385,947.64	385,947.64

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
USMARKUP	13% Markup		2,968,828.00	Each	U.S. Dollar	0.13	385,947.64

1.10	1.00	Lump Sum	ODOE Mandated Contingencies	0.00	Detail	U.S. Dollar	743,294.15	743,294.15
1.10.1	1.00	Lump Sum	20% Contingency on BESS	0.00	Detail	U.S. Dollar	38,791.40	38,791.40

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
UODCBESS	20% ODOE Mandated Contingency		193,957.00	Each	U.S. Dollar	0.20	38,791.40

1.10.2	1.00	Lump Sum	1% Performance Bond	0.00	Detail	U.S. Dollar	33,547.75	33,547.75

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
UODOE1	ODOE 1% Markup		3,354,775.00	Each	U.S. Dollar	0.01	33,547.75

1.10.3	1.00	Lump Sum	10% Administrative and Project Management	0.00	Detail	U.S. Dollar	335,477.50	335,477.50

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost
UODOE2	ODOE 10% Markup		3,354,775.00	Each	U.S. Dollar	0.10	335,477.50

1.10.4	1.00	Lump Sum	10% Future Development Contingency	0.00	Detail	U.S. Dollar	335,477.50	335,477.50

Resource Code	Description	Hours	Quantity	UM	Currency	Unit Cost	Total Cost

CBS Position Code	Quantity	UM	Description	Cost Item UM/Day	Cost Source	Currency	Unit Cost	Total Cost
UODOE2	ODOE 10% Markup			3,354,775.00 Each	U.S. Dollar		0.10	335,477.50
Report Total:								4,098,069.58

Category	Total
Labor	1,004,666.05
Rented Equipment	674,376.39
Supplies	3,637.60
Materials	40,000.00
Subcontract	1,629,895.39
ODCs	745,494.15