

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

In the Matter of the Application for Site Certificate for Muddy Creek Energy Park	)))	FIRST AMENDED PROJECT ORDER

Issuance Dates

Project Order	October 6, 2023
First Amended Project Order	June 10, 2025

Table of Contents

I.	INTRODUCTION	1
I.A.	Facility Description	1
I.B.	Applicant Information	5
I.C.	Procedural History	5
I.D.	Comments on the Notice of Intent.....	7
II.	EFSC REGULATORY FRAMEWORK.....	12
III.	ANALYSIS AREAS FOR THE PROPOSED FACILITY	13
IV.	APPLICATION REQUIREMENTS.....	17
IV.A.	General Information about the Proposed Facility.....	17
IV.B.	Organizational Expertise (OAR 345-022-0010).....	22
IV.C.	Structural Standard (OAR 345-022-0020)	31
IV.D.	Soil Protection (OAR 345-022-0022)	32
IV.E.	Land Use (OAR 345-022-0030)	34
IV.F.	Protected Areas (OAR 345-022-0040)	36
IV.G.	Retirement and Financial Assurance (OAR 345-022-0050).....	39
IV.H.	Fish and Wildlife Habitat (OAR 345-022-0060)	40
IV.I.	Threatened and Endangered Species (OAR 345-022-0070).....	44
IV.J.	Scenic Resources (OAR 345-022-0080)	45
IV.K.	Historic, Cultural and Archaeological Resources (OAR 345-022-0090).....	45
IV.L.	Recreation (OAR 345-022-0100)	47
IV.M.	Public Services (OAR 345-022-0110)	47
IV.N.	Wildfire Prevention and Risk Mitigation (OAR 345-022-0115)	49
IV.O.	Waste Minimization (OAR 345-022-0120)	51
IV.P.	State and Local Laws and Regulations (OAR 345-022-0160).....	52
V.	EXPIRATION DATE OF THE NOTICE OF INTENT	57
VI.	PROJECT ORDER AMENDMENT AND APPLICATION COMPLETENESS.....	57
VII.	APPLICABILITY AND DUTY TO COMPLY	57

Tables

Table 1: Reviewing Agencies.....	6
Table 2: Summary of Issues Raised in Public Comments.....	8
Table 3: Analysis Areas.....	14
Table 4: Example Energy Facility Specifications and Details	18
Table 5: Example Related or Supporting Facilities Specifications and Details	18
Table 6: Potentially Required Permits	25
Table 7: Protected Areas within 15 miles	37
Table 8: Habitat Categories Under OAR 635-0415-0025.....	41
Table 9: New Industrial and Commercial Noise Source Standards Allowable Statistical Noise Levels in Any One Hour (OAR 340-035-0035, Table 8)	55

Attachments:

Attachment 1: Figures

Attachment 2: Public Comments

Attachment 3: Reviewing Agency, SAG, and Tribal Government Comments

Attachment 4: Draft Templates – Examples for pASC/ASC

- Facility Components Table
- Facility Decommissioning Spreadsheet
- Habitat Mitigation Plan Template
- Dust Control Plan Template
- Construction Vegetation and Soil Management Plan Template
- Operational Revegetation, Vegetation Management, Soil Reclamation and Noxious Weed Plan Template
- Construction Wildfire Mitigation Plan Template
- Operations Wildfire Mitigation Plan Template
- Landowner Letter Template – Wildfire Mitigation Plan

ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
ACDP	Air Contaminant Discharge Permit
Applicant	Muddy Creek Energy Park LLC
ASC	Application for Site Certificate
BLM	Bureau of Land Management
BOC	Board of Commissioners
CWA	Clean Water Act
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
EFSC or Council	Energy Facility Siting Council
EFU Zone	Exclusive Farm Use Zone
kV	Kilovolts
MCEP	Muddy Creek Energy Park
MW	Megawatt
LCDC	Oregon Land Conservation and Development Commission
LCIS	Legislative Commission on Indian Services
LLC	Limited Liability Company
NOI	Notice of Intent to File an Application for Site Certificate
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rule
ODAg	Oregon Department of Agriculture
ODAv	Oregon Department of Aviation
ODF	Oregon Department of Forestry
ODOE or Department	Oregon Department of Energy
ODOT	Oregon Department of Transportation
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
ORS	Oregon Revised Statute
Parent Company	Hanwha Q CELLS USA Corp.
pASC	Preliminary Application for Site Certificate
SHPO	Oregon State Historic Preservation Office
USFWS	U.S. Fish and Wildlife Service
WPCF	Water Pollution Control Facilities

1 **I. INTRODUCTION**

2
3 On May 19, 2023, the Oregon Department of Energy (ODOE or Department) received a Notice
4 of Intent to File an Application for a Site Certificate for the Muddy Creek Energy Park (NOI). The
5 NOI was submitted by Muddy Creek Energy Park LLC (Muddy Creek or applicant).
6

7 This Project Order establishes the statutes, administrative rules, Energy Facility Siting Council
8 (EFSC or Council) standards, local ordinances, application requirements and study requirements
9 for the Application for Site Certificate (ASC) in accordance with ORS 469.330 and OAR 345-015-
10 0160. On June 10, 2025, the Department issued an Amended Project Order in accordance with
11 OAR 345-015-0160(3). The Amended Project Order included the following changes:
12

- 13 • Section V was revised to reflect a 1-year extension of the NOI expiration granted by the
14 Energy Facility Siting Council on May 16, 2025. The new expiration date is May 19,
15 2026.
- 16 • Section IV was revised to reflect amendments to applicable Council standards and rules
17 that occurred after the Project Order was issued. In particular, the Project Order is
18 revised to reflect the restructuring of exhibit and information requirements in OAR
19 chapter 345, divisions 21 to 24.
20

21 As provided in ORS 469.330(4), this Amended Project Order is not a final order. The Department
22 or the Energy Facility Siting Council (EFSC or Council) may further amend this Amended Project
23 Order at any time.
24

25 **I.A. Facility Description**

26
27 Muddy Creek Energy Park (proposed facility) is a proposed solar photovoltaic energy generation
28 facility with up to 199 megawatts (MW) of nominal and average electric generating capacity.
29 Related or supporting facilities include a 199-MW battery energy storage system (either
30 Lithium-ion batteries, flow batteries, or direct-current [DC] coupled batteries), an electrical
31 collection system, collector substation, an approximate 0.5 mile 230-kilovolt (kV) gen-tie line,
32 point of interconnection (POI), service roads, fencing, and temporary construction staging
33 areas.
34

35 The facility is proposed to be sited within an approximately 1,588 acre (2.5 sq. mile) site
36 boundary in Linn County. The proposed site encompasses part or all of Sections 13, 14, 21, 22,
37 23, 26, 27, 28, 33, 34 of Township 15S, Range 03W. All land within the proposed site boundary
38 is privately owned and zoned for Exclusive Farm Use. The land within the proposed site
39 boundary is predominately cultivated and includes high-value farmland as defined in ORS
40 195.300. The land area for full build-out of the facility is not expected to exceed the
41 approximate 1,588 acre site boundary.
42

1 Because the proposed facility would use and occupy more than 160 acres of high-value
2 farmland, the proposed facility is an “energy facility” subject to the jurisdiction of the Oregon
3 Energy Facility Siting Council (EFSC or Council).¹ Under ORS 469.320, no energy facility may be
4 constructed or operated in Oregon without a Site Certificate from the Council.

6 **I.A.1 Facility Components/Structures**

8 The following description of major components is preliminary and based on the best available
9 design information at the time of issuance of this order.

11 **I.A.1.1 Solar Array**

13 The facility’s major components consist of solar arrays. A solar array is a configuration of solar
14 modules, tracker systems, posts, and related electrical collector equipment. The ASC will
15 analyze potential impacts associated with the largest solar array layout within the
16 approximately 1,588 acre site boundary. The actual solar array equipment and layout selected
17 at final design will not exceed the potential impacts analyzed in the site boundary.

19 *Solar Modules*

20 Solar modules use bifacial mono- or poly-crystalline cells to generate electricity by converting
21 sunlight energy into direct current (DC) electrical energy. The electrical generation from a single
22 solar module will vary by module size and the number of cells per module. The dimensions of
23 each solar module will be approximately 8 feet long and 4 feet wide. Solar modules consist of
24 antireflective glass, a metal frame, and wire connectors. The solar modules will be connected in
25 strings with approximately 24 modules to a string. The module strings are connected via
26 combiners, cables, and switchboards. The configuration of strings (the solar array) can vary
27 depending on the equipment type and topography. The actual number of modules used will
28 vary depending on the module technology, spacing, mounting equipment, and other design
29 criteria, which are subject to change during final design.²

31 *Tracker System*

32 Strings of solar modules will be mounted on fixed tilt or single-axis tracker systems. The length
33 of each tracker string may vary by topography and the number of modules that the tracker can
34 hold. The drive unit for the single-axis tracking system can control a single string or multiple
35 strings of modules through a series of mechanical linkages and gearboxes. As the solar modules
36 tilt throughout the day, the height of their top edges will shift accordingly (i.e., up to 12 feet
37 high). The tracker system, and associated posts, will be specifically designed to withstand wind,
38 snow, and seismic loads anticipated at the site.³

40 *Posts*

¹ ORS 469.300(11)(a)(D)

² MCEPNOI Notice of Intent 2023-05-19, p. 6

³ *Id.*

1 Each tracker will be supported by multiple driven steel posts, which could be round hollow
2 posts, or pile-type posts (i.e., H-pile, C-pile, S-pile). Post depth may vary depending on soil
3 conditions, but the posts are typically installed 6 to 10 feet below the surface and protrude
4 approximately 5 feet above grade. Posts at the end of tracker strings are usually installed to
5 greater depth to withstand wind uplift. In some soil conditions, concrete backfill is required for
6 each post. For the purposes of the ASC, applicant will assume that posts will use concrete
7 foundations, but site-specific conditions will determine whether concrete will be required for
8 construction. Post locations will be determined by the final layout of the tracker system and
9 geotechnical investigations of the solar array area within the site boundary prior to final
10 design.⁴
11

12 *Inverters and Transformers*

13 Direct current (DC) collected from the solar modules will be converted into alternating current
14 (AC) before connecting to the facility's collector substation. Low-voltage cabling will link each
15 solar module to the inverters and transformers. Inverters serve the function of converting DC
16 power supply to an AC power supply in accordance with electrical requirements. The AC from
17 the inverters is routed to transformers that will increase the output voltage from the inverter to
18 the desired facility collector substation feed voltage of 34.5-kilovolts (kV). The transformers
19 could be collocated with the inverters and could be centrally located within the site boundary
20 or dispersed throughout the solar array. The number of inverters and transformers will vary
21 depending on the final solar array layout. The inverter and transformer specifications will
22 comply with applicable requirements of the National Electrical Safety Code and Institute of
23 Electrical and Electronics Engineers standards.⁵
24

25 *Cabling*

26 The electrical current produced by solar modules is in the form of DC. Cables collect and
27 aggregate the DC before it is converted to AC and sent to the facility collector substation. Low-
28 voltage cabling will connect the solar modules of each tracker string in series and combine
29 multiple strings to a single combiner box. Cabling from multiple combiner boxes will connect to
30 a single inverter, which will convert the DC to AC and connect to the buried collection system.
31 Cabling can be mounted to the tracker system, placed in cable trays, or buried. Cable associated
32 with the solar array will be located within the solar area fence line that will occur within the site
33 boundary.⁶
34

35 *Collection System*

36 The inverters and transformers will connect the generation output of the solar array to 34.5-kV
37 collector lines which are anticipated to be underground. Underground AC electrical cables will
38 be buried to a minimum of 3 feet. These will be located underground to the extent practicable.
39 In areas where they must be overhead, the overhead collector line segments will likely be
40 placed on steel or wood monopoles approximately 50 to 60 feet high and subject to the

⁴ *Id.*

⁵ MCEPNOI Notice of Intent 2023-05-19, p. 6-7

⁶ MCEPNOI Notice of Intent 2023-05-19, p. 7

requirements of the National Electrical Safety Code. Two approximately 0.5 mile long and 100 foot wide collection line corridors will connect solar array components in the northwest and northeast areas of the Facility site boundary to the collector substation. Specific locations and dimensions of overhead collector lines, if necessary, will not be known until site geotechnical work has been completed during pre-construction activities and prior to final design.⁷

I.A.1.2 Battery Energy Storage System

The proposed facility includes an up to 199 MW Battery Energy Storage System (BESS) centralized in an area near the facility's collector substation (Attachment 1 Figure 1). The BESS can store and later deploy energy generated by the facility. Battery options under consideration include: Lithium-ion batteries, flow batteries, and DC coupled batteries. The battery options are anticipated to use a series of self-contained enclosures located on a concrete pad within a centralized fenced area. All three BESS options under consideration include fire suppression systems.⁸

I.A.1.3 Collector Substation

The proposed facility includes a collector substation consisting of transformers, gen-tie line termination structures, a bus bar, circuit breakers and fuses, control systems, meters, and other equipment that will be determined at final design.⁹

I.A.1.4 Gen-tie Line

An approximately 0.5 mile long 230-kV gen-tie line will connect the facility's collector substation to the point of interconnect (POI) with PacifiCorp's existing 230-kV transmission line at the Diamond Hill Substation (Attachment 1 Figure 1).¹⁰

I.A.1.5 Site Access, Service Roads, Perimeter Fencing, and Gates

Existing roads will provide access to the facility site. The primary transportation corridor to the facility site is Interstate 5. The facility site will be accessed from Priceboro Road and Mount Tom Drive (Figure 1). New service roads will be constructed within the site boundary to provide access to facility infrastructure.

Newly constructed service roads will be graded and graveled as needed to meet load requirements for equipment. Service roads are anticipated to be approximately 20 feet wide and will be constructed to facilitate access within the site boundary for construction and maintenance purposes. Internal service roads will meet applicable standards for emergency

⁷ MCEPNOI Notice of Intent 2023-05-19, p. 7

⁸ MCEPNOI Notice of Intent 2023-05-19, p. 9

⁹ *Id.*

¹⁰ *Id.*

1 vehicle access. To the extent feasible, vegetation will be cleared and maintained along
2 perimeter roads to provide a vegetation clearance area for fire safety. Use of the service roads
3 may continue after construction, or new service roads may be removed, and the land reclaimed
4 to pre-construction conditions.

5
6 The locations of specific access points and gates will depend on the final configuration of the
7 solar array and related infrastructure. Chain-link perimeter fencing, 7 feet in height, will enclose
8 the solar array as well as other infrastructure within the site boundary. The perimeter fencing
9 will have lockable vehicle and pedestrian access gates.¹¹

10 11 I.A.1.6 Temporary Construction Staging Areas

12
13 Temporary construction staging areas will be used for development of the proposed facility to
14 facilitate the delivery and assembly of materials and equipment. The applicant proposes to
15 temporarily store diesel and gasoline fuels in aboveground tanks within designated secondary
16 containment areas at the site. In addition, the applicant proposes to use one or more
17 temporary concrete batch plant areas, located within the temporary construction staging areas.
18 The temporary construction staging areas will be within the site boundary.¹²

19 20 I.B. Applicant Information

21
22 The applicant is Muddy Creek Energy Park LLC (Muddy Creek or applicant), a wholly owned
23 subsidiary of Hanwha Q CELLS USA Corp. (parent company). The officer responsible for
24 submitting the NOI is:

25
26 Brian Tran, Development Manager
27 Hanwha Q CELLS USE Corp.
28 300 Spectrum Center Drive, Suite 1250
29 Irvine, CA 92618
30 Email: brian.tran@qcells.com
31 Phone: (626) 646-3560
32

33 I.C. Procedural History

34
35 On May 19, 2023, the applicant submitted a NOI with the fee required under OAR 345-020-
36 0006. On June 27, 2023, the Department sent notice of the NOI to persons on the Council's
37 general mailing list, special mailing list, and to the owners of property located within the
38 distances specified in OAR 345-020-0010(1)(f)(A).¹³ Public notice also appeared in the Albany
39 Democrat-Herald, a newspaper of general circulation for Linn County, on June 29, 2023. The

¹¹ MCEPNOI Notice of Intent 2023-05-19, p. 9-10

¹² MCEPNOI Notice of Intent 2023-05-19, p. 10

¹³ Noticing conducted in accordance with OAR 345-015-0110, effective September 24, 2020.

public notice provided information regarding the proposed facility and the EFSC review process and announced that a public informational meeting on the NOI would be held in Brownsville, Oregon on July 25, 2023. The public notice requested public comment on the NOI and established August 11, 2023 as the public comment deadline.

The Department held the NOI public informational meeting on July 25, 2023. The Department and the applicant appeared at the informational meeting and provided information about the siting process and the proposed facility and responded to questions from the public.

ORS 469.480(1) requires the Council to designate the governing body of any local government within whose jurisdiction a facility is proposed to be located as a Special Advisory Group (SAG). On June 7, 2023, the Department sent a letter requesting comments and recommendations on applicable local substantive criteria from the Linn County Board of Commissioners (BOC). At the June 23, 2023 EFSC meeting, the Council appointed the Linn County BOC as the SAG for all EFSC proceedings associated with the proposed facility.

In accordance with ORS 469.350 and OAR 345-020-0040(1), the Department prepared a distribution list of state agencies with regulatory or advisory responsibility with respect to the siting of the proposed facility and local governments and tribal governments that could be potentially affected by the proposed facility. On August 1, 2023, the Department provided the list to the applicant for concurrence. In accordance with OAR 345-015-0120, the Department prepared a memorandum requesting comments from the reviewing agencies identified under OAR 345-001-0010. The Department electronically distributed the memorandum to reviewing agencies on July 6, 2023, in accordance with 345-020-0040¹⁴ and subsequently sent the memo to three additional affected local governments on August 1, 2023. The Department requested comments from reviewing agencies on or before August 25, 2023. The reviewing agencies and governments for the proposed facility are listed in Table 1 below.

Table 1: Reviewing Agencies

State Agencies	
• Oregon Department of Agriculture • Oregon Department of Aviation • Oregon Department of Environmental Quality • Oregon Department of Fish and Wildlife • Oregon Department of Forestry • Oregon Department of Geology and Mineral Industries	• Oregon Department of Land Conservation and Development • Oregon Department of State Lands • Oregon Office of State Fire Marshal • Oregon Public Utility Commission • Oregon State Historic Preservation Office • Oregon Water Resources Department
Special Advisory Group (SAG)	
• Linn County Board of Commissioners	

¹⁴ On August 29, 2023, OAR 345-020-0040 was removed from OAR 345 Division 20. Distribution of the NOI and agency memos is established in OAR 345-015-0120, effective August 29, 2023.

Table 1: Reviewing Agencies

State Agencies	
Local Jurisdictions for Public Services	
• City of Brownsville • City of Coburg • City of Eugene • City of Harrisburg • City of Springfield	• Halsey • Junction City • Lane County Planning Department • Linn County Planning Department
Other Reviewing Agencies	
• Pacific Northwest Electric Power and Conservation Planning Council	
Tribal Governments	
• Confederated Tribes of Grande Ronde • Confederated Tribes of Siletz Indians • Confederated Tribes of Warm Springs	

The Department separately requested comments from the Tribal Councils of the Confederated Tribes of Warm Springs, Confederated Tribes of Siletz Indians, and the Confederated Tribes of Grande Ronde in letters issued on July 7, 2023. The Department received comments from the Historic Preservation Office of the Confederated Tribes of the Grande Ronde Community of Oregon on August 2, 2023.

Exact copies of all comments from the SAG, reviewing agencies, tribal governments and members of the public are attached to this Project Order as Attachments 2 and 3.

I.D. Comments on the Notice of Intent

The Department received written and oral comments, in addition to written and submitted comments received via email and the Department of Energy's Public Comment Portal. All written public comments received during the comment period were uploaded to the ODOE Siting Docket¹⁵ and are available for online review. The audio recording of the Public Information Meeting including oral comments received during that meeting, is available on the ODOE project webpage.¹⁶

At the close of the comment period, the Department received comments from 7 state and local governments, the SAG and 136 public comments (41 public comments were provided at the informational meeting). The Department received 6 public comments after the close of the comment period. Despite these comments being submitted after the close of the comment deadline, the Department evaluated them in preparing the Project Order. In accordance with

¹⁵ Oregon Department of Energy Siting Docket Available at: [Siting Docket · Customer Self-Service \(powerappsportals.us\)](https://powerappsportals.us)

¹⁶ Oregon Department of Energy State of Oregon: Facilities – Muddy Creek Energy Park Available At: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/mcep.aspx>

OAR 345-015-0140, the Department sent the applicant a copy of each comment received for their review and consideration in preparing the ASC, including the public comments submitted after the close of the comment deadline. All comments received during the NOI comment period are provided in Attachments 2 and 3.

Table 2 below presents a summary of issues raised in public comments received on the NOI.

Table 2: Summary of Issues Raised in Public Comments

General Theme	# of Related Comments	Council Standard
Conversion of high-value farmland / Preservation of farmland	54	Land Use
Use of sheep grazing to mitigate the conversion of high-value farmland	17	
Potential impacts to local economy	18	
Impacts to birds	23	Fish and Wildlife Habitat
Impacts to big game	16	
Habitat Impacts	27	
Potential soil & hydrologic impacts	24	Soil Protection
Weed management	5	
Impacts to recreation/tourism (biking, visual impacts, noise impacts)	10	Recreation; Protected Areas; Scenic Resources
Impacts to health and safety (transportation, fire)	23	Public Services; Wildfire Prevention and Risk Mitigation
Potential historic, cultural, and archeological impacts	4	Historic, Cultural, and Archeological Resources
Solar facility materials, waste, and lifespan	19	Waste Minimization; Retirement and Financial Assurance
Energy distribution/allocation and generation	5	No applicable Council standard
Potential impacts to property values	16	
Alternative options (location)	29	
Environmental sustainability	12	
EFSC process (noticing, responding to questions)	15	

I.D.1 Special Advisory Group Participation

ORS 469.480(1) requires the Council to designate the governing body of any local government within whose jurisdiction a facility is proposed to be located as a Special Advisory Group (SAG).

1 The site boundary is proposed to be located within Linn County. The governing body of Linn
2 County is the Linn County Board of Commissioners (BOC).

3
4 On June 7, 2023, the Department sent a letter notifying the Linn County BOC that they would
5 be designated as a SAG in accordance with ORS 469.480(1). On July 6, 2023 the Department
6 requested that the Linn County BOC provide comments and recommendations on applicable
7 local substantive criteria by August 11, 2023. The deadline was subsequently extended to
8 August 25, 2023 following a request for more time from the SAG. On September 27, 2023, the
9 Department sent an email to the SAG to discuss any additional questions, comments, concerns
10 about the NOI or the EFSC review process. In the email, the Department offered to schedule a
11 meeting (either virtual or in person). No additional meetings were scheduled as a result of the
12 follow up email.

13
14 The Linn County BOC provided comments on the NOI on August 11 and September 27, 2023.
15 The BOC noted their opposition to the proposed facility and indicated that approving the ASC
16 would make a mockery of Oregon’s Statewide Land Use System and would set a precedent of
17 approving all solar farm applications on high value farmland, with disregard to the positive
18 impact of agriculture to Linn County. Furthermore, the comment letters state that the
19 “property in question is zoned Exclusive Farm Use ...[and a] ‘solar farm’ is not listed as farming
20 activity by the Oregon Department of Agriculture.”

21
22 The applicable substantive criteria recommended by the SAG and affected local government
23 agencies are discussed further in Section III.K. Local permitting requirements are discussed in
24 Section III.E.3 below. The applicant is encouraged to review all comments and
25 recommendations carefully and to coordinate with local governments while preparing
26 application materials.

27 28 **I.D.2 Reviewing Agency Participation**

29
30 On July 6, 2023, the Department requested comments from state agencies with regulatory or
31 advisory responsibility with respect to the siting of the proposed facility (see Table 1 above).
32 Subsequent requests for comment on the NOI were sent on: July 10, 2023 to DLCD and ODAg;
33 August 1, 2023 to the City of Springfield, City of Coburg, and Lane County.

34
35 Request for comment was sent to the Oregon State Historic Preservation Office (SHPO) via their
36 submittal portal on July 6, 2023. Follow up coordination emails to agency contacts were sent
37 on: August 4, 2023 to the ODAg and DLCD; August 10, 18, 25, and September 15, 2023 to DSL;
38 August 18, 2023 to ODFW; and September 21, 2023 to ODAg. The follow up coordination emails
39 resulted in calls with DLCD, ODAg, DSL, and ODFW. Written comments on the NOI were
40 received from DEQ, Linn Couty, ODFW and DSL, and are summarized below, and are included in
41 full in Attachment 3 of this Order. Recommendations from these reviewing agencies have been
42 incorporated into the ASC exhibit requirements and the analysis areas (See Sections III and IV of
43 this order), as applicable.

1 *DEQ Comments*

2 On July 11, 2023, the Department received written comments from Martha Cruse, DEQ's
3 Eastern Region Stormwater Quality Inspector. On July 28, 2023, the Department received a
4 second comment from DEQ's Regional Solutions Center Liaison, Greg Svelund. Both comments
5 indicate that a 1200-C stormwater construction permit may be required. Additionally, the July
6 11, 2023 comment indicates that a "site specific and complete Erosion and Sediment Control
7 Plan, all applicable permit fees, and ODOE issues site certificate be submitted using the Your
8 DEQ Online (YDO) system. The Erosion and Sediment Control Plan must be complete and ready
9 for construction to be approved. A permit will not be issued without an approved Erosion and
10 Sediment Control Plan."

11
12 *Linn County Comments*

13 On August 10, 2023, the Department received written comments from the Linn County
14 Planning and Building Department. The comments provided recommendations on applicable
15 local substantive criteria, and a list of studies, analysis, and information based on adopted Linn
16 County ordinances. In addition, the comments also suggested that the applicant coordinate
17 with Lane County to "to ensure conflicts between the project and impacted resources identified
18 within the study areas located in Lane County, as well as other impacted resources within the
19 study area that may be identified within the Lane County Comprehensive Plan are avoided."¹⁷

20
21 In addition, the Linn County comments also recommend adjustments to the analysis areas for
22 Surface and Groundwater Quality (Exhibit J), Land Use (Exhibit K), Wildfire (Exhibit V), Fish and
23 Wildlife Habitat (Exhibit P), and Public Services (Exhibit U). Linn County recommended an
24 Analysis Area of 5 miles to be applied to Exhibit's J, K, P, and V, and an Analysis Area that would
25 include the cities of Brownsville, Harrisburg, and Halsey for Exhibit U.¹⁸

26
27 *DSL Comments*

28 On August 25, 2023, the Department received written comment from Lynne McAllister,
29 Jurisdictional Coordinator for the Midwest Region. The comments indicated that the applicant's
30 wetland delineation will be reviewed within approximately 90 days, and that if additional
31 information is needed for concurrence, they will be in touch.

32
33 On September 9, 2023, Charles Redon, Aquatic Resource Coordinator at DSL provided
34 comments that advised "Any material placed, removed or altered in wetlands or waterways
35 may be within the regulatory scope of DSL and Oregon's Removal-Fill Law." Additionally, DSL
36 notes that "a completed 'Joint Permit Application' form with attachments, and a preliminary
37 Wetland Delineation [be provided] to provide conditions to ODOE for the equivalent conditions
38 of a Removal Fill Individual Permit...[and that as long as] the site boundary includes all areas

¹⁷ The Department has established analysis areas for the pASC, provided in Table 9 of this Order. The County's comments have been incorporated into the Land Use analysis area.

¹⁸ The Department has established analysis areas for the pASC, provided in Table 9 of this Order. The County's comments have been incorporated into the established analysis areas; to the extent the analysis area extends outside of the proposed site boundary, the analysis area establishes the extent of literature review/desktop methods employed to evaluate potential resources and impacts.

1 where project components will occur (generation, transmission, roads, fencing, temporary
2 storage, ground surface alteration, etc.) then it is sufficient for DSL purposes.” Lastly, the
3 September 9, 2023 comment states that “A wetlands and waters delineation report and maps,
4 concurred by DSL, is required before permit equivalent conditions can be provided. Any impacts
5 to wetlands will require an Oregon Rapid Wetland Assessment Protocol (ORWAP) Functions and
6 Values Assessment. Any impacts to regulated wadable, non-tidal streams will require a Stream
7 Functional Assessment Method (SFAM) Functions and Values Assessment.”

8 9 *ODFW Comments*

10 On August 22, 2023, the Department received written comments from ODFW’s South
11 Willamette Watershed Regional Habitat Biologist, Joseph Stack. The comments included
12 recommended data sources to be reviewed, and survey protocols to follow in the ASC, as well
13 as information on documented presence and/or modeled habitat of state-sensitive fish and
14 wildlife species identified in the Oregon Conservation Strategy (OCS) within the vicinity of the
15 proposed project. ODFW also provides guidance for evaluating delineated wetlands, and the
16 important habitat they provide for migrating and breeding shorebirds, waterbirds, waterfowl,
17 songbirds, mammals, amphibians, and reptiles. Flowing water and riparian setback guidelines
18 were also provided.

19
20 Following a coordination call with the Department on October 2, 2023, Joeeph Stack provided a
21 memo on October 4, 2023, explaining how ODFW staff categorized the habitat within the site
22 boundary. The memo includes how specific habitat categorization is designated based on the
23 relative function and value that the habitat provides for species, and the relative scarcity of the
24 habitat on the landscape.

25 26 **I.D.3 Tribal Government Participation**

27
28 On April 12, 2023, the applicant consulted with the Legislative Commission on Indian Services
29 (LCIS) to identify tribes that may be potentially affected by the proposed facility. Also on April
30 12, 2023, LCIS recommended the applicant consult with the following tribes:

- 31 • Confederated Tribes of Grande Ronde
- 32 • Confederated Tribes of Siletz Indians
- 33 • Confederated Tribes of Warm Springs¹⁹

34
35 On July 7, 2023, the Department, on behalf of the Chair of the Energy Facility Siting Council,
36 sent letters to the Chair of the Tribal Council of each of the aforementioned Tribes, requesting
37 comments regarding historic, cultural, or archaeological resources, and other resources that
38 may have cultural or economic significance to the Tribe. On the same date, the Department
39 sent similar letters requesting comments from the Tribal Councils of the Confederated Tribes of
40 Grande Ronde, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of Warm
41 Springs.

42

¹⁹ MCEPNOI Notice of Intent 2023-05-19, Attachment 3.

On August 2, 2023, the Historic Preservation Office of the Confederated Tribes of Grand Ronde Community of Oregon provided comments recommending that a cultural resource inventory (that includes subsurface testing) be undertaken prior to the project activities and a request that an Inadvertent Discovery Plan (IDP) be in place, and if archaeological and/or cultural resources are discovered at the site, that they be contacted immediately by phone.

II. EFSC REGULATORY FRAMEWORK

Under ORS 469.300(11)(a)(D)(i), a solar photovoltaic power generation facility using more than 160 acres located on high-value farmland as defined in ORS 195.300 is an “energy facility” subject to the jurisdiction of the Council. Under ORS 469.320, no energy facility may be constructed or operated in Oregon without a Site Certificate from the Council. Issuance of a site certificate is governed by ORS 469.300 to 469.563, 469.590 to 469.619, 469.930 and 469.992 and OAR chapter 345.

The following divisions of OAR chapter 345 include rules related to ASC requirements, EFSC review of an ASC, and construction and operation of an approved facility:

OAR Chapter 345, Division 21 (Site Certificate Application Requirements) includes the general site certificate ASC requirements. See Section III of this Project Order for specific information related to ASC requirements for the proposed facility.

OAR Chapter 345, Division 22 (Council Standards for Siting Facilities) establishes the General Standards which apply to all proposed energy facilities and their respective information requirements.

OAR Chapter 345, Division 24 (Specific Standards for Siting Facilities) includes additional standards for specific categories of energy facilities. The Division 24 standard that applies to the proposed facility is OAR 345-024-0090, Siting Standards for Transmission Lines.

OAR Chapter 345, Division 25 (Site Certificate Conditions) includes site certificate conditions that EFSC must include in all site certificates, as well as applicable site-specific and monitoring conditions. As provided in OAR 345-025-0006(10), the Council will include all representations made in the ASC and supporting record that are necessary to either comply with and/or adequately mitigate a potentially significant impact to a resource protected by a Council standard as conditions of approval if the application is approved.

OAR Chapter 345, Division 26 (Construction and Operation Rules for Facilities) includes the compliance plan requirements that will apply if the Council issues a site certificate for the proposed facility. Note that, if a site certificate is issued, the certificate holder must also comply with additional construction- and operation-related regulations that may apply to the proposed facility but that may not be covered by the site certificate, per ORS 469.401(4).

1 III. ANALYSIS AREAS FOR THE PROPOSED FACILITY

The analysis areas are the areas that the applicant must study for potential impacts from the construction and operation of the proposed facility. **Please Note:** If significant impacts associated with the applicable Council standards could occur beyond the analysis areas described here, then the applicant must assess those impacts in the ASC and show how the facility would comply with the applicable standard with regard to the larger area where impacts could occur.

For all potential impacts, the analysis area includes all the area within the site boundary. Most analysis areas also include an area extending a specified distance from the site boundary. The minimum required analysis areas are presented in **Error! Reference source not found..**

Table : Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE's Basis for Analysis Area
Structural Standard	H	The area within the site boundary, notwithstanding the distances related to an assessment of seismic hazards required by OAR 345-021-0010(1)(h).	Default minimum
Soil Protection	I	The area within the site boundary and extending: • North - all area extending to Bond Butte Drive, and any EFU zoned land east of the Bond Butte Drive (but not any further than Gap Road) • South – all lands within EFU and extending 2-miles from the site boundary • East – all lands within EFU and extending 2-miles from the site boundary • West – Interstate 5	The analysis area has been extended from the default minimum (area within the site boundary) to reasonably adjacent lands with potential for agriculturally productive soils which could be impacted by the facility
Land Use	K	The area within and extending ½-mile from the site boundary except for the evaluation of MCZO 6.025(A). For the evaluation of MCZO 6.025(A), the analysis area shall be the area within the site boundary and extending: • North - all area extending to Bond Butte Drive, and any EFU zoned land east of the Bond Butte Drive (but not any further than Gap Road) • South – all lands within EFU and extending 2-miles from the site boundary	Extent of MCZO 6.025(A) evaluation based on the location of the proposed facility, landscape, existing infrastructure, and current land use. The analysis area for the MCZO 6.025(A) evaluation was discussed with both ODAg and DLCD.

Table : Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE's Basis for Analysis Area
		East – all lands within EFU and extending 2-miles from the site boundary West – Interstate 5	
Wetlands	J	The area within the site boundary, except that the desktop analysis for wetlands and waters of the state shall extend 5 miles from the site boundary.	Extent of desktop analysis is based on recommendations from Linn County (based on prominence of hydric soils in the area)
Protected Areas	L	The area within and extending 15 miles from the site boundary.	Based on the location of the proposed facility, and its relation to landscape, and existing infrastructure.
Fish and Wildlife Habitat	P	The area within and extending 0.5 mile from the site boundary, except that the desktop analysis for fish and wildlife habitat shall extend 5 miles from the site boundary.	Extent of desktop analysis is based on recommendations from Linn County (based on proximity of the site to sensitive fish habitat, and peripheral and sensitive big game habitat)
Threatened and Endangered Species	Q	The area within and extending 5 miles from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(a))
Scenic Resources	R	The area within and extending 10 miles from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(b))
Historic, Cultural and Archaeological Resources	S	For direct impacts to archeologic sites and objects, the area within the site boundary. For indirect impacts to aboveground resources, including Traditional Cultural Properties or Historic Properties of Religions and Cultural Significance to Indian Tribes, identified within 1-mile of the site boundary during the desktop review, the analysis area shall include the area within and extending 1-mile from the site boundary.	Consistent with SHPO guidance

Table : Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE's Basis for Analysis Area
Recreation	T	The area within and extending 5 miles from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(d))
Public Services	U	The area within and extending 20 miles from the site boundary, to include the Cities of Eugene, Springfield, Lebanon, and Sweet Home.	Extent of desktop analysis is based recommendations from Linn County (based on rural nature of the area and access to food, dining, hotel and RV camping in these other adjacent areas that are likely to be used by construction workers)
Wildfire Risk	V	The analysis area is the site boundary and 0.5 mile from the site boundary, except that the desktop analysis for wildfire risk shall extend 5 miles from the site boundary.	Extent of desktop analysis is based recommendations from Linn County (based on recent experience from 2023 Priceboro Fire)
Noise Control Regulation	Y	The area within and extending 1-mile from the site boundary.	Consistent with distance identified in OAR 345-021-0010(1)(y)(E)
Notes: 1. The applicant should note that analysis areas defined in this Project Order are to be used for the assessment of impacts to the associated resource. The applicant is not required to perform comprehensive field surveys of the entire analysis area if another method of impact assessment is suitable. However, the Department reserves the right to require field surveys if it is determined that a different method of analysis is insufficient to provide the level of information necessary to find the application complete. It is recommended that the Department be consulted if the applicant wishes to propose alternative methods of analysis than field surveys.			

IV. APPLICATION REQUIREMENTS

The applicant must include all information required under OAR 345-021-0010, including all information that would otherwise be required by any state agency or local government to issue a permit, license, or certificate that the applicant proposes to be included in and governed by the site certificate.²⁰ The applicant must also submit copies of the applications for federally delegated permits that are needed for construction or operation of the proposed facility.²¹

OAR 345-021-0010(1) identifies the exhibits that must be included in the ASC. The specific subsections and paragraphs of OAR 345-021-0010(1) that apply to the proposed facility are indicated in the sections below. Each exhibit must include a table of contents.²²

IV.A. General Information about the Proposed Facility

Applicable Sections: OAR 345-021-0010(3)(a)(A)(i) through (v), (B), (C), (D), (E) and (F); (3)(b), (3)(c) (3)(d), (3)(g), (3)(h), (3)(i).

Discussion: The General Information Exhibit must provide information about the proposed facility, construction schedule and temporary disturbances of the site, and adjacent properties. The Applicant must address all provisions applicable to transmission lines, including the corridor assessment required under OAR 345-021-0010(3)(a)(E).

IV.A.1 Facility Description

Under OAR 345-021-0010(3)(a)(A) through (C) and (E), the General Information Exhibit must include a description of the facility that includes, at a minimum:

- The nominal electric generating capacity and the average electrical generating capacity of the proposed solar photovoltaic power generating facility.
- A detailed description of all major components, structures and systems that will be part of the proposed facility, including:
 - The capacity, dimensions, type, and configuration of equipment used to generate, store, transmit, or transport electricity.
- A site plan showing the general arrangement of buildings, equipment, and structures, including any proposed temporary laydown or staging areas and any proposed microsite corridors/areas. Note that if the applicant seeks flexibility to site proposed facility components anywhere within the site boundary, or seeks approval of a microsite corridor, the applicant must evaluate impacts to resources within the entire site boundary or microsite corridor based on maximum the impact facility layout option within the site boundary or microsite area, if different.

²⁰ OAR 345-021-0000(6)

²¹ OAR 345-021-0000(7)

²² OAR 345-021-0010(3)

- The capacity, dimensions, type, number, and configuration of related or supporting facilities, including but not limited to the battery energy storage system, collector substation, gen-tie line, POI/interconnection facilities, roads, and fences.
- Identification and description of any fuel and chemical storage facilities, including structures and systems for spill containment
- Equipment and systems for fire prevention and control in any system components, including water tanks, internal fire suppression systems, and access and egress points for fire responders.

The description must be in both narrative and tabular format, like the examples provided in Tables 4 and 5 below.

Table 3: Example Energy Facility Specifications and Details

Component	PV Only	PV plus Storage (Dispersed)
3 MWac Block	160	
Modules	1,326,858	1,742,572
Module Rows (on trackers)	16,587 x 78 module rows	21,644 x 78 module rows
Posts	187,545	246,444
Inverters	160	
Transformers	160	

Table 4: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
Direct current electrical system, above and belowground	Up to 2 million miles of cable; combiner boxes
34.5 kV ac electrical system	Inverters, step-up transformers and 160 home-run cables
Collector Substations, 1 acre each	4, with oil-containing step-up transformers; equipment height = 10'
115 kV generation-tie transmission line	2 miles, double circuit consisting of: • 37 single steel monopole structures up to 6 feet in diameter, spaced approximately 300 feet apart, and approximately 70 feet in height. • Concrete foundations up to 20 feet deep, which may have directional anchoring system structures.
115/500 kV step-up substation, 3 acres	1 substation consisting of: • up to 2 115 to 500 kV transformers, each containing 50,000 gallons of transformer oil • one 115 kV input structure • two 115 kV circuit breakers • two 500 kV circuit breakers • 500 kV output structures

Table 4: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
	• a control building for housing control and communication equipment. • 65–100-foot interconnection structures
Operations and Maintenance Building, 0.5 acre	2 O&M buildings, 50 x 50 x 14', consisting of: • warehouse-like storage area • human machine interface system • restrooms and employee work areas • an exempt groundwater well • septic system
Perimeter Fence	Approx. 18 miles, chain link
Battery Storage Enclosures	134 steel framed structures: • approximately 50 feet wide, 67 feet long and up to 30 feet tall Balance of Plant (BOP) consisting of: • large polymer tanks on each side of the cell stack, pumps, piping (polyvinyl chloride), thermal controls, and power conversion hardware (single stage, bidirectional inverters). • Storage tanks with non-hazardous, water-based electrolyte/polymer. • Primary and secondary spill containment devices • Thermal system control of a heating, ventilation, air conditioning (HVAC) air-to-air and glycol-to-air (non-toxic) heat exchanger
Batteries	• outdoor rated • negatively grounded, ground fault detection and interruption capable of detecting ground faults in the dc current carrying conductors and components • intentionally grounded conductors, insulation monitoring, • dc and ac overvoltage protection and lightning protection, • humidity control • data acquisition and communication monitoring interface.
Inverters	160
Redox Electrolyte Fluid	14,000 gallons per MW
Supervisory Control and Data Acquisition System	Fiber optic cables installed above- and below ground with collection system
Perimeter roads	50 miles

Table 4: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
	• Built with materials designed to act as fire breaks, sized for emergency vehicle access in accordance with Oregon Fire Code. • Internal roads of 12 x 20' with at least a 30-foot noncombustible, defensible space clearance for fire prevention

The information in the General Information Exhibit must be as complete and accurate as possible. If the ASC is approved, the information will form the basis for the description of the facility in the site certificate. As provided under OAR 345-025-0006(3)(a), the site certificate will contain conditions requiring the certificate holder to design, construct, operate and retire the facility substantially as described in the site certificate.

IV.A.2 Corridor Selection Assessment

Because the proposed 0.5-mile transmission line does not meet the definition of an energy facility by itself, therefore OAR 345-021-0010(3)(a)(D) does not apply.

IV.A.3 Construction and Maintenance Schedule

Under OAR 345-021-0010(3)(a)(F), the General Information Exhibit must include a construction schedule including a description of all primary construction activities that will be performed at the site and the estimated timing of those activities. "Construction activities" include all work performed at the site, excluding surveying, exploration, or other activities to define or characterize the site. The construction schedule must be provided in sufficient detail to ensure construction activities will be completed within any required work-windows required to avoid or minimize impacts on sensitive resources.

The General Information Exhibit must also describe routine operations and maintenance activities, including the frequency for panel or part replacement and repowering that will be performed during operation of the facility, including any anticipated need to replace or repower facility components.

IV.A.4 Site Description and Maps

Under OAR 345-021-0010(3)(b)(A), the General Information Exhibit must include maps showing the proposed locations of the energy facility site, all related or supporting facility sites, and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features.

1
2 Maps included in the ASC must provide enough information for property owners potentially
3 affected by the proposed facility to determine whether their property is within or adjacent to
4 property on which the site boundary is located. Major roads must be accurately named. Maps
5 included in the ASC must use a scale of 1 inch = 2000 feet, or smaller when necessary to show
6 detail.

7
8 The maps must identify all proposed transmission line routes and corridors for which the
9 applicant seeks Council approval. If the applicant seeks flexibility to site facility components
10 anywhere within the site boundary or an established micrositng area, please clearly identify in
11 maps and include an evaluation to support the facility “micrositng area,” to be consistent with
12 the intent of a “micrositng corridor” (OAR 345-001-0010(32)).

13
14 Under OAR 345-021-0010(3)(b)(B), the General Information Exhibit must also include a
15 narrative description of the proposed energy facility site, the proposed site of each related or
16 supporting facility and areas of temporary disturbance, including the total land area (in acres)
17 within the proposed site boundary, the total area of permanent disturbance, and the total area
18 of temporary disturbance. While all areas within the proposed energy facility footprint would
19 be considered permanent disturbance for the purposes of the Fish and Wildlife Habitat
20 Standard, the exhibit should identify the estimated areas that would be affected by temporary
21 (e.g. grading, temporary vegetation clearing) and permanent (i.e. graveling, foundation
22 installation) disturbance activities separately.

23
24 In addition to the maps and narrative described above, the Department requests GIS data
25 showing the site boundary and any micrositng corridors proposed by the applicant and the
26 general location of facility components to the best knowledge of the applicant at the time the
27 application is submitted, including but not limited to: any proposed or alternate transmission
28 line corridors, converter stations, substations, and temporary work areas, including laydown
29 yards.

30
31 The Department notes that the applicant has already shared GIS data for the proposed facility,
32 and requests updated GIS data if there are changes to the site boundary or proposed facility
33 layout between the NOI and the submittal of the pASC.

34 35 **IV.A.5 Adjacent Properties**

36
37 The General Information Exhibit must identify all tax lots or parcels located wholly or partially
38 within the site boundary, and those tax lots within 500 feet of the tax lots on which the project
39 is proposed, when the tax lot or parcel located within the site boundary is within a farm or
40 forest zone.

41
42 Tax lots must be identified in a consistent format that provides the Township, Range, Section
43 and Tax lot number of each tax lot. If the local government uses a different tax lot identification
44 system, please include the local tax lot identification number in a separate column.

1
2 The General Information Exhibit must also include the contact information for the owner of
3 record of each identified tax lot based on the tax assessment roll for the jurisdiction in which
4 the tax lot is located. Because the Department requires the most recent tax assessment roll to
5 be used, the Department will require updated property owner information to be submitted
6 within 60 days of the determination of completeness. To avoid the duplication of work, the
7 applicant may omit specific property owner information from the preliminary Application for
8 Site Certificate but must still include a list of all tax lots within the notification area described
9 above. The list must be accompanied by legible maps that include: 1) the properties that are
10 wholly or partially in the site boundary with a specific outline color ; 2) the properties that are
11 within 500 feet of the properties that are wholly or partially in the site boundary with a
12 different outline color; 3) tax lot identification numbers for tax lots in 1 and 2 above; and 4)
13 adjacent road names. In addition to incorporating the list in the application, the applicant must
14 submit the list to the Department in Excel Workbook (.xlsx) or comma-separated values (.csv)
15 format.

16
17 Following the submission of the complete application, the applicant must submit updated
18 property owner lists as requested by the Department to ensure that all public notices issued
19 use the most recent tax assessment roll.
20

21 IV.B. Organizational Expertise (OAR 345-022-0010)

22 **Applicable Sections:** OAR 345-022-0010(1) to (4); (5)(a)(A), (B), and (H); (5)(b) and (c), all
23 paragraphs.

24 **Discussion:** The Organizational Expertise Exhibit must include information about the applicant,
25 as well as the organizational expertise of the applicant to construct and operate the proposed
26 facility, providing evidence to support a finding that the applicant has the ability to construct,
27 operate, and retire the proposed facility in compliance with Council standards and conditions of
28 the site certificate; and, in a manner that protects public health and safety. The exhibit must
29 also include information about the permits needed for the facility (see Section IV.B.3 below).
30

31 IV.B.1 Applicant Information - OAR 345-022-0010(5)(a)

32
33 Under subsection (A), the Organizational Expertise Exhibit must identify the legal name and
34 address of the applicant and any co-owners of the proposed facility. The application must
35 provide the name, mailing address, email address and telephone number of at least one
36 contact person for the applicant, and if there is a contact person other than the applicant, the
37 name, title, mailing address, email address and telephone number of that person.
38

39 As described above, the NOI identifies Muddy Creek Energy Park, LLC as the applicant. The
40 applicant must notify the Department of any change in the legal name or entity prior to the
41 change. This notification requirement continues to apply until the Council issues its Final Order
42 on the ASC.
43

1 Under subsection (B), the Organizational Expertise Exhibit must identify any participating
2 entities other than the applicant, including but not limited to, the parent company of the
3 applicant and any persons upon whom the applicant will rely for third-party permits or
4 approvals related to the facility, and, if known, other persons upon whom the applicant will rely
5 in meeting any facility standard adopted by the Council.

6
7 The NOI identifies Muddy Creek Energy Park, LLC (applicant) as a wholly-owned subsidiary of
8 Hanwha Q CELLS USA Corp. (parent company). The applicant must disclose any changes to the
9 ownership or management in this Exhibit.

10
11 Because the applicant is a limited liability company, subsection (H) applies. Under this
12 paragraph, the Organizational Expertise Exhibit must include:

- 13 • The full name, official designation, mailing address, email address and telephone
14 number of the officer responsible for submitting the application.
- 15 • The date and place of the LLC's formation.
- 16 • A copy of the LLCs articles of organization and its authorization for submitting the
17 application.
- 18 • Proof of registration to do business in Oregon.

19
20 The applicant is not required to identify a resident attorney-in-fact because it is registered to do
21 business in Oregon, however, it must still identify and maintain a registered agent that can
22 accept legal service in this state.

23 24 **IV.B.2 Previous Experience and Qualifications - OAR 345-022-0010(5)(b)**

25 Under subsection (A), the exhibit must describe the applicant's previous experience, if any, in
26 constructing and operating facilities similar to the proposed facility. The description must
27 include, at a minimum, the size, location, and date of commercial operation for any facilities
28 upon which the applicant wishes to rely as evidence of organizational expertise. The description
29 should also provide an analysis of similarities and differences between the sites of the facilities
30 and their sites, including engineering and environmental constraints at each.

31
32 Under subsections (B) and (C), the exhibit must describe the qualifications of the applicant's
33 personnel who will be responsible for constructing and operating the facility, and the
34 qualifications of any architect, engineer, major component vendor, or prime contractor upon
35 whom the applicant will rely in constructing and operating the facility, to the extent that the
36 identities of such persons are known when the application is submitted.

37
38 Under subsection (D), the exhibit must describe the compliance history of the applicant, its co-
39 owners and their subsidiaries, and other participating entities, including disclosure any
40 regulatory citations in any jurisdiction received by the past 10 years and a description of the
41 status or resolution of those citations.

Under subsection (G), the exhibit must include evidence that the applicant can successfully complete any mitigation proposed to demonstrate compliance with any applicable Council standards, including reports documenting past experience with other projects and the qualifications, experience, and contact information of personnel upon whom the applicant will rely, to the extent that the identities of such persons are known at the date of submittal. The applicant must provide evidence that past mitigation projects required as part of a land use approval or other permitting process were completed successfully, such as final reports submitted to the permitting agency.

The Organizational Expertise Exhibit must also include drafts of any plans needed to comply with Council standards, including plans for wildfire mitigation and response, emergency management, and erosion control and spill prevention if those plans are not included in another exhibit.

IV.B.3 Permits – OAR 345-022-0010(5)(c)

Under subsections (A) and (B), the exhibit must identify all federal, state, and local government permits related to the siting of the proposed facility. ORS 469.310 establishes the Council’s comprehensive licensing authority, which is referred to as a “one-stop” consolidated permitting process. Permits related to the siting of the proposed facility should be included in and governed by the site certificate to consolidate permitting processes, consistent with ORS 469.310; however, it is the applicant that must identify whether permits should be governed by the site certificate. For each permit, the exhibit must include:

- A description of the permit and the reasons the permit is needed.
- A legal citation of the statute, rule or ordinance governing the permit.
- The name, mailing address, email address and telephone number of the agency or office responsible for the permit.
- The applicant’s analysis of whether the permit should be included in and governed by the site certificate.

Under subsection (C), for any state or local government agency permits, licenses or certificates that are proposed to be included in and governed by the site certificate, the exhibit must also provide evidence to support findings by the Council that construction and operation of the proposed facility will comply with the statutes, rules, and standards applicable to the permit. Information about removal-fill permits must be provided in the Removal-Fill Exhibit. Provide information about any necessary water rights or permits in the Water Rights Exhibit.

Under subsection (E), if the applicant will rely on a contractor or third party to obtain a required state or local permit, license or certificate that would otherwise be governed by the site certificate, the exhibit must also include evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit and evidence that the third party has, or has a reasonable likelihood of obtaining, the necessary permit.

Although the Council does not have jurisdiction over federally delegated permits, the Council may rely on the determinations of compliance and the conditions in federally delegated permits in evaluating the application for compliance with Council standards. Under subsection (D), the exhibit must include evidence that the responsible agency for any federally delegated permitted program has received a permit application. The applicant must provide the estimated date when the responsible agency will complete its review and issue a permit decision. If the applicant relies on a contractor or third party to obtain a required state or local permit, license or certificate that will be governed by the site certificate, the Organizational Expertise Exhibit must also include the information required by subsection (F).

Table 6 lists permits that may be required for the proposed facility. Additional information is provided in the discussion that follows.

Table : Potentially Required Permits

Permitting Authority	Permit	EFSC Jurisdiction
Federal and Federally Delegated Permits		
U.S. Army Corps of Engineers	Section 404 Permit	Not Jurisdictional, but information required for completeness ¹
Federal Aviation Administration	Notice of Proposed Construction or Alteration (Form 7460-1)	Not Jurisdictional
	Supplemental Notice of Actual Construction or Alteration (Form 7460-2)	Not Jurisdictional
U.S. Fish and Wildlife Service	Incidental Take Permit or Eagle Take Permit	Not Jurisdictional
Oregon Department of Environmental Quality	NPDES Construction Stormwater 1200-A Permit	Not Jurisdictional, but information required for completeness ¹
	NPDES Construction Stormwater 1200-C Permit	Not Jurisdictional, but information required for completeness ¹
	Basic Air Contaminant Discharge Permit	Not Jurisdictional, but information required for completeness ¹
State (Oregon Only)		
Oregon Department of State Lands	Removal-Fill Permit & Wetland Delineation Concurrence	Jurisdictional if proposed by applicant
Oregon Department of Environmental Quality	Water Pollution Control Facilities Permit 1000, Gravel mining and Batch Plant	Not Jurisdictional
	Water Pollution Control Facilities Permit 1700-B	Not Jurisdictional
Oregon Department of Transportation	Oversize Load Movement Permit	Not Jurisdictional
	Access Management Permit	Not Jurisdictional
	Utility Encroachment Permit	Not Jurisdictional

Table : Potentially Required Permits

Permitting Authority	Permit	EFSC Jurisdiction
Oregon Water Resources Department	Water Right Permit or Limited Water Use License	Jurisdictional if proposed by applicant
State Historic Preservation Office	Archeological Excavation Permit	Jurisdictional if proposed by applicant
Oregon Department of Aviation	Notice of Proposed Construction or Alteration (Form 7460-1)	Jurisdictional
Local (Oregon)		
Linn County	Conditional Use Permit	Jurisdictional
	Zoning Permit	Not Jurisdictional
	Building Permit	Not Jurisdictional
	Utility Placement in Right-of Ways and Access Approach Site Permit	Not Jurisdictional
	Right-of-Way Permit	Not Jurisdictional
Notes: ¹ Under OAR 345-022-0010(5)(c) the application must identify all federal, state and local government permits related to the siting of the proposed facility. For federally delegated permits, the application must include evidence that the responsible agency has received a permit application and the estimated date when the responsible agency will complete its review and issue a permit decision. The department requests this evidence be provided for all federal permits. ² Under ORS 469.401(4), matters including but not limited to employee health and safety, building code compliance, wage and hour or other labor regulations, local government fees and charges or other design or operational issues that do not relate to siting the facility are not included in or governed by the site certificate.		

IV.B.3.1 Federal Permits

U.S. Army Corps of Engineers

Section 404 Permit: (*Not Jurisdictional, but information required for completeness*)

Statute and Rule References: Clean Water Act, Section 404; 33 CFR 1344.

Discussion: Section 404 of the Clean Water Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the discharge of dredged or fill material into all waters of the United States, including wetlands. Note that a Section 401 Water Quality Certification from the State of Oregon is generally required before a Section 404 permit may be granted. The Section 404 permit and the 401 Water Quality Certification are separate from the Removal-Fill permit required under Oregon State Law, however, there is a Joint Permit Application that satisfies the information requirements for all three. The applicant must provide a letter or other indication from the Corps stating that it has received a Joint Permit Application for the project, identifying any additional information it is likely to need from the applicant based on the agency's review of the application, and providing an estimated date for when it will complete its review and issue a permit decision.

Oregon Department of Environmental Quality

1 *National Pollution Discharge Elimination System (NPDES) Construction Stormwater 1200-C*
2 *permit: (Federally delegated. Not Jurisdictional, but information required for completeness)*

3
4 *NPDES Stormwater and Mine Dewatering Discharge 1200-A permit: (Federally delegated Not*
5 *Jurisdictional, but information required for completeness)*

6
7 **Statute and Rule References:** ORS Chapter 468B; OAR Chapter 340, Division 45

8 **Discussion:** The EPA has delegated authority to DEQ to issue NPDES Stormwater Discharge
9 permits for construction and operation activities. Based upon the information in the NOI, a
10 NPDES 1200-C permit would likely be required for facility construction.

11
12 In accordance with OAR 345-021-0000(6), the applicant must submit to the Department one
13 copy of all applications for federally delegated permits (including the NPDES permit) or provide
14 a schedule of the date by which the applicant intends to submit the application. Unless this
15 permit will be obtained by a third-party (see Section IV.B.5), the Department will not be able to
16 find the application for site certificate complete before receiving a copy of the NPDES permit
17 application and a letter or other indication from DEQ. The DEQ response must state that the
18 agency has received a permit application from the applicant and provide an estimated date
19 when the agency will complete its review and issue a permit decision.

20
21 Disposal of concrete batch plant wash water (if a temporary batch plant is necessary) would
22 require either an NPDES 1200-A permit or a WPCF General Permit 1000. If the batch plant was
23 to discharge stormwater from a point source to surface water or to a conveyance system that
24 discharges to surface water, the plant would require an NPDES 1200-A permit. If the applicant's
25 third-party contractor would instead obtain the NPDES 1200-A permit, the requirements
26 described in the Third-Party Permits section below would apply. Alternatively, if the batch plant
27 would be located within a construction staging yard for which the applicant would seek
28 coverage under an NPDES 1200-C permit described above, the applicant may seek coverage for
29 the batch plant under the same NPDES 1200-C permit.

30
31 If the batch plant would not discharge to surface waters, a WPCF General Permit 1000 would
32 instead be required to dispose of process wastewater and stormwater by recirculation,
33 evaporation, and/or controlled seepage (see the State Permits discussion below).

34
35 *Basic Air Contaminant Discharge Permit: (Federally delegated. Not EFSC-jurisdictional, but*
36 *information required for completeness)*

37
38 **Statute and Rule References:** OAR Chapter 340, Division 216

39 **Discussion:** The United States Environmental Protection Agency (EPA) has delegated authority
40 to the Oregon Department of Environmental Quality (DEQ) to administer air quality under the
41 Clean Air Act. A Basic ACDP authorizes operation of a concrete manufacturing plant that
42 produces more than 5,000 but less than 25,000 cubic yards per year output. ACDPs for mobile,
43 temporary concrete batch plants are associated with the equipment itself. The requirements of
44 OAR 345-021-0000(6) would apply to this federally delegated permit. If the applicant's third-

1 party contractor would instead obtain the ACDP, the requirements described in the Third-Party
2 Permits section below would apply.

3 4 IV.B.3.1 State Permits

5 Oregon Department of State Lands

6
7 *Wetland Delineation and Removal Fill Permit: (EFSC-jurisdictional)*
8

9 **Statute and Rule References:** ORS 196.795-990; OAR chapter 141, division 85, 90

10 **Discussion:** A removal-fill permit is required if any removal or fill activities occur in streams
11 designated as Essential Indigenous Anadromous Salmonid Habitat or 50 cubic yards or more of
12 material is removed, filled, or altered within a jurisdictional water of the state [OAR 141-085-
13 0520(2) and (5)].

14
15 The applicant must conduct a wetland delineation, to be sent to Department of State Lands
16 (DSL) for concurrence, according to OAR chapter 141, division 90. The wetland delineation
17 determines the location of “waters of this state,” as defined in OAR 141-085-0510(91), within
18 the analysis area. A detailed discussion of the requirements for the wetland delineation report
19 is included Section **Error! Reference source not found.** and the comments provided by DSL in
20 Attachment 3.

21
22 Depending upon facility impacts to “waters of this state” a removal-fill permit may be
23 necessary, and the application for site certificate must include information establishing whether
24 a removal-fill permit is required. The information in the NOI indicates that a removal-fill permit
25 is not likely to be required. If a removal-fill permit is required, the ASC must include a concurred
26 delineation from DSL and a complete application for an individual permit which demonstrates
27 consistency with ORS 196.825(1) and provides enough information for determinations and
28 considerations under ORS 196.825(3) and OAR 141-085-0565.

29
30 A Compensatory Wetland Mitigation Plan which meets the requirements of OAR 141-085-0680
31 through OAR 141-085-0715 must be provided to replace all lost functions and values previously
32 provided by the impacted wetlands and waterways.

33
34 If the proposed facility also requires a Section 401 permit from the Army Corps of Engineers and
35 a Section 401 Water Quality Certification from the Oregon Department of Environmental
36 Quality, these approvals are separate from the Removal-Fill permit, however, there is a Joint
37 Permit Application that satisfies the information requirements for all three. As discussed above,
38 **if applicable**, the applicant must provide a copy of the complete Joint Permit Application with
39 the ASC in addition to documentation that it has been submitted to the Corps and DEQ, as
40 described above.

41
42 Oregon Department of Environmental Quality
43

1 *Water Pollution Control Facilities (WPCF) General Permit 1000, Gravel mining and Batch Plant:*
2 *(EFSC-jurisdictional unless obtained by third-party; see Third-Party Permits discussion)*
3 *WPCF General Permit 1700-B: (EFSC-jurisdictional)*
4

5 **Statute and Rule References:** ORS Chapter 468B; OAR Chapter 340, Division 45

6 **Discussion:** If a temporary batch plant is necessary, disposal of concrete batch plant wash water
7 would require either a Water Pollution Control Facilities (WPCF) General Permit 1000 or a
8 NPDES permit. Concrete batch plants that dispose of process wastewater and stormwater by
9 recirculation, evaporation, and/or controlled seepage with no discharge to surface waters
10 require a WPCF General Permit 1000. A WPCF General Permit 1000 is a state permit under
11 Council jurisdiction. If the applicant's third-party contractor would obtain the necessary WPCF
12 General Permit 1000 directly from DEQ, this permit would be related to the siting and operation
13 of the proposed facility but would not be included in and governed by the site certificate (see
14 the Third-Party Permits discussion below). If the batch plant was to instead discharge
15 stormwater from a point source to surface water or to a conveyance system that discharges to
16 surface water, the plant would require an NPDES 1200-A permit or coverage under the NPDES
17 1200-C permit for the construction yard in which it would be located (as discussed under the
18 federally delegated permits discussion of this Project Order).
19

20 Disposal of solar panel wash water would require a WPCF 1700-B permit. The NOI indicates that
21 either the Applicant or a third-party contractor who will conduct the solar panel washing
22 activities may seek coverage under the WPCF-1700-B permit from ODEQ following completion
23 of construction and before initiating any washing activities. DEQ has indicated to the
24 Department that a WPCF General Permit 1700-B is not required for solar array washing
25 activities that would not result in discharge to surface waters, storm sewers, or dry wells, and
26 that would not use acids, bases, metal brighteners, steam, or heated water. The use of
27 biodegradable, phosphate-free cleaners with cold water is allowed. However, cleaning only
28 with cold water is recommended. Chemicals, soaps, or detergents must be used sparingly. The
29 applicant or its third-party contractor should seek guidance from DEQ prior to conducting solar
30 module washing activities. A WPCF 1700-B and WPCF General Permit 1000 are state permits
31 under Council jurisdiction. If the applicant's third-party contractor would obtain the necessary
32 WPCF 1700-B permit directly from DEQ, this permit would not be included in and governed by
33 the site certificate (see the Third-Party Permits discussion below).
34

35 Oregon Water Resources Department
36

37 *Water Right Permit or Water Use Authorization: (EFSC-jurisdictional)*
38

39 **Statute and Rule References:** ORS chapter 537; OAR chapter 690 division 310, 340, and 410

40 **Discussion:** As represented in NOI Exhibit J, the applicant proposes to obtain water from existing
41 municipal water sources with valid water rights and truck it to the site. Additionally, the
42 applicant states that if water is not available from nearby municipalities, they could apply for a
43 limited water use license to allow either a new well or use of an existing well for facility
44 construction water. Water right permits, limited water use licenses, and other water

1 authorizations for energy facilities are subject to review and authorization by the Council, and
2 any permit would be included in and governed by the site certificate.

3
4 State Historic Preservation Office

5
6 *Archaeological Excavation Permit: (Not EFSC-jurisdictional, unless proposed by the applicant)*

7
8 **Statute and Rule References:** ORS Chapter 97, 358, and 390; OAR Chapter 736, Division 51

9 **Discussion:** Per ORS 390.235 and 358.920 a person may not excavate, injure, destroy, or alter
10 an archaeological site or object or remove an archaeological object located on public or private
11 lands in Oregon unless that activity is authorized by an Archaeological Permit issued by the
12 State Historic Preservation Office (SHPO). The applicant has not proposed to have this permit
13 be included and governed by the site certificate, and as such the applicant will be required to
14 obtain this permit from the State Historic Preservation Office prior to ground disturbing
15 activities at the site. The applicant must provide a letter or other indication from SHPO stating
16 that it has received an application for an excavation permit for the project, identifying any
17 additional information it is likely to need from the applicant based on the agency's review of
18 the application, and providing an estimated date for when it will complete its review and issue
19 a permit decision. The applicant must attach a copy of any archaeological report and
20 inadvertent discovery plan prepared in support of the application to Historic, Cultural, and
21 Archeological Exhibit.

22
23 ***Oregon Department of Aviation – Form 7460-1 Notice of Proposed Construction or Alteration***

24 **Statute and Rule References:** ORS 836.530 and OAR 738-070-0060 – 0100.

25 **EFSC Jurisdiction:** Jurisdictional.

26 **Discussion:** OAR 738-070-0100 establishes standards and notification requirements for objects
27 affecting navigable airspace. Any structures exceeding 200 feet in height are subject to
28 compliance with Federal Aviation Administration (FAA) Part 77.9. Applicant shall provide
29 preliminary location data for facility components as indicated on FAA Form 7460-1 to aid in
30 ODAV's determination of potential impacts to air navigation. This review and determination will
31 be incorporated and governed by the site certificate.

32
33 **IV.B.4 Local Permits**

34
35 **IV.B.4.1 Linn County**

36
37 ***Conditional Use Permit (EFSC-jurisdictional)***

38
39 **Statute and Rule References:** ORS Chapter 469.504; Linn County Land Development Code
40 Article 928.320(18) and 921.874.

41 **Discussion:** Linn County has permitting requirements that relate to the siting, construction, or
42 operation of the proposed facility.

As stated in the NOI, the applicant requests that the Council determine compliance with the statewide planning goals under ORS 469.504(1)(b). Accordingly, the conditional use permit will be included in and governed by the site certificate.

The other listed Linn County permitting requirements are not related to facility siting and as such will not be included in or governed by the site certificate. Building permits are specifically excluded from EFSC jurisdiction by statute, ORS 469.401(4).

IV.B.5 Third-Party Permits

Discussion: As noted in the NOI, the applicant may rely upon third-party permits for access to resources necessary for facility construction and operation. If the applicant relies upon a state or local government permit issued to a third party that is related to the siting of the proposed facility, the applicant must identify each third-party permit, and, for each, include evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit; evidence that the third party has or, has a reasonable likelihood of obtaining, the necessary permit; and, an assessment of the impact of the proposed facility on any permits that a third party has obtained and on which the applicant relies to comply with any applicable Council standard (OAR 345-022-0010(5)(c)(E)).

If the applicant relies on a federally delegated permit issued to a third party that is related to the siting of the proposed facility, the applicant must identify the third-party permit and include evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit. The applicant must provide evidence that the responsible agency has received the permit application and provide the estimated date when the responsible agency will complete its review and issue a permit decision (OAR 345-022-0010(5)(c)(F)).

In accordance with OAR 345-022-0010(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.

IV.C. Structural Standard (OAR 345-022-0020)

Applicable Sections: OAR 345-022-0020(1), (4).

Discussion: The Structural Standard Exhibit must include Information regarding the geological and soil stability within the analysis area sufficient to demonstrate compliance with OAR 345-022-0020(1).

1 The contents of the Structural Standard Exhibit must be based on a consultation with the
2 Oregon Department of Geology and Mineral Industries regarding the appropriate methodology
3 and scope of the seismic hazards and geology and soil-related hazards assessments, the
4 appropriate geotechnical work that must be performed at the site, and the guidelines for
5 preparing the geologic report for the application required under section (4)(a). Per section
6 (4)(b), the exhibit must include a summary of this consultation.

7
8 Under sections (4)(a), (e), and (f), the exhibit must include a geologic report meeting the
9 Oregon State Board of Geologist Examiners geologic report guidelines and an assessment of
10 seismic hazards and appropriate mitigation consistent with the recommendations made by
11 DOGAMI during the consultation and the requirements of the rule. The assessment must
12 explain how the applicant will design, engineer, construct and operate the facility to integrate
13 disaster resilience design to ensure recovery of operations after major disasters and how future
14 climate conditions, including changes in precipitation and stream flow, for the expected life
15 span of the proposed facility will impact the proposed facility.

16
17 Under sections (4)(c) and (d), the exhibit must provide a description and schedule of site-
18 specific geotechnical work that will be performed before construction activities begin at the
19 site, and a description of any locations where the applicant proposes to perform site specific
20 geotechnical work.

21 22 IV.D. Soil Protection (OAR 345-022-0022)

23 **Applicable Sections:** All sections apply.

24 **Discussion:** The Soil Protection Exhibit must include information from reasonably available
25 sources regarding soil conditions and uses in the analysis area and demonstrate compliance
26 with OAR 345-022-0022(1).

27
28
29 Under section (2)(a), the Soil Protection Exhibit must include an inventory of substantial
30 quantities of industrial materials flowing into and out of the proposed facility site during
31 construction and operation of the proposed facility, including but not limited to, metals, oils,
32 and fuels. Quantities of waste materials must be inventoried, and methods of disposal should
33 be described.

34
35 The Soil Protection Exhibit must include a proposed monitoring plan for any potential site
36 contamination by hazardous materials, including oils or fuels used or stored on site, such as
37 periodic environmental site assessment and reporting. If the applicant believes no monitoring
38 for soil contamination is necessary, the exhibit must provide evidence to support this position.
39 The applicant must identify any hazardous materials that will be used or stored at the site and
40 describe plans to manage those materials during construction and operation of the proposed
41 facility, including measures to prevent and contain spills.

1 The Soil Protection Exhibit must identify any proposed fuel storage areas, vehicle maintenance
2 areas, or other areas that could be used to store hazardous materials. The exhibit must also
3 describe plans to manage non-hazardous waste materials during construction and operation.
4

5 Under sections (2)(b)(A) and (B), the Soil Protection Exhibit identify and describe major soil
6 types in the analysis area. Data should be presented in maps and tabular format and should
7 identify general soil characteristics, farmland and capability classification, erosion factors, and
8 any relevant data regarding suitability or limitations for the proposed use.
9

10 The exhibit must identify and describe current land uses in the analysis area, such as growing
11 crops, that require or depend on productive soils. The exhibit must include the results of
12 consultation with the County Soil and Water Conservation District (SWCD) and adjacent
13 landowners, as feasible, to inform the description of existing agricultural and conservation
14 practices, including existing soil conservation and erosion control features, harvest and rotation
15 schedules, and grazing practices, on lands within and adjacent to the site boundary. This
16 information shall be applied to the impact assessment, as discussed below.
17

18 The Soil Protection Exhibit must identify and assess potential adverse impacts of construction
19 and operation of the proposed facility, including impacts such as erosion and soil compaction.
20

21 If the applicant relies upon an erosion and sediment control plan to meet the Soil Protection
22 Standard a draft of that plan must be included in the application.
23

24 The applicant can cross-reference any applicable information related to the federally delegated
25 NPDES 1200-C permit application. Please note that an erosion and sediment control plan that
26 meets the NPDES 1200-C requirements may not necessarily be sufficient to meet the EFSC Soil
27 Protection standard. See Section IV.B.3.1. Permits, for additional discussion of federally-
28 delegated permits.
29

30 The Soil Protection Exhibit must also include a soil reclamation plan that describes any
31 measures the applicant proposes to avoid or mitigate adverse impacts to soils during proposed
32 facility construction and any proposed monitoring program. The site reclamation plan should
33 clearly describe all actions that would be taken to conserve, stabilize, and revegetate disturbed
34 soils within the energy facility site.
35

36 The exhibit should also explain how vegetation, graveled surfaces, and erosion and sediment
37 control Best Management Practices would be managed during facility construction. Minimum
38 measures including a phased grading plan, dust abatement plan, and coordinated construction
39 and restoration schedule that aligns with participating landowner rotation schedules (for lands
40 within the tracts associated with the facility) to minimize excessive bare ground impacts, when
41 applicant may be relying on landowners planting schedule for site stabilization, should be
42 described, as applicable. The plan or plans must be included as attachments to the Soil
43 Protection Exhibit. Please contact the Department for templates that are consistent with
44 current requirements and guidance.

1
2 The Exhibit must include a proposed monitoring plan for any potential site contamination by
3 hazardous materials, including oils or fuels used or stored on site, such as periodic
4 environmental site assessment and reporting. If the applicant believes no monitoring for soil
5 contamination is necessary, the exhibit must provide evidence to support this position.
6

7 For cultivated or arable lands, The Soil Protection Exhibit must contain sufficient evidence to
8 demonstrate that temporary disturbances during construction or maintenance activities will
9 not result in long-term losses of productivity. The Department would recommend that
10 vegetation be required to be maintained to the maximum extent practicable. Any restoration
11 activities for permanent disturbance areas that would occur during decommissioning of the
12 facility must also be described in Section IV.G., the Retirement and Financial Assurance Exhibit
13 of this order, and the soil reclamation plan. If the applicant relies upon an erosion and sediment
14 control plan to meet the Soil Protection Standard a draft of that plan must be included in the
15 application.
16

17 IV.E. Land Use (OAR 345-022-0030)

18 **Applicable Sections:** All Sections apply.

19 **Discussion:** The Land Use Exhibit must include information about the proposed facility's
20 compliance with the statewide planning goals adopted by the Land Conservation and
21 Development Commission, providing evidence to support a finding by the Council as required
22 by sections (1) and (2)(b).
23

24 Under section (7)(b), the Land Use Exhibit must include a map showing the comprehensive plan
25 designations and land use zones in the analysis area. Based on information provided in the NOI,
26 the Department understands that the proposed facility is entirely within the Exclusive Farm Use
27 Zone in Linn County.
28

29 Because the location of the proposed facility is located directly adjacent Interstate 5, and both
30 North and West of the Coburg Hills North, for the application, the Analysis Area for the
31 evaluation of MCZO 6.025(A) shall be the area within the site boundary and extending:

- 32 • **North** - all area extending to Bond Butte Drive, and any EFU zoned land west of the
- 33 Bond Butte Drive latitude (but not any further than Gap Road)
- 34 • **South** – whichever is less; a 2 mile buffer, or the boundary of EFU zoned Land
- 35 • **East** – whichever is less; a 2 mile buffer, or the boundary of EFU zoned Land
- 36 • **West** – Interstate 5
37

38 the Land Use Exhibit must state the applicant's election to either obtain local land use approval
39 under ORS 469.504(1)(a) or to obtain a Council determination under ORS 469.504(1)(b). In the
40 NOI, the Applicant indicated that it intends to seek a Council determination under ORS
41 469.504(1)(b). Assuming the applicant has not changed its election, OAR 345-022-0030(7)(b)(B)
42 does not apply to the application. Note that once the election is made in the preliminary ASC, it
43 is final.

1
2 Under section (7)(b)(C), the applicant must identify applicable substantive criteria from each
3 affected local governments' comprehensive plan and any land use regulations that are required
4 by the statewide planning goals and in effect on the date the application is submitted. All
5 applicable criteria and standards associated with any zone in which the facility site boundary is
6 proposed to be located must be included unless proposed micrositings corridors that clearly
7 demonstrate that no part of the facility will be located within that zone are proposed. The
8 applicant is encouraged to consult with the planning departments of the affected local
9 governments to develop the list. A detailed discussion of all applicable substantive criteria
10 identified by the Special Advisory Group, affected local government, or Department for each
11 jurisdiction is provided in the sections that follow. The applicant should coordinate with the
12 Special Advisory Groups (SAG) prior to submittal of the application to ensure that they are
13 applying the current (at date of submittal of application) applicable substantive criteria.
14

15 The Linn County applicable substantive criteria are found in the Linn County Land Development
16 Code, and the Linn County Comprehensive Plan. In its comment letter on the NOI dated August
17 10, 2023, Linn County recommended the policies, ordinances and land use regulations that
18 might apply to the construction and operation of the proposed facility.
19

20 The Land Use Exhibit must identify and discuss each applicable substantive criteria and must
21 demonstrate how the proposed facility complies with those criteria. If the proposed facility will
22 not comply with one or more of the applicable substantive criteria, the applicant must
23 demonstrate that the proposed facility nevertheless complies with the applicable statewide
24 planning goals or that an exception to a goal is justified under ORS 469.504(2) and OAR 345-
25 022-0030(4).
26

27 Under section (2)(a)(A), the Land Use Exhibit shall also provide evidence that the proposed
28 facility would comply with any directly- applicable Land Conservation and Development
29 Commission (LCDC) administrative rules and statutory requirements related to the proposed
30 facility, including ORS 215.243, 215.274, 215.283, 215.296, and specifically including all
31 requirements regarding the location of the proposed facility within the EFU zone. The Land Use
32 Exhibit shall provide evidence that the proposed facility would comply with the applicable
33 administrative rules at OAR 660-033-0130(38) related to development of solar power
34 generation facilities, as well as rules related to associated transmission lines to energy
35 generating facilities.
36

37 As part of the evaluation of compliance with OAR 660-033-0130(38), the Land Use Exhibit must
38 include evidence that demonstrates that the proposed facility will not make it more difficult for
39 existing farms and ranches in the area extending one mile from the center of project to
40 continue operation due to diminished opportunities to expand, purchase or lease farmland,
41 acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that
42 will destabilize the overall character of the study area.
43

44 The proposed facility also requires an exception to Statewide Planning Goal 3 (Agricultural

1 Lands). The Council's goal exception process is described at ORS 469.504(2) and OAR 345-022-
2 0030(4). Because the land within the site is not physically developed or irrevocably committed
3 to non-agricultural use ORS 469.504(2)(a) and (b) are not applicable to the proposed facility and
4 Exhibit K must evaluate whether each of the standards listed under ORS 469.504(2)(c) are met:

- 5 • Reasons justify why the state policy embodied in the applicable goal should not apply
- 6 • The significant environmental, economic, social and energy consequences anticipated
- 7 because of the proposed facility have been identified and adverse impacts will be
- 8 mitigated in accordance with rules of the council applicable to the siting of the proposed
- 9 facility
- 10 • The proposed facility is compatible with other adjacent uses or will be made compatible
- 11 through measures designed to reduce adverse impacts

12
13 The Land Use Exhibit must clearly demonstrate that all three standards are met and must
14 provide site-specific evidence to support the evaluation. Evaluation of significant impacts to
15 agriculture should include relevant information about specific uses and historic agricultural
16 production on properties within and adjacent to the proposed facility, including agricultural
17 revenue and number of workers employed for agricultural activities on the impacted land.
18 Reasons that support a local economic benefit should provide specific and detailed information
19 about how the proposed facility would provide economic benefits which differ from any other
20 type of development. The applicant should address comments by reviewing agencies, the SAG,
21 and stakeholder groups about impacts to agriculture in the context of the Goal 3 exception
22 request.

23 24 **IV.E.1 Directly Applicable LCDC Rules**

25
26 The Land Use Exhibit must provide evidence that the proposed facility would comply with
27 directly applicable rules or statutory requirements administered by the Land Conservation and
28 Development Commission, including, but not limited to, any provisions associated with
29 agricultural lands or the Willamette River Greenway.

30 31 **IV.F. Protected Areas (OAR 345-022-0040)**

32 **Applicable Sections:** All paragraphs apply.

33 **Discussion:** Under sections (5)(a) and (b), the Protected Areas Exhibit must include a list and
34 map of the protected areas within the analysis area showing the distance and direction from
35 the proposed facility. For the application, the Analysis area must include the area within the site
36 boundary and extending 15 miles from portions of the site boundary containing above-ground
37 facility components. If any additional protected areas in the analysis area are identified during
38 the development of the ASC or if the site boundary is amended, the table and map must be
39 updated accordingly.

As shown in Table 7 below²³, the Protected Areas Exhibit of the NOI identifies 34 protected areas within the 20-mile study area for protected areas. 13 of 34 protected areas are more than 15 miles from the proposed facility site and are separated from the proposed facility site by major roads (Interstate 5 and State Highways 99, 99E and 99W) and other infrastructure development. Based on distance, topography, and intervening development, the Department recommends that the proposed facility is not likely to result in significant adverse impacts to these protected areas. Accordingly, the Department is establishing an analysis area of 15 miles for impacts to protected areas.

Table : Protected Areas within 15 miles

Type	Area Name	Approx. Distance to Site Boundary (miles)	Direction from Facility
(A) An Area of Critical Environmental Concern;	Ferguson Creek ACEC	15	West
	Nails Creek ACEC	15	West
	Oak Basin Prairies ACEC	5	Northeast, east
	Grassy Mountain ACEC	12	East
	McGowan Meadow ACEC	5	Southeast
(C) A Research Natural Area;	Mohawk RNA	5	Southeast
	Horse Rock Ridge RNA	7	East
	Pigeon Butte RNA	15	Northwest
	Willamette Floodplain RNA	15	Northwest
	Fern Ridge RNA	14	Southwest
(j) A state park, wayside, corridor, monument, historic, or recreation area under the jurisdiction of the Oregon Parks and Recreation Department;	Marshall Island Landing	5	West
	Washburne State Wayside	10	Northwest
	Thompson's Mill State Heritage Site	10 to 15	North
(k) The Willamette River Greenway created under ORS 390.310 to 390.368;	Beacon Landing; Blue Ruin Island; Blue Ruin Landing; Bristow Landing; Brown's Landing; Buckskin Mary Landing; Camas Swale Landing; Christensen's Boat Ramp; Glass Bar Access; Gravel Bar Landing; Green Island Landing; Halsey; Harkens Lake North Landing; Harkens Lake South Landing; Jasper Bridge Access; Kiger Island Landing; Log Jam	5 at minimum	Northwest, West, Southwest, South, Southeast

²³ Table adapted from NOI Table L-1

Table : Protected Areas within 15 miles

Type	Area Name	Approx. Distance to Site Boundary (miles)	Direction from Facility
	Access; Log Jam Landing; Marshall Island Access; OPRDW82; Pisgah Landing; River Jetty Landing; Roger's Bend Landing; Sam Daws Landing; Scandia Landing; Seavy Landing; Whitely Landing; Willis Refuge		
(L) A natural area listed in the Oregon Register of Natural Areas under ORS 273.581;	Coburg Ridge Preserve	8	South
	Cogswell-Foster Preserve	7	Northwest
	Courtney Creek Preserve	6	Northeast
	Horse Rock Ridge Preserve	5	East
(o) A state wildlife refuge or management area identified in OAR chapter 635, division 008;	Fern Ridge	12	Southwest
	Courtney Creek	10	North
	Junction City Pond and Archery Park	7	West
*ACEC – Area of Critical Environmental Concern; RNA – Research Natural Area			

Under section (5)(c), the Protected Areas Exhibit must include a description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:

- Noise resulting from facility construction or operation.
- Increased traffic resulting from facility construction or operation.
- Water use during facility construction or operation.
- Wastewater disposal resulting from facility construction or operation.
- Visual impacts of facility structures.
- Visual impacts from air emissions resulting from facility construction or operation.

Note that a visual impact assessment is required as part of the Protected Areas Exhibit. While no specific methodology is required, the applicant must submit sufficient evidence to demonstrate how the proposed facility would comply with the Recreation standard. The applicant should consider the extent of impacts and prior Council evaluations when designing the impact assessment methodology. Visual simulations or other visual representations are not required but can provide important evidence for use by the Department and Council in understanding the potential visual impact of the proposed facility to Protected Areas.

Also note that compliance with the DEQ noise rules does not correlate to compliance with the noise assessment considered in the Protected Areas standard. Particularly, while construction noise is exempt from the DEQ noise rules, construction noise must be considered under the

1 Protected Areas standard. However, information developed to demonstrate compliance with
2 the DEQ noise rules (such as noise modeling) included in the Noise Exhibit can be used in the
3 assessment under the Protected Areas standard.

4
5 If the applicant becomes aware of any potential significant impacts to Protected Areas including
6 impacts to wildlife or wildlife habitat in the protected areas, the impacts must be disclosed and
7 evaluated in the Exhibit.

9 **IV.G. Retirement and Financial Assurance (OAR 345-022-0050)**

10 **Applicable Sections:** All sections apply.

11 **Discussion:** The Retirement and Financial Assurance Exhibit must provide evidence to support a
12 finding that the site can be restored adequately to a useful, non-hazardous condition following
13 permanent cessation of construction or operation of the facility; an estimate of the total cost of
14 site restoration; and evidence that the applicant has a reasonable likelihood of obtaining a
15 bond or letter of credit in a form and amount satisfactory to the Council.

17 **IV.G.1 Facility Retirement**

18
19 The Retirement and Financial Assurance Exhibit must provide information about site
20 restoration, providing evidence to support a finding that the site can be restored adequately to
21 a useful, non-hazardous condition following permanent cessation of construction or operation
22 of the facility, in accordance with OAR 345-022-0050(1).

23
24 Under sections (2)(a) and (b), this information must include the estimated useful life of the
25 proposed facility and a description of the specific actions and tasks to restore the site to a
26 useful, non-hazardous condition.

27
28 Under sections (1)(c) and (d), the Retirement and Financial Assurance Exhibit must also include
29 an estimate, in current dollars, of the total and unit costs of restoring the site to a useful, non-
30 hazardous condition and a discussion and justification of the methods and assumptions used in
31 preparing the estimate. The estimate must include sufficient detail to identify costs associated
32 with individual tasks and units.

33
34 Under section (1)(e), the Retirement and Financial Assurance Exhibit must include a proposed
35 monitoring plan for any potential site contamination by hazardous materials, including oils or
36 fuels used or stored on site, such as periodic environmental site assessment and reporting. If
37 the applicant believes no monitoring for soil contamination is necessary, the exhibit must
38 provide evidence to support this position.

40 **IV.G.2 Ability to Obtain Financial Assurance**

41
42 The Retirement and Financial Assurance Exhibit must also provide evidence to support a finding
43 that the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form

1 and amount satisfactory to the Council to restore the site to a useful, non- hazardous condition,
2 in accordance with section (3).

3
4 Under section (4)(a)(A), the Retirement and Financial Assurance Exhibit
5 must include an opinion or opinions from legal counsel stating that, to counsel's best
6 knowledge, the applicant has the legal authority to construct and operate the facility without
7 violating its bond indenture provisions, articles of incorporation, common stock covenants, or
8 similar agreements.

9
10 Under section (4)(a)(B), the Retirement and Financial Assurance Exhibit must include the type
11 and amount of the applicant's proposed bond or letter of credit. The applicant must explain any
12 discrepancies between the proposed bond amount and the retirement estimate required under
13 section (2)(c). If the applicant would like to reserve the option to construct the facility in
14 phases, the applicant must provide sufficient detail to allow the Council to determine an
15 appropriate bond or letter of credit amount based on phase.

16
17 Under section (4)(a)(C), the Retirement and Financial Assurance Exhibit must include evidence
18 that the applicant has a reasonable likelihood of obtaining the proposed bond or letter of credit
19 from a reputable financial institution in that amount before beginning construction of the
20 facility. If applicant chooses to provide a comfort letter from a financial institution as evidence
21 to support Council's review of this requirement, the letter must refer to the applicant or facility,
22 be on letterhead, and provide assurance that the financial would issue a bond or letter or credit
23 to the applicant in an amount greater than or equal to the estimated decommissioning amount.

24
25 Under section (4)(b), the Retirement and Financial Assurance Exhibit must include an inventory
26 of substantial quantities of industrial materials flowing into and out of the proposed facility site
27 during construction and operation of the proposed facility, including but not limited to, metals,
28 oils and fuels. Quantities of waste materials must be inventoried, and methods of disposal
29 should be described. The applicant must identify any hazardous materials that will be used or
30 stored at the site and describe plans to manage those materials during construction and
31 operation of the proposed facility, including measures to prevent and contain spills.

32 33 IV.H. Fish and Wildlife Habitat (OAR 345-022-0060)

34 **Applicable Sections:** (1) and (3)

35 **Discussion:** The Fish and Wildlife Habitat Exhibit must include Information about fish and
36 wildlife habitat and the species that could be affected by the proposed facility, providing
37 evidence to support a finding by the Council that the design, construction, and operation of the
38 facility, taking into account mitigation, are consistent with the general fish and wildlife habitat
39 mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24,
40 2017.

The applicant must consult with the Oregon Department of Fish and Wildlife (ODFW) in developing the resources and methods used to develop materials for the Fish and Wildlife Habitat Exhibit.

The Oregon Fish and Wildlife Habitat Mitigation Policy under OAR Chapter 635, Division 415 classifies six habitat categories and establishes a mitigation goal for each category. The exhibit must identify all fish and wildlife habitat in the analysis area, classified by both vegetation class and habitat category as set forth in OAR 635-415-0025 and describe the characteristics and condition of that habitat in sufficient detail to justify the categorizations. The habitat classification is subject to the Department and ODFW review. The Fish and Wildlife Habitat Exhibit must include maps and a table of the areas of permanent disturbance and temporary disturbance (in acres) in each habitat category and subtype.

IV.H.1 Required Surveys - OAR 345-022-0060(3)

Under subsections (a) through (e), the Fish and Wildlife Habitat Exhibit must include a description of biological and botanical surveys performed or scheduled to support the habitat categorization and other information in the exhibit. At a minimum, the timing, scope, methods, and sources for each survey must be discussed. Requirements for specific surveys are discussed in more detail below. Additional surveys may be required based on consultation with ODFW and WDFW.

IV.H.1.1 Habitat Surveys

Under subsection (b), the Fish and Wildlife Habitat Exhibit must include the results of habitat surveys identifying habitat type, vegetation and characteristics, habitat condition, and species use and presence.

Based on the results of the habitat surveys, the applicant must categorize habitat in all areas within Oregon as provided under OAR 635-415-0025. The habitat categorization is subject to review and approval by ODFW. The habitat categories and the mitigation goals area summarized in Table 8 below.

Table 8: Habitat Categories Under OAR 635-0415-0025

Category	Description	Mitigation Goal
1	Irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.	No loss of either habitat quantity or quality.
2	Essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.	If impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.

Table 8: Habitat Categories Under OAR 635-0415-0025

Category	Description	Mitigation Goal
3	Essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.	No net loss of either habitat quantity or quality.
4	Important habitat for fish and wildlife species.	No net loss in either existing habitat quantity or quality.
5	Habitat for fish and wildlife having high potential to become either essential or important habitat.	If impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.
6	Habitat that has low potential to become essential or important habitat for fish and wildlife.	Minimize impacts.

Under subsection (c), the Fish and Wildlife Habitat Exhibit must include tabular data and maps depicting the areas of permanent and temporary disturbance (in acres) in each habitat category, type and subtype based on the results of the habitat survey. ODFW comments received on the NOI provided additional guidance on habitat categorization for habitat within the site boundary, with specific instruction on how to guide mitigation efforts for wetlands and grass fields.²⁴

IV.H.1.2 Sensitive Species Surveys

Under subsection (d), based on consultation with the ODFW and appropriate field study and literature review, the Fish and Wildlife Habitat Exhibit must identify all state sensitive species that might be present in the habitat survey areas and a discussion of any site-specific issues of concern to ODFW. The Fish and Wildlife Habitat Exhibit must include baseline surveys in appropriate habitats for these species, and any other identified state sensitive species within the analysis area and must provide a map showing the locations of the different species and habitats with respect to the proposed activities. If state sensitive species, or suitable habitat for state sensitive species, are identified within the analysis area that could be adversely affected as a result of the proposed facility, the applicant shall include a description of the nature, extent, and duration of potential adverse impacts and a description of any proposed mitigation measures, consistent with the exhibit requirements, the EFSC Fish and Wildlife Habitat standard, and the ODFW Habitat Mitigation Policy. If sensitive species surveys are required by other jurisdictions, the applicant is encouraged to provide a single survey report that identifies occurrences of all sensitive species.

IV.H.1.3 Raptor Nest Surveys

The applicant must conduct surveys for raptor nests within one quarter mile of all proposed disturbance areas. The applicant must also provide information on how it will avoid or minimize

²⁴ MCEPNOI Reviewing Agency Comment (ODFW) 2023-10-04
First Amended Project Order for the Muddy Creek Energy Park ASC
June 10, 2025

1 and monitor impacts to raptors and other avian species, including curtailing construction
2 activities within one quarter mile of active raptor nests during the nesting season.

4 **IV.H.2 Assessment of Impacts to Habitat and Sensitive Species**

5 Under subsection (f), the Fish and Wildlife Habitat Exhibit must describe the nature, extent and
6 duration of potential adverse impacts on the habitat and species identified in surveys that could
7 result from construction, operation and retirement of the proposed facility. This assessment
8 must discuss, at a minimum the temporary and permanent disturbance (during construction or
9 maintenance activities). Please follow guidance provided by ODFW in the October 4, 2023 NOI
10 comment when evaluating and describing potential adverse impacts to wetlands and grass
11 fields.

13 **IV.H.3 Proposed Monitoring and Mitigation**

14 Under subsections (g) and (h), the Fish and Wildlife Habitat Exhibit must describe any
15 monitoring and mitigation activities proposed by the applicant to ensure that the construction,
16 operation, and retirement of the facility will comply with the habitat mitigation goals and
17 standards and to otherwise avoid, reduce, or otherwise mitigate adverse impacts to habitat and
18 state sensitive species. At a minimum, mitigation measures discussed must include avoidance
19 areas and implementation measures; and in-kind/in proximity mitigation as required by ODFW
20 regulations. This information must also be incorporated into a draft Revegetation and Noxious
21 Weed Control Plan, a draft Habitat Mitigation Plan, and a draft Post Construction Monitoring
22 Plan, which must be included as attachments to the Fish and Wildlife Habitat Exhibit.

24 The draft Revegetation and Noxious Weed Control Plan and associated information in the Fish
25 and Wildlife Habitat Exhibit must describe how the areas that are temporarily disturbed during
26 construction or operation of the facility will be rehabilitated and returned to their pre-
27 construction functionality. The plan must clearly describe draft success criteria for revegetation
28 activities and describe the monitoring program that will be used to ensure those criteria are
29 met.

31 The draft Habitat Mitigation Plan and associated information in the Fish and Wildlife Habitat
32 Exhibit must clearly demonstrate how the applicant will provide mitigation for both short- and
33 long-term habitat impacts in accordance with the ODFW Habitat Mitigation Policy. This includes
34 identifying the location of a specific habitat mitigation area that could be used to provide in-
35 kind, in-proximity mitigation for any impacts to Category 1 to 4 Habitat, as well as ecological
36 uplift mitigation actions that could be implemented at the habitat mitigation area to provide
37 the appropriate mitigation.

39 The draft Habitat Mitigation Plan must include the results of the habitat categorization surveys
40 as well as surveys of any proposed habitat mitigation areas and must provide the draft legal
41 mechanism or mechanisms proposed for acquiring the legal right to maintain and enhance the
42 habitat mitigation area. The Habitat Mitigation Plan must include draft success criteria for the

1 proposed ecological uplift actions and describe a process for evaluating monitoring and
2 reference site locations, prior to construction.

3
4 The post construction monitoring plan for the project must provide for two years of post-
5 construction fatality monitoring to determine fatality effects of solar projects on avian species
6 using the airspace above and around the proposed project.
7

8 IV.I. Threatened and Endangered Species (OAR 345-022-0070)

9 **Applicable Sections:** All sections apply.

10 **Discussion:** The Threatened and Endangered Species Exhibit must include information about
11 threatened and endangered plant and animal species that may be affected by the proposed
12 facility, providing evidence to support a finding by the Council as required by OAR 345-022-
13 0070. For the application, the Analysis area must include the area within and extending 5 miles
14 from the site boundary.
15

16 Under section (3), the Threatened and Endangered Species Exhibit must include a list of all
17 threatened and endangered species listed in OAR 635-100-0125 or 603-073-0070 that have the
18 potential to occur in the analysis area. For the application, the Analysis area must include the
19 area within and extending 5 miles from the site boundary. The applicant shall identify these
20 species based on a review of literature, consultation with knowledgeable individuals, and
21 reference to the list of species maintained by the Oregon Biodiversity Information Center. For
22 each species identified, the Threatened and Endangered Species Exhibit must describe the
23 nature, extent, locations, and timing of its occurrence in the analysis area; how the facility
24 might adversely affect the species; what measures the applicant proposes to avoid or reduce
25 and adverse impact; and the applicant's proposed monitoring program for impacts.
26

27 For each threatened and endangered plant species, the Threatened and Endangered Species
28 Exhibit must describe how the proposed facility, including any mitigation measures, complies
29 with the protection and conservation program adopted by the Oregon Department of
30 Agriculture (ODA), or if there is no protection and conservation program in place for an
31 identified threatened or endangered plant species, describe any significant potential impacts
32 the proposed facility may have on the continued existence of the species and on the critical
33 habitat of such species, and must provide evidence that the proposed facility, including any
34 mitigation measures, is not likely to cause a significant reduction in the likelihood of survival or
35 recovery of the species.
36

37 For each threatened and endangered animal species, the Threatened and Endangered Species
38 Exhibit must describe any significant potential impacts of the proposed facility on the continued
39 existence of such species and on the critical habitat of such species, and must provide evidence
40 that the proposed facility, including any mitigation measures, is not likely to cause a significant
41 reduction in the likelihood of survival or recovery of the species.
42

43 Field surveys for any threatened and endangered species that may occur within the analysis

1 area are required within or near suitable habitat that will be disturbed during construction and
2 operation of the proposed facility. The applicant must consult with ODFW and ODA's Native
3 Plant Conservation Program regarding appropriate field survey methods, survey areas, survey
4 seasons, qualifications of field survey personnel, and the information to be included in a field
5 survey report.

6
7 The Threatened and Endangered Species Exhibit must include maps showing appropriate
8 habitats for all identified species and a map showing the locations of the different species and
9 habitats with respect to the proposed activities. If special status species surveys are required by
10 other jurisdictions, the applicant is encouraged to provide a single survey report that identifies
11 occurrences of all listed species.

12
13 Any information about monitoring and mitigating impacts to threatened or endangered plant
14 species must be incorporated into the draft Revegetation and Noxious Weed Control Plan, draft
15 Habitat Mitigation Plan, or draft Post Construction Monitoring Plan included in the Fish and
16 Wildlife Habitat Exhibit, as appropriate.

17 18 IV.J. Scenic Resources (OAR 345-022-0080)

19 **Applicable Sections:** All paragraphs apply.

20 **Discussion:** The Scenic Resources Exhibit must include an analysis of potential significant visual
21 impacts of the proposed facility on scenic resources identified as significant or important in
22 local, state or regional land use plans, tribal land management plans and federal land
23 management plans for any lands located within the analysis area.

24
25 For any scenic resources deemed "significant" or "important" in a local, state, regional tribal or
26 federal land management plan, the applicant shall include in the ASC an evaluation of the
27 proposed facility's consistency or compliance with any development or land use criteria
28 included in the land management plan for the identified resource. The Scenic Resources Exhibit
29 shall include a copy of the portion(s) of the management plan that identifies the resource as
30 significant or important. The applicant shall also describe the measures it proposes to avoid,
31 reduce, or otherwise mitigate any significant adverse impacts to these scenic resources. A visual
32 impact assessment is required as part of The Scenic Resources Exhibit; while no specific
33 methodology is required by EFSC rule, the applicant must submit evidence adequate to
34 demonstrate why the proposed facility is in compliance with the Scenic Resources standard.
35 Visual simulations or other visual representations are not required but can provide important
36 evidence for use by the Department and Council in understanding the potential visual impact of
37 the proposed facility to Scenic Resources.

38 39 IV.K. Historic, Cultural and Archaeological Resources (OAR 345-022-0090)

40 **Applicable Sections:** 1 and 4

41 **Discussion:** The Historic, Cultural and Archaeological Resources Exhibit must include
42 information about historic, cultural, and archaeological resources. As described under section
43 (2), the Council may issue a site certificate for a facility that would produce power from solar

1 energy without making the findings required under section (1); however, the applicant must
2 still provide sufficient information for the Council to determine whether conditions of approval
3 to ensure compliance with the Standard are appropriate.

4
5 Information concerning the location of archaeological sites or objects may be exempt from
6 public disclosure under ORS 192.345(11). Such information, including archaeological survey
7 reports, should be provided confidentially under separate cover in **hard copy only** format, and
8 only after consultation with the Department. Confidential material shall also be provided
9 directly to SHPO, following guidance from the Department and SHPO. Please contact the
10 Department to discuss current practices regarding treatment and submittal of confidential
11 material.

12
13 As described under sections (4)(d)(A) to (C), the Historic, Cultural and Archaeological Resources
14 Exhibit must describe survey methodology, survey areas, and the results of all surveys
15 conducted for historic, cultural, and archaeological resources as well as an analysis of any
16 significant adverse impacts anticipated and proposed mitigation measures.

17
18 Under sections (4)(a) through (c), the Historic, Cultural and Archaeological Resources Exhibit
19 must include an inventory of all historic properties discovered in the analysis area, including any
20 archaeological sites or objects on private land in the analysis area and archaeological sites on
21 public land in the analysis area. The Historic, Cultural and Archaeological Resources Exhibit
22 must include an evaluation of whether the historic properties have been listed on, or would
23 likely be listed on, the National Register of Historic Places, based on an evaluation of the
24 National Register Evaluation Criteria as described in National Register Bulletin 15.

25
26 Under section (4)(d), the Historic, Cultural and Archaeological Resources Exhibit must also
27 include an impact assessment, and proposed measures to avoid or mitigate potential impacts
28 to historic, cultural, or archaeological resources that have been listed on, or would likely be
29 listed on the National Register of Historic Places.

30
31 Under section (4)(e), the Historic, Cultural and Archaeological Resources Exhibit must include
32 the applicant's proposed monitoring program, if any, for impacts to historic, cultural, and
33 archaeological resources during construction and operation of the proposed facility, including a
34 program to address inadvertent discovery of resources during ground disturbing activities at
35 the site.

36
37 The applicant is strongly encouraged to discuss the proposed facility with all Tribes that could
38 be potentially affected by the construction and operation of the proposed facility, including but
39 not limited to the tribes identified by the Legislative Commission on Indian Services:
40 Confederated Tribes of Grande Ronde, Confederated Tribes of Siletz Indians, and the
41 Confederated Tribes of Warm Springs.

1 IV.L. Recreation (OAR 345-022-0100)

2 **Applicable Sections:** All sections apply.

3 **Discussion:** The Recreation Exhibit must include information about the impact the proposed
4 facility would have on important recreational opportunities. For the ASC, the analysis area
5 includes the area within and extending 5 miles from the site boundary.

6
7 Under section (5)(a), the Recreation Exhibit must include a description of recreational
8 opportunities in the analysis area, and information identifying whether the opportunity is
9 considered “important” under OAR 345-022-0100(2).,

10
11 Under sections (5)(b) through (e), the Recreation Exhibit must include a map of the analysis
12 area showing the locations of identified important recreational opportunities; a description of
13 any potential significant adverse impacts to important recreation opportunities; and a
14 description of measures the applicant proposes to avoid, reduce, or otherwise mitigate and
15 monitor those impacts. Impacts that must be evaluated in the Recreation Exhibit include:

- 16 • Direct or indirect loss of a recreational opportunity because of facility construction or
17 operation.
- 18 • Noise resulting from facility construction or operation.
- 19 • Increased traffic resulting from facility construction or operation.
- 20 • Visual impacts of facility structures.

21
22 Note that a visual impact assessment is required as part of the Recreation Exhibit. While no
23 specific methodology is required, the applicant must submit sufficient evidence to demonstrate
24 how the proposed facility would comply with the Recreation standard. The applicant should
25 consider the extent of impacts and prior Council evaluations when designing the impact
26 assessment methodology. Visual simulations or other visual representations are not required
27 but can provide important evidence for use by the Department and Council in understanding
28 the potential visual impact of the proposed facility to important recreational opportunities.

29
30 Compliance with the DEQ noise rules does not correlate to compliance with the noise
31 assessment considered in the Recreation standard. Particularly, while construction noise is
32 exempt from the DEQ noise rules, construction noise must be considered under the Recreation
33 standard. However, information developed to demonstrate compliance with the DEQ noise
34 rules such as noise modeling can be used in the assessment under the Recreation standard.

35
36 If the applicant becomes aware of any potentially significant impacts to the identified
37 recreational opportunities other than those described above, the impacts must be disclosed
38 and evaluated in the Recreation Exhibit.

39
40 IV.M. Public Services (OAR 345-022-0110)

41 **Applicable Paragraphs:** All paragraphs apply.

42 **Discussion:** The Public Services Exhibit must include information on how the construction and
43 operation of the proposed facility will impact public services. The Public Services Exhibit must

1 include sufficient evidence to support a finding by the Council that construction and operation
2 of the proposed facility, taking into account mitigation, are not likely to result in significant
3 adverse impact to the ability of public and private service providers to provide sewers and
4 sewage treatment, water, storm water drainage, solid waste management, housing, traffic
5 safety, police and fire protection, health care and schools.

6
7 The northern portions of the City of Eugene and City of Springfield are partially within the
8 established 10-mile study area for impacts to public services. However, based on the proposed
9 facility location and potential for impacts to the cities of Eugene, Springfield, Lebanon, and
10 Sweet Home, the Department is establishing an analysis area that includes the area within and
11 extending 20 miles from the site certificate. The extension of the analysis area to include
12 Lebanon and Sweet Home was a recommendation made by Linn County in their NOI comment
13 letter.²⁵

14
15 Under section (2), the Council may issue a site certificate for a facility that would produce
16 power from solar energy without making the findings of the Public Services standard at OAR
17 345-022-0110(1), though the Council may apply the requirements of OAR 345-022-0110(1) to
18 impose conditions on a site certificate issued for such a facility.

19
20 Under sections (4)(a)(A) through (D), the Public Services Exhibit must include an analysis
21 identifying the public and private service providers in the analysis area that would likely be
22 affected by construction and operation of the proposed facility, a description of any likely
23 impacts on the ability of the service providers to provide their respective services, and evidence
24 that any adverse impacts, taking into account any mitigation proposed by the applicant, are not
25 likely to be significant. The analysis must describe any important assumptions the applicant
26 used to evaluate potential impacts.

27
28 The applicant may include information developed in support of the Wildfire Prevention and Risk
29 Mitigation Exhibit in its evaluation of impacts to fire protection providers, an evaluation of any
30 potential impacts that may affect responders to structural fires at the proposed facility,
31 including but not limited to fires involving Battery Energy Storage Systems or electrical
32 equipment at the site should also be included as part of the Public Services Exhibit.

33
34 In evaluating impacts to traffic safety, the Public Services Exhibit must contain sufficient
35 evidence to demonstrate that the construction and operation of the proposed facility will not
36 result in significant safety impacts to drivers along Interstate 5. Impacts that must be evaluated
37 should include the impacts of vehicles entering and exiting the site during construction and the
38 potential for glint or glare from solar modules and other surfaces during operation. The
39 applicant must demonstrate that they consulted with local public works department staff on
40 potential haul and traffic routes to be used during construction and discussed existing

²⁵ MCEPNOI Reviewing Agency Comment (Linn Co) 2023-08-02. The basis of extending the public services analysis area to 20-miles from the proposed site boundary is based on rural nature of the area and access to food, dining, hotel and RV camping in these other adjacent areas that are likely to be used by construction workers.

conditions and capacity of those roads. If Linn County Public Works Department utilizes road use agreements to manage traffic impacts on local roads, a draft of the road use agreement to be used for the project shall be included in the Public Services Exhibit. The Public Services Exhibit should also evaluate whether any significant traffic delays will occur and whether these delays could affect ambulance services or other emergency responders. In addition, the Public Services Exhibit must evaluate the impacts that the construction and operation of the proposed facility will have on local aviation resources, sufficient to demonstrate compliance with OAR chapter 738, division 070.

The Public Services Exhibit must evaluate the impact that the temporary and permanent workforce will have on housing in the analysis area, including the availability of hotels, RV parks, and other temporary accommodations. This evaluation must assume that 100 percent of the temporary construction workforce will require temporary accommodations unless the applicant can provide evidence to demonstrate the availability of local workers or can provide evidence of a local hiring program.

In addition to the analysis described above, the applicant is encouraged to obtain letters from local public services providers to demonstrate that the proposed facility would not cause a significant adverse impact on their ability to provide their respective services. Including:

- Local fire departments,
- Police departments,
- Public works departments,
- Sewer and sewage treatment providers,
- Water service providers
- Solid waste providers

Letters obtained from public service providers include analysis indicating that their level of service would not be impacted. For instance, letters obtained from water service providers should include an evaluation of permit limits, permit or water right numbers, type of water use, and historical demand to demonstrate that it can meet proposed facility needs. Letters from fire service providers should explain how resources used by the facility, in the event of a fire-related issue, would not impact their ability to provide fire emergency response, rather than a conclusory statement without supporting analysis demonstrating a clear understanding of the facility. Letters from public works departments should demonstrate an understanding of proposed facility road use, including maximum number of vehicle miles travelled and vehicle weight, and confirmation of whether the use would impact local roads.

Under section (4)(a)(E), the Public Services Exhibit must include the applicant's proposed monitoring program, if any, for impacts to public services.

IV.N. Wildfire Prevention and Risk Mitigation (OAR 345-022-0115)

Applicable Sections: All sections apply.

Discussion: The Wildfire Prevention and Risk Mitigation Exhibit must include information about wildfire risk within the analysis area sufficient to support the Council findings required under OAR 345-022-0115. The analysis area is the site boundary and 0.5 mile from the site boundary, except that the desktop analysis for wildfire risk shall extend 5 miles from the site boundary.

Under section (1), the Wildfire Prevention and Risk Mitigation Exhibit must include a characterization of wildfire risk within the analysis area that identifies each of the following:

- 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.
- 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.
- Areas subject to a heightened risk of wildfire, based on the Baseline and Seasonal risk information.
- 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.

The characterization must also describe all data sources and methods used to model and identify risks. The applicant may select data sources and methods as appropriate for the site, but all data must be current and from reputable sources.

Under section (2), the Wildfire Prevention and Risk Mitigation Exhibit must also include a draft Wildfire Mitigation Plan for construction, and separately for operations and maintenance of the proposed facility. The Wildfire Mitigation Plan(s) must, at a minimum:

- 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.
- Describe the procedures, standards, and time frames that the applicant will use to inspect facility components and manage vegetation in any identified areas of heightened risk of wildfire.
- 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. This should include a discussion of the use of defensible space, fire hardened infrastructure, and power shutoff protocols, as applicable.
- Identify procedures to minimize risks to public health and safety, the health and safety of responders, and damages to resources protected by Council standards if a wildfire occurs at the facility site, regardless of ignition source. This should include:
 - A description of who will respond to wildfires at the site and a plan for ensuring responders are aware of sensitive resources that should be avoided during fire

- 1 suppression activities.
- 2 ○ A description and maps of access and egress options for wildfire responders and
- 3 emergency vehicles to enter and exit the site in a fire emergency.
- 4 ○ Information about whether any specialized equipment or training will be needed
- 5 to respond to fire events at the site involving solar arrays, battery systems, or
- 6 other facility components.
- 7 • Describe methods the applicant will use to ensure that updates of the plan incorporate
- 8 best practices and emerging technologies to minimize and mitigate wildfire risk.
- 9

10 Examples of plan templates available at the time of the Project Order issuance are included in
11 Attachment 4 for informational purposes. Please contact the Department during the
12 development of the Wildfire Mitigation Plans for current guidance prior to ASC submittal.
13

14 IV.O. Waste Minimization (OAR 345-022-0120)

15 **Applicable Sections:** All Sections apply.

16 **Discussion:** The Waste Minimization Exhibit must describe the applicant's plans to minimize the
17 generation of solid waste and wastewater and to recycle or reuse solid waste and wastewater,
18 providing evidence to support findings by the Council under OAR 345-022-0120. As provided
19 section (2), the Council may issue a site certificate for a facility that would produce power from
20 solar energy without making the findings required by section (1); however, the applicant must
21 still provide sufficient evidence in Exhibit W for the Council to determine whether conditions of
22 approval are needed to ensure that waste generation will be minimized.
23

24 Under sections (4)(a)(A), (B), and (D) and (b)(C), the Waste Minimization Exhibit must include a
25 description of the major types and amount of solid waste and wastewater that construction,
26 operation, and retirement of the facility are likely to generate; the structures, systems, and
27 equipment for management and disposal of the wastes, including any plans to minimize,
28 recycle or reuse the wastes. This should include a discussion of whether the applicant has plans
29 in place to recycle solar modules or other facility components.
30

31 Under section (4)(a)(C), the Waste Minimization Exhibit must include a discussion of any actions
32 or restrictions proposed by the applicant to reduce consumptive water use during construction
33 and operation of the facility. This includes water needed for operation and maintenance of the
34 facility and should include a discussion of wastewater and runoff generated from panel
35 washing.
36

37 Under parts (4)(a)(E) and (F), the Waste Minimization Exhibit must include a description of any
38 adverse impact on surrounding and adjacent areas from the accumulation, storage, disposal
39 and transportation of solid waste, wastewater and stormwater during construction and
40 operation of the facility and evidence that those impacts, taking into account any account any
41 measures the applicant proposes to avoid, reduce, or otherwise mitigate the impacts, will be
42 minimal.
43

1 Under section (4)(G), the Waste Minimization Exhibit must include the applicant's proposed
2 monitoring program, if any, for minimization of solid waste and wastewater impacts.

3
4 The applicant is encouraged to reference information provided under other exhibits, including
5 but not limited to the Soil Protection Exhibit, Water Use Exhibit, and Public Services Exhibit, in
6 the development of this exhibit.

7 8 **IV.P. State and Local Laws and Regulations (OAR 345-022-0160)**

9
10 **Discussion:** All requirements apply.

11 The State and Local Laws and Regulations Exhibit must identify, by legal citation, all state
12 statutes and administrative rules and local government ordinances containing standards or
13 criteria that the proposed facility must meet for the Council to issue a site certificate, other
14 than statutes, rules and ordinances identified in the Organizational Expertise Exhibit, and
15 identification of the agencies administering those statutes, administrative rules, and
16 ordinances. The applicant must identify all statutes, administrative rules, and ordinances that
17 the applicant knows to be applicable to the proposed facility, whether or not identified in the
18 project order. To the extent not addressed by other materials in the application, the applicant
19 must include a discussion of how the proposed facility meets the requirements of the
20 applicable statutes, administrative rules, and ordinances.

21 22 **IV.P.1 Waters of the State and Removal-Fill (ORS 196.795-990; OAR chapter 141, division** 23 **085)**

24 **Applicable Sections:** OAR 345-022-0160(1)(a), all paragraphs.

25 **Discussion:** The Waters of the State and Removal-Fill Exhibit must include information based on
26 literature and field study, as appropriate, about waters of this state, as defined under ORS
27 196.800, including, but not limited to all natural waterways, intermittent and perennial
28 streams, lakes, and wetlands.

29
30 Under section (1)(a)(A), the exhibit must include a description of all areas within the site
31 boundary that might be waters of the state and maps showing the location of these features.

32
33 A wetland delineation report that complies with OAR chapter 141, division 90 must be provided
34 to the Department and DSL before the application is determined to be complete. The wetland
35 delineation must be conducted using the standard wetland delineation methodology as
36 outlined in the 1987 Army Corp manual and relevant supplements. The applicant must also
37 provide GIS data including the study area boundary and the boundaries of all delineated
38 wetlands and waters to both ODOE and DSL.

39
40 Under sections (1)(a)(B), (C), and (F), the Waters of the State and Removal-Fill Exhibit must
41 describe whether construction or operation of the proposed facility could result in potential
42 adverse impacts to any waters of the state, assess the significance of those impacts, and

1 describe proposed actions to avoid or mitigate adverse impacts and the applicant's proposed
2 monitoring program, if any, for such impacts.

3
4 If impacts to waters of the state cannot be avoided, the Waters of the State and Removal-Fill
5 Exhibit must describe the amount and type of material that could be deposited or removed
6 from any waters of the state, consistent with the requirements of OAR 141-085-0525, and any
7 other information needed to determine whether a removal-fill permit is required under OAR
8 chapter 141, division 085.

9
10 Under sections (1)(a)(D) and (E), the Waters of the State and Removal-Fill Exhibit must include
11 an analysis of whether or not a removal-fill permit is required. If a removal-fill permit is
12 necessary for the proposed facility, the Exhibit must include all information required for the
13 Council to make a decision on the removal-fill permit application, including all information
14 required under OAR chapter 141 division 85. This must include a completed and signed Joint
15 Permit Application on the current form, including:

- 16 • A complete project description.
- 17 • An alternatives analysis including an analysis of alternative sites with lesser impacts to
18 waters of this State and an analysis of alternative designs with lesser impacts to waters
19 of this State.
- 20 • An explanation of how the proposed project minimizes adverse effects to waters of this
21 State, including avoiding and minimizing activities outside of the ODFW-designated in-
22 water-work window; avoiding and minimizing interference with fishing, navigation, and
23 recreation; erosion control; avoiding and minimizing sediment suspension and
24 dispersion; spill response measures; avoiding or minimizing impacts to shallow water
25 habitats; avoiding and minimizing adverse effects to aquatic biota and habitats; avoiding
26 or minimizing disturbance or destruction of native riparian vegetation;
- 27 • Figures depicting SWI wetlands and DSL compensatory mitigation sites.
- 28 • Functions and values assessments of permanently impacted sites, including SFAM for
29 wadable streams, ORWAP for wetlands, and Best Professional Judgement for the
30 Deschutes River and any other non-wadable streams.
- 31 • A rectification plan for restoring disturbed sites within 24-months of disturbance.
- 32 • A compensatory mitigation plan to mitigate for any unavoidable impacts to waters of
33 this State; and
- 34 • A monitoring plan with performance standards for restoration of disturbed areas and
35 performance of compensatory mitigation.

36
37 A draft removal-fill permit with draft conditions must be submitted to the Department by DSL
38 to be included as an attachment to the draft proposed order.

39
40 Wetland delineation reports and removal-fill permit application materials can be sent directly
41 by the applicant to DSL; however, all materials as well as DSL's concurrence with the wetland
42 delineation must also be submitted to the Department as part of the exhibit. The Department
43 will work closely with DSL in review of the removal-fill permit application, if applicable.

1
2 When required for an energy facility, a removal-fill permit will be included in and governed by
3 the site certificate. The Department and DSL would maintain dual responsibility for compliance
4 with any associated permit conditions.
5

6 As described in Section IV.B of this order, the applicant will also need to obtain proprietary
7 authorization from the Department of State Lands under OAR chapter 141, divisions 80, 82, and
8 123. Proprietary decisions are not within the Council's jurisdiction; however, the exhibit must
9 provide evidence that the proposed facility can obtain the required authorizations, including a
10 discussion of:

- 11 • Whether the project has independent utility.
- 12 • Whether the project is consistent with the protection, conservation, and best use of
13 the water resources of this state.
- 14 • Whether the project would unreasonably interfere with the paramount policy of this
15 state to preserve the use of its waters for navigation, fishing, and public recreation,
16 including identification of public needs for or social, economic, or other public
17 benefits of the project and identification of economic costs to the public if the
18 project is not accomplished; and
19

20 **IV.P.2 Water Use (OAR chapter 690, Divisions 310 and 380)**

21 **Applicable Sections:** OAR 345-022-0160(1)(b)(A) to (C), (E) or (F), (G)

22 **Discussion:** The Water Use Exhibit must include information about anticipated water use
23 during construction and operation of the proposed facility.
24

25 Under sections (1)(b)(A) through (C) and (G), the Water Use Exhibit must include a description
26 of how water will be used during construction and operation of the proposed facility, and must
27 describe each source of water and the estimated amount of water the facility will need from
28 each source during construction and during operation under annual average and worst-case
29 conditions, and a description of proposed actions to mitigate the adverse impacts of water use
30 on affected resources.
31

32 Under sections (1)(b)(E) and (F), the Water Use Exhibit must provide an evaluation of whether
33 or not the proposed facility would need a groundwater permit, surface water permit or a water
34 right transfer. If the proposed facility would need a groundwater permit, a surface water permit
35 or a water right transfer, the Water Use Exhibit must include information to support a
36 determination by the Council that the Water Resources Department should issue the permit or
37 transfer of a water use, including information in the form required by the Water Resources
38 Department under OAR Chapter 690, Divisions 310 and 380. See Section IV.B.3 of this order for
39 a discussion of OWRD permits, and Section IV.M for information requirements related to water
40 service providers.
41

42 **IV.P.3 Noise (OAR 340-035-0035)** 43

Applicable Sections: OAR 345-022-0160(2)

Discussion: The Noise Exhibit must include information about noise generated by construction and operation of the proposed facility, providing evidence to support a finding by the Council that the proposed facility complies with the Oregon Department of Environmental Quality's noise control standards in OAR 340-035-0035.

Under subsection (a), the Noise Exhibit must include predicted noise levels from all potential noise-generating components of the facility including, but not limited to the solar inverters, transformers, transmission lines, switchgears, and the Battery Energy Storage System.

Under subsection (b), the Noise Exhibit must include an analysis demonstrating that the predicted noise levels will not exceed the ambient antidegradation standards established under OAR 340-035-0035. Noise generated by the facility may not increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, and may not exceed the levels specified in Table 9 below.

**Table : New Industrial and Commercial Noise Source Standards Allowable
Statistical Noise Levels in Any One Hour (OAR 340-035-0035, Table 8)**

7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
L50 – 55 dBA	L50 – 50 dBA
L10 – 60 dBA	L10 – 55 dBA
L1 – 75 dBA	L1 – 60 dBA

The analysis must include a discussion and justification of the methods and assumptions used, including methods used to measure ambient noise levels at the site. OAR 340-035-0035(3) provides that sound measurement procedures must conform to the procedures set forth in Sound Measurement Procedures Manual (NPCS-1). If the applicant's sound measurement procedures differ from the NPCS-1, please provide a discussion and basis for the variation. The analysis must evaluate noise impacts using the maximum expected noise levels from all noise-generating equipment during construction and operation. Operational noise shall be evaluated from both stationary sources and corona noise from transmission lines.

Under subsection (e), the Noise Exhibit must include a list of the names and addresses of all owners of all dwellings or other noise sensitive properties within one mile of the proposed site boundary; however, if the applicant determines potential exceedances of the ambient antidegradation standards may occur beyond the 1-mile distance, impacts to noise sensitive properties within the area of potential exceedance must be evaluated. The applicant is not required to conduct ambient noise monitoring at each noise sensitive property; however, the number of ambient monitoring sites shall be sufficient to reasonably represent the ambient noise conditions at noise sensitive receptor locations in closest proximity to the proposed site.

Under subsections (c) and (d), the Noise Exhibit must describe any measures the applicant proposes to reduce noise levels or noise impacts or to address public complaints about noise

1 from the facility and any measures the applicant proposes to monitor noise generated by
2 operation of the facility. This information must be provided regardless of whether any
3 exceedances of the ambient antidegradation standards are expected.
4
5

6 **IV.P.4 Specific Standards for Transmission Lines (OAR 345-024-0090)**

7 **Applicable Sections:** All sections apply

8 **Discussion:**

9 Because the proposed facility would include transmission lines as related and supporting
10 facilities, the provisions of OAR 345-024-0090 apply.
11

12 The Specific Standards for Transmission Lines Exhibit must include sufficient information to
13 support a finding that the applicant:

- 14 • Can design, construct, and operate the proposed transmission lines so that alternating
15 current electric fields do not exceed 9 kV per meter at one meter above the ground
16 surface in areas accessible to the public.
- 17 • Can design, construct, and operate the proposed transmission lines so that induced
18 currents resulting from the transmission lines will be as low as reasonably achievable.
19

20 This must include the information about the expected electric and magnetic fields from
21 collector lines and each transmission line (including inter-tie lines) required under OAR 345-
22 024-0090(3)(a), and information about any radio interference likely to be caused by the
23 transmission line.

1 **V. EXPIRATION DATE OF THE NOTICE OF INTENT**

2
3 The NOI was originally set to expire on May 19, 2025. On March 31, 2025, the applicant
4 submitted a petition to extend the expiration date of the NOI by one year. The petition
5 explained that the extension was needed because over the course of the original NOI period,
6 the applicant, in coordination with the Oregon Department of State Lands (DSL) and the U.S.
7 Army Corps of Engineers (USACE), identified the presence of more wetlands in the facility
8 analysis area than were first delineated. This unanticipated discovery required the applicant to
9 spend additional time revising the wetland delineation, evaluating the proposed facility's
10 potential impacts to wetlands and conducting four complete redesigns of the site plan to
11 minimize wetland impacts, formulate potential mitigation measures, and to determine whether
12 the project remains viable.

13
14 Pursuant to OAR 345-020-0060, the Council reviewed the petition and found that the
15 unanticipated discovery of additional wetlands and the subsequent time to evaluate impacts to
16 wetlands, conduct supplemental season-dependent field surveying, revise the wetland
17 delineation, and redesign the project multiple times to avoid and minimize impacts to wetlands
18 represents good cause for an extension of the NOI, and ordered the Project Order be amended
19 to extend the NOI expiration date by one year, to May 19, 2026.

20
21 **VI. PROJECT ORDER AMENDMENT AND APPLICATION COMPLETENESS**

22
23 As provided in ORS 469.330(4) and OAR 345-015-0160(3), the Council or the Department may
24 amend this Project Order at any time. Amendments may include changes to the analysis areas.
25 To issue a site certificate, the Council must determine that the proposed facility complies with
26 Oregon statutes and administrative rules identified in the Project Order, as amended, as
27 applicable to the issuance of a site certificate for the proposed facility (ORS 469.503(3)).

28
29 Under OAR 345-015-0190(5), when the Department determines the ASC contains adequate
30 information for the Council to make findings or impose conditions on all applicable Council
31 standards, the Department will issue a determination of completeness on the ASC. The
32 applicant may submit a written request to waive specific information requirements that are
33 identified as applicable in this Project Order. If the Department grants the waiver, it will amend
34 the Project Order accordingly. In accordance with OAR 345-015-0190(9), after a determination
35 that an application is complete, the Department may require additional information from the
36 applicant if additional information is needed during its continued review of the application.

37
38 **VII. APPLICABILITY AND DUTY TO COMPLY**

39
40 Failure to include an applicable statute, rule, ordinance, permit or other requirement in this
41 Project Order does not render that statute, rule, ordinance, permit or other requirement
42 inapplicable, nor in any way relieve applicant from the duty to comply with the same.

1 OREGON DEPARTMENT OF ENERGY

2 *Todd Cornett*

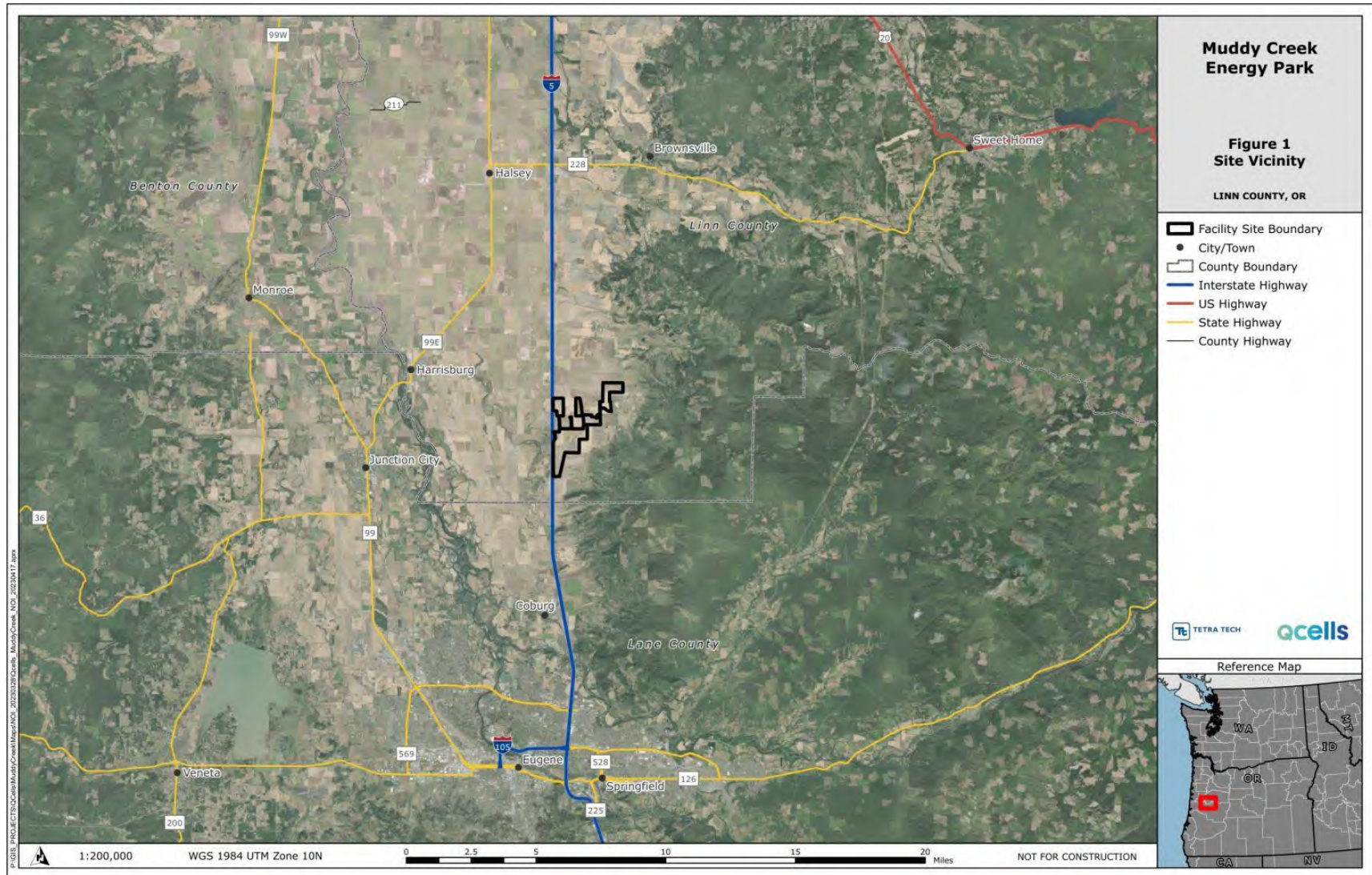
3 Todd Cornett (Jun 10, 2025 14:53 PDT)

4
5
6 Todd R. Cornett, Assistant Director, Siting Division
7 Energy Facility Siting Division
8 Oregon Department of Energy
9

10 Date of Issuance: June 10, 2025

Attachment 1: Figures

Figure 1: Site Vicinity



Attachment 2: Public Comments

Comment Date: 06-29-2023

From: Monty Jelden

Email Address: jhrmc46@gmail.com

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

We want to go on record that we oppose the Muddy Creek Electricity Project. It would be detrimental to the habitat and valuable farmland.

Comment Date: 07-10-2023

From: Garrett Sims

Email Address: gmsims22@gmail.com

Source: portal

Comment Summary: Concerns related to impacts on local communities, regional aesthetics, tourism, and the environment. Concerns that alternative solutions have not been considered.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

Dear Oregon Department of Energy, I am writing to provide my comments and express my deep concerns regarding the Muddy Creek Energy Park proposal. While renewable energy initiatives are essential for a sustainable future, I believe it is crucial to carefully consider the potential impacts this project will have on the region's natural beauty and the state's commitment to preserving farmland. Having grown up just outside of the proposed park boundary, I am undeniably biased. However, I believe that the perspective of those who know and love that area well should be taken into account when considering the project's approval. Oregon has made a commendable commitment to slowing development on farmland, recognizing the vital role it plays in ensuring food security and supporting local agricultural communities. By converting this 1,588 acres of productive agricultural land for solar panel installations, we risk undermining these efforts and jeopardizing the viability of our farming industry. We have already lost a significant portion of our EFU-designated land across Oregon. Moving forward with the project will contribute to the erosion of rural livelihoods and the divisions which already plague our state. I would be interested to know what percentage of the harnessed energy would go towards those most impacted by the installation of the site vs. that which would be diverted to local urban areas. As you are aware, the conversion of agricultural lands for industrial use is an irreversible decision - one that will have cascading impacts on future generations. Yavari Bajehbaj, R., D. Zaliwciw, R. Cibir, L. McPhillips 2022 article on the impact of solar farms underscores how much is unknown by the introduction of these projects on such a vast scale. Hydrological impacts, soil compaction, erosion, air quality issues, and more are all feasible outcomes. It seems problematic that our first response when confronted with the need for renewable energy is to increase our degradation of the local environment instead of committing ourselves to finding alternative solutions that minimize our impact. Brownfields, rooftops, parking lots, and other underutilized spaces should be thoroughly assessed for their solar energy potential before resorting to converting agricultural land. This approach would allow us to maximize the utilization of available space without compromising Oregon's commitment to agriculture and the maintenance of our scenic landscapes. I urge the Oregon Department of Energy to consider alternative options for the solar panel installation that prioritize non-agricultural lands. Another significant impact will be on local tourism. The proposed installation is on a number of local biking routes and races. The focus of the events is, again, to showcase Oregon's natural beauty. Concerns about Oregon's growing tourist industry have not been addressed in the proposal – a gaping oversight on the part of the applicants. 1,500+ acres is a significant step in the destruction of our land. It seems to be a direct violation of the spirit and letter of our

local laws, especially when there are alternatives already available. Thank you for considering my comments. I trust that the Oregon Department of Energy will carefully evaluate the potential impacts and take the necessary steps to preserve Oregon's natural beauty while advancing renewable energy goals.

Sincerely, Garrett Sims

Comment Date: 07-10-2023

From: Garrett Sims

Email Address: gmsims22@gmail.com

Source: portal

Comment Summary: Impacts local bike tourism

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

The proposed location would have a negative impact on local tourism and be a blight on the community. It sits on the Willamette Valley's scenic bikeway (linked below). The area would be visible from I-5 and would greatly decrease the scenic value of the valley. I cannot express my deep, emphatic concerns for the project enough.

<https://traveloregon.com/things-to-do/outdoor-recreation/bicycling/willamette-valley-scenic-bikeway/>

Comment Date: 07-18-2023

From: Lindsey Ruckert

Email Address: lindseyruckert@gmail.com

Source: portal

Comment Summary: Stop dwindling the little farm ground we have left!

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s): Any/all

Council Standards:

Comment:

The Willamette Valley holds the title of grass seed capital of the world and we are fighting everyday to hold on to that title. Please, there is plenty of other land in this fine state to cover with solar panels. Let the farm ground stay farm ground!

Comment Date: 07-18-2023

From: Farmers Helper

Email Address: crew@farmershelper.net

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Please don't turn our linn county farm grounds into a solar field funded by South Korea. We will never be able to replace it. Every year more and more farmland is covered wind farms, parking lots and More.

Comment Date: 07-18-2023

From: Jana Jenkins

Email Address: JJ4Mayor@gmail.com

Source: portal

Comment Summary: Harnessing green energy is a great solution. I am thankful I live in progressive Oregon where our officials lead the nation in environmental sustainability.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 07-18-2023

From: Elwood Martin

Email Address: elwood@linnwest.com

Source: portal

Comment Summary: Nothing against solar but there is plenty of roof tops and desert land for this use. We should not sacrifice crop producing farmland for energy, when there are millions of “non-productive” acres in the state that would be great for a solar project... Really, on EFU?

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 07-19-2023

From: Gabriel Buhler

Email Address: buhlerg@hotmail.com

Source: portal

Comment Summary: The proposed Muddy Creek Energy project will greatly encroach on the migratory habits of Waterfowl and Elk in the area.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

As a resident who lives in the immediate area of the proposed Muddy Creek Energy Park, I am firmly against the project due to the obvious impact it will have on our local wildlife health and migratory habits. Each year we have approaching 45,000 head of waterfowl who migrate through our specific slice of the valley and use our Gap Road/Diamond Hill Drive/Priceboro Road area as a vital rest stop and breeding grounds during their long journey. The proposed area for the Solar Project would greatly affect this natural process due to its location in the very fields the birds inhabit. This land is also home to several herds of Elk who graze the area and come down out of the hills to have their calves in the very fields and tree lines of the proposed Energy Park Project. The fencing of the Energy Park would block them completely from this vital migratory and reproductive activity. On a more personal note, we are a tight knit community out in this area who have a great appreciation for the lack of industrial activity and infrastructure. It's one of the many reasons we choose to live away from town and out here where we are more connected to the environment and the natural world around us. The proposed Muddy Creek Energy Park is just not the kind of operation we want to see being built in the midst of our farming and ranching community. Thank you for your consideration.

Comment Date: 07-19-2023

From: Colton Neuschwander

Email Address: Colt44_shortround@yahoo.com

Source: portal

Comment Summary: Private land or not, rural Harrisburg Brownsville area doesn't need a big solar power plant... what do they need more power plants for, oh right they wanna get rid of dams, that makes sense , you have a giant battery essentially sitting there ready to make power when ever you need it, and you get flood control and a ready source of water for countless poeple around any given reservoir, but never mind that. Let's spend millions of tax dollars on a solar plant in the middle of rural oregon

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 07-20-2023

From: David and Kathy Rogers

Email Address: riverrefugeseed@gmail.com

Source: portal

Comment Summary: See attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment



RIVER REFUGE SEED CO 26366 Gap Rd Brownsville, OR 97327
riverrefugeseed@gmail.com 541-466-5309

July 17, 2023

TO WHOM IT MAY CONCERN:

I am a farmer, an avid waterfowler and a dedicated conservationist. The proposed Muddy Creek Solar Industrial Complex destroys farmland, likely forever; destroys valuable seasonal wetland, likely forever; violates the LCDC rules that were put into place to protect agricultural lands and the environment.

This project will disturb more than 2.5 square miles of seasonal wetland, part of the dwindling system of Willamette Valley wetlands. This proposed industrial complex is in an area entirely zoned Exclusive Farm Use. These seasonal wetlands have been farmed for most of the 20th century and, in the 1970's, were deemed by LCDC to be Prior Converted Wetland. Meaning they may continue to be farmed but, if that use is abandoned, the land must revert to wetland status and be protected as such.

Solar panels and the resulting supportive infrastructures (access roads, powerlines, lithium storage batteries, etc) will disturb and degrade precious wetland areas used by wildlife. Thousands of waterfowl need these seasonal wetlands as stopovers and resting areas in their annual migrations. This area is also noted for its habitat for the threatened species: the Streaked Horned Lark. Solar panels can also present a danger, particularly to wildfowl, as the birds can mistake a field of panels for a body of water and be killed or injured trying to land or fish.

Oddly, the installation of solar panels for production of power is to eliminate power production by CO2 emitting fossil fuels and yet this project will cover up acres of CO2 absorbing farmland and possibly create its own lithium and other toxic chemical pollution problems. This project is being proposed for a part of the state that is fairly densely populated and in a latitude that doesn't have a high yield of sunlight annually. Why is this area desirable when in Eastern Oregon there are thousands of acres of open land much more suitable for this kind of development?

We and our farming neighbors are adamantly opposed to this siting of Muddy Creek Energy Complex.

David and Kathy Rogers
David and Kathy Rogers

Comment Date: 07-22-2023

From: Todd Karo

Email Address: toddkaro96@gmail.com

Source: portal

Comment Summary: I am apposed to the Muddy Creek Energy Park. I don't believe that this meets the criteria for land zoned EFU. Along with the safety hazarded of 1500 acres of reflective solar panels along I5, the destruction of the scenic beauty, loss of property value to surrounding neighbors, and the potential damage to the natural flyway of water fowl. There are more remote areas of our state that would be more suitable.

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s):

Council Standards:

Comment:

Comment Date: 07-23-2023

From: Mike Estergard

Email Address: maestergard@gmail.com

Source: portal

Comment Summary: Solar farms take away farm land which in turn takes away from local economies because farmers are not using goods and services that support farming such as fertilizer and equipment. They disrupt wildlife habitats, they ruin the beauty of the landscape. They ruin the ground because of stripping and compaction. The compacted ground no longer absorbs moisture as it does when farmed. The run off into neighboring properties is polluted. It does not make for good pasture. I have more but no space!

Notice of Intent Exhibit: Exhibit F - Adjacent Property Owners

Page Number(s):

Council Standards:

Comment:

Solar farms take away farm land which takes away from local economies because farmers no longer need services that support farming. They ruin the beauty of the landscape, they disrupt and displace wildlife. They ruin the ground from stripping and compaction. The compacted ground devalues surrounding property because there is more run off from the compacted ground. This run off often is polluted. It is not good pasture. That is simply a gimmick they only want the sheep there to eat the weeds. They sheep don't do well but the invasive weeds do! These companies are mostly owned by big oil companies who don't care about us or the land they are only doing it because they have to invest in so called green energy and this is a convenient location to tie into the grid.



Public Comment Report

PROJECT: Muddy Creek Energy Park

PHASE: NOI

COMMENT PERIOD: 06-27-2023 - 08-16-2023

Comment Date: 07-25-2023

From: Tom Cade

Email Address: cadetw46@gmail.com

Source: portal

Comment Summary: Zone agricultural only. Concerns about property values by ruining our view. Glare off the arrays in the afternoon. Lack of sunlight in the winter will lower there estimate of KW. Huge amount of traffic on our dead end road coming and going. Claiming low carbon footprint. It takes a huge amount of energy to make the panels.

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s):

Council Standards:

Comment:

Comment Date: 07-25-2023

From: Kevin Sims

Email Address: kevin.sims90@gmail.com

Source: portal

Comment Summary: I am opposed to this solar panel project. Not only are these fields used for migratory birds. Elk, deer and honey bees occupy this space. If we truly care about the environment, plant trees that consume CO2 and save the area for rich agricultural purposes. Solar panels are not the answer due to the volume of land they occupy and ruin the scenic beauty of the Pacific Northwest. The panel if need be put in the middle of a desert where there is more sunshine and they need not ruin the beauty.

Notice of Intent Exhibit: Exhibit B - Proposed Facility Description

Page Number(s): NA

Council Standards:

Comment:

The Science The 2021 carbon footprint of the state of Oregon was 61.4 million metric tons of CO2. One mature tree consumes 48 pounds of CO2 a year. If you plant rows of trees 9ft apart and rows of trees are 9 feet apart you yield approximately 538 trees per acre. Take 1300 acres and plant trees with this spacing you come up with 699,400 trees. These trees consume 33,571,200 lbs of CO2 or 16,785 tons of CO2. Oregon has an approximate 9 billion trees which consume about 432,000,000,000.00 lbs of CO2 or 216 million tons of CO2. Add this ground to contribute to the reduction of CO2 and we have 216,016,785 metric tons consumed.

Comment Date: 07-25-2023

From: Tim Hill

Email Address: ehilltim@comcast.net

Source: portal

Comment Summary: Opposed due to the multitude of unmitigated environmental and hazardous health and safety impacts to the surrounding communities, land, wildlife, agriculture and people effected by this project

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s):

Council Standards:

Comment:

Satisfactory mitigation has not been provided or completed for this project. Anticipated loss from the impacts are more significant and long-term than described by the project.

Comment Date: 07-31-2023

From: Terri Burr

Email Address: luckyburr@yahoo.com

Source: portal

Comment Summary: Opposed

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Opposed. Siting solar 'farms' on EFU farmland is an obvious violation of the letter and intent of the law. The process by which this company is going about their business is shady, as well as unneighborly. There have been virtually no notifications, forums, or publicity surrounding this project, and the company is bypassing local control to take advantage of the current temperature of the state government. This does not bode well for stakeholders. * wetlands * bird and large animal migration * heavy metals used in construction of solar panels and batteries (leaching) * removing productive EFU land from production for 40+ years * non-native and invasive weeds taking over when field/pasture rehab is impossible * replacing carbon-sequestering production agriculture with heat-producing/reflecting solar panels * degrading local land values * dropping the taxable value of the site This is not an appropriate location for this type of project. The State of Oregon must abide by its own laws. It must stop grabbing rural land to serve the metro area, at the expense of truly green endeavors.

Comment Date: 08-01-2023

From: Walter Adams

Email Address: walter.adams@energy.oregon.gov

Source: portal

Comment Summary: The attached document contains a scan of the comment cards received at the Public Information Meeting on the NOI held in Brownsville on July 25, 2023.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The attached document contains a scan of the comment cards received at the Public Information Meeting on the NOI held in Brownsville on July 25, 2023.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: JOEL GEIER

Address: 38586 HWY 99W / CORVALLIS OR 97330

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)
Date: July 25, 2023 Location: Brownsville, Or
REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Patrick Starnes
Address: 122 Putman Brownsville, OR 97327
I represent (if applicable) self Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.
My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or
☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Don Bowers

Address: 2209 Coho Rd Harrisburg 97441

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

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ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Jim Johnson

Address: 635 Capitol St. NE Salem, OR 97301

I represent (if applicable) Oregon Dept. of Agriculture
Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

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ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Tony Koster

Address: 2449 Cliff Rd.

I represent (if applicable) Overton Vauxel Ranch

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Lois Hawk

Address: 21091 Powerline Rd Lawrenceburg, OR

I represent (if applicable) Lois A. Hawk, farmer
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

Coburg location would have been a better location.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Yvonne Scott

Address: 33864 MT Tom

Harrisburg OR 97446

I represent (if applicable) _____

Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: Photography.Artist.Scott@outlook.com

☐ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

1.) Visual Impacts

2.) Location class farmland use

3.) Impact to Planning & Community

4.) Industrial Zoned land taken away

5.) Residential Property values

6.) Wildlife migration ? Elk + Birds Pond & Creek

7.) Decommissioning land fill + abandonment

8.) Wildlife Corridors

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

9.) Fire Mitigation on High Fire Area

10.) Community Town -

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: _____

Address: _____

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: Wade Carothers

Address: 707 Oak St

I represent (if applicable) _____
Print your name OR your organization/business name.

- ☐ Send me future notifications about Council meetings via email.
My email address is: _____

- ☒ I wish to address the Energy Facility Siting Council and/or
☐ I wish to submit the following written comment:

When in early evening
How with Van County Board

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Stephanie Glaser Hargety

Name:

Address: Box 649 Albany Or 97321

Address:

Stephanie Glaser Hargety

I represent (if applicable)

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Kim Buzzard
Address: 23137 Gap Rd. Harrisburg
I represent (if applicable) Myself Kim Buzzard
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: buzzardkim@gmail.com

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)
Date: July 25, 2023 Location: Brownsville, Or
REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: JOHN MARBLE
Address: 38808 Hwy 228 Sweet Home 97386
I represent (if applicable) _____
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

*1st Time
Allowed*

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: STEVE HOOD

Address: 25255 GAP RD, BROWNSVILLE

I represent (if applicable) SELF Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: TOM CORDIER

Address: 2240 NEW PARK TERRACE, ALBANY 97321

I represent (if applicable) TOM CORDIER
Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

• Energy facility siting council - ORLAND, when, who
elected or appointed - by who

• design of cell structure - animal grazing under cells?

• disposal of cells - changing requirements likely

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: 7-25-23 Location: Brownville

REGISTRATION FOR PUBLIC COMMENT

Name: Katie Glaser

Address: _____

I represent (if applicable) _____

Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: Katie.bashawtglaser@gmail.com

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)
Date: July 25, 2023 Location: Brownsville, Or
REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Chelsea Fain
Address: _____
I represent (if applicable) _____
Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: Chad Higgins

Address: 38056 Kelly Rd, Scio OR 97374

I represent (if applicable) myself & my Research outputs
Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☒ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

I wish to invite anyone interested to the agricultural
Research facility & Demonstration in Aurora Oregon
at the north willowette Research & Extension center
on ~~Wiley~~ Wiley Rd.

open tours ~~on~~ Second tuesday of each month
@ 1:00 pm next tour is on August 8th

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: Carl Witig
Address: 33463 Mt. Storm Dr.
I represent (if applicable) Samarhill Ranch
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: carlwitig@hotmail.com

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: Quet Valley

Address: 26135 PERDUE RD HALSEY

I represent (if applicable) LEGACY VALLEY FARMS

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

RIGHT TO FARM QUESTION

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Ryan Glaser
Address: 31880 Sand Ridge Rd Lebanon, OR 97355
I represent (if applicable) Ryan Glaser
Print your name OR your organization/business name.
☒ Send me future notifications about Council meetings via email.
My email address is: ryan 4092556 @ gmail. com

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: Bob Blunsom

Address: 8651 Sonoma Village Loop Harrisburg, OR 97341

I represent (if applicable) Chapman Lumber Co. Placerville, CA

Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: blunsomr47@gmail.com

☒ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____
REGISTRATION FOR PUBLIC COMMENT

Name: Colton Newchwander

Address: _____

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

Who wrote the Standards? Farmers? Ranches?

Where is the Power Stored when the Grid
is full?

Why take out Dams that produce power

to put in one of these facilities? Klamath Energy!

40 yrs? Class 1 soil affected & will/may never

be back to class 1?

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____ Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: HEIDI LEB

Address: _____

I represent (if applicable) _____
Print your name OR your organization/business name.

- ☐ Send me future notifications about Council meetings via email.
My email address is: _____

- ☒ I wish to address the Energy Facility Siting Council and/or
☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Carol Edwards

Address: 34110 Brownsville, Harroburg Dr. 97446

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

★ Please send her notices via U.S. Mail ★

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: _____

Location: _____

REGISTRATION FOR PUBLIC COMMENT

Name: _____

Address: _____

I represent (if applicable) _____

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

- why is the project so large?
- what similar size projects?
- sheep grazing issue

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT
*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Jim Fairchild

Address: 3550 Oak Creek Drive, Corvallis, OR

I represent (if applicable) AUGUBON SOCIETY OF CORVALLIS
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: Maureen Short

Address: 25425 Center School Rd Halsey OR 97348

I represent (if applicable) Mendocino Short Ranch

Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is:

mshort@msshort.com

☐ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

I am opposed to this project for the following reasons:

1 The site location on FV zoned ground.

2 Disruption in the riparian area of migrating waterfowl

3 Changing the aesthetic value of the valley

4 Concerns with the cleanup and restoration at the end of the project

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: LAURA A. LEABO

Address: P.O. BOX 434 (Live 22699 Gap Rd.) Harrisburg, OR 97446

I represent (if applicable) LAURA A. LEABO

Print your name OR your organization/business name.

☐ Send me future notifications about Council meetings via email.

My email address is: _____

☐ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

Human Slaver to get Law Notified For Solar Panels

Lithium Battery. Child Slavery. China Uyghurs

Slavery.

(TUBE THE DIRTY SECRET BEHIND "CLEAN")

Solar ENERGY By AMERIC UNCOVERED

Take gram Revealed EYE July 24, 2023

Rachel Matthews "GREEN AGENDA"

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

ENERGY FACILITY SITING COUNCIL (EFSC)

Date: July 25, 2023 Location: Brownsville, Or

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

Name: TOM CORDIER

Name:

Address: tcordier@pacnet.org 541 905 6228

Address:

I represent (if applicable)

Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is:

☐ I wish to address the Energy Facility Siting Council and/or

☐ I wish to submit the following written comment:

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

REGISTRATION FOR PUBLIC COMMENT ON MUDDY CREEK SOLAR FACILITY

S. Hamilton

1

1

Print your name OR your organization/business name.



Shantam4@yahoo.com

- [illegible]

PLEASE RETURN THIS FORM TO THE COUNCIL ASSISTANT

*See reverse for tips on giving testimony

Comment Date: 08-02-2023

From: Melissa Rogers

Email Address: Melayday@gmail.com

Source: portal

Comment Summary: I am not in favor of the Muddy Creek Solar Engery Project

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I am not ok with the Muddy Creek Solar Engery project. 1500 acres is way too much land to be covered by panels. Solar farms have been known to inhibit local vegetation growth and damage agriculture. We are an agricultural community and the majority of us here do not want this project to move forward.

Comment Date: 08-04-2023

From: Terry White

Email Address: twwhite@live.com

Source: portal

Comment Summary: I am a resident in the neighborhood of the Muddy Creek project. In speaking with the neighbors in our area there are valid concerns that property values will be diminished and the farmland is being converted to industrial property. It would be appreciated if there was an impact survey completed and shared with those affected. Regards, Terry White

Notice of Intent Exhibit: Exhibit F - Adjacent Property Owners

Page Number(s): 0

Council Standards:

Comment:

Comment Date: 08-06-2023

From: Edward Horst

Email Address: horste@hotmail.com

Source: portal

Comment Summary: I am against this project for several reasons. First solar panels located anywhere in western Oregon makes not since except for political reasons since at least half the year is cloudy and thus producing minimum power if any power. Second dolor panels at the best are inefficient and unreliable. Third, the State Government has kept this project from the area resident because it knew it would not be well received, where is the transparency Oregon Government has said they were going to be?

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The only comment left was number four, if the State of Oregon truly cared about what the local residents thought, why render Linn County to advertise status. If you want solar then place them in eastern Oregon where the sun shines a lot longer.

Comment Date: 08-06-2023

From: Bill Royle

Email Address: bill@unionpoint.com

Source: portal

Comment Summary: Opposing solar park due to fire suppression resources needed by Priceboro fire

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

I have already opposed this initiative at the public meeting but that was due to my view that we need as many EFU acres as possible. The Priceboro fire was very close to the area that this solar farm would be located in. It is clear that fire prevention resources could not limit fire within a single property and it involved significant regional resources to ensure that the community wasn't further affected. High Voltage power lines that communities rely on were interrupted as the high voltage power lines that run west to east had to shut down. And how valuable is that solar power if it starts a fire that burns the northern Springfield hills? Is this region better protected than the Oakland region was during the firestorm of 1991? No. In Oakland it was carnage during that fire and they had a lot less fuel to deal with. We aren't smarter than they were and neither is the applicant, regardless of the tech that they claim will put out any fire. The response to the Priceboro fire has been excellent and I am amazed that this fire wasn't worse. But it also shows that fire response time in this area cannot logistically be counted on to be contained within an individual property. God has provided us with a proof-of-concept on what could happen if a solar energy farm fire was sparked. Unless Hanwha Qcells USA Corp is willing to field an on-site water source for this facility and onsite monitors there is no way that this should be approved. Their Notice of Intent notes that they do not have water rights so they can't even pipe in water for fire suppression. This entire project should be scrapped. It is a gamble already from a legal standpoint (EFU IS EFU) but now it is a safety issue as well. Thank you.

Comment Date: 08-07-2023

From: Vicki Bell

Email Address: vicksterbell@icloud.com

Source: portal

Comment Summary: I oppose this solar farm

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I strongly oppose taking up precious farmland for the use of this solar farm. My question is, how will you protect us with fire control after experiencing a horrific weekend of danger to our subdivision? The thought of running sheep within the solar panel seems completely outrageous and ridiculous. What will you do with them in the winter? This seems like a horrible spot to put a solar farm since we experience so many overcast days in the winter when we need the most of our electricity

Comment Date: 08-07-2023

From: Cole Jones

Email Address: Jonesco@protonmail.com

Source: portal

Comment Summary: Opposition to proposed solar installation on the grounds of environmental degradation and harm to wildlife.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The proposed area for the "Muddy Creek Energy Park" is my home. Ever since I was a child I have always loved the area due to its natural beauty and wildlife. Installing a 1500 acre power generation facility in this area will damage what is already occurring at a rapid pace, which is the destruction of our natural environment. This area is located in close proximity to newly established wetlands located on Diamond Hill Road and helps support thousands of migrating waterfowl that visit the area each year, including the vulnerable Dusky Canada Goose. The area is also frequented by deer, turkey, and large elk herds that graze on the grass seed fields. In turn this helps support a large number of raptors that frequent the area. These once endangered birds have seen a dramatic increase due to regulations that help protect their habitat, not cover it in glass and steel. The idea that we should allow the destruction of this seasonal "wetland" area with an enormous amount of solar panels, fencing, substations, roads, etc. is misguided. The many years of agriculture have been hard enough on this area, but at least wildlife can coexist with this process. Building a power plant will surely prove harmful. I hope the state of Oregon will be following its own zoning laws and protect the interests of its own citizens and wildlife who make this area home, instead of allowing a global multinational corporation to destroy an area of great natural beauty and abundant wildlife. There are plenty of vacant parking lots, industrial spaces, and commercial real estate that could be of use for solar installations without sacrificing a large swath of an undeveloped area. Let us not destroy what is left of our natural environment in an effort to save the climate. Thank you, Cole Jones Senate Bill 100 and amendment 101 signed into law May 29, 1973 Oregon Conditional Land Use laws (see section 38)

Comment Date: 08-08-2023

From: Rose Kaler

Email Address: lazyhorsefarm2@yahoo.com

Source: portal

Comment Summary: I'm opposed to this solar farm.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

My first concern is for the the property owners living near this and how it will effect them and their property values. Second, this is good farm land in a county that has more overcast gray days than sun. On average, there are 157 sunny days per year in Linn County.

Comment Date: 08-08-2023

From: Daniel Leabo

Email Address: leabodaniel62@gmail.com

Source: portal

Comment Summary: I am concerned about how these solar panels will affect my land values this land has been in my family since 1863 with a land grant it's historic property to have this solar stuff next to mine less than 500 ft away is to close to be safe. There are endangered or and protected species were the proposed site is there are periwinkles salamanders signal crayfish mud trout small fish species also leeches lampreys in the watersheds Creeks that run through the property.

Notice of Intent Exhibit: Exhibit F - Adjacent Property Owners

Page Number(s): Page one proposed facility location

Council Standards:

Comment:

There are web pages Oregon State University files Oregon wildlife Oregon department of fish and wildlife online information about the endangered species in these creeks and waterways. I am concerned because of my property it is less than 500 ft from proposed site I think that those solar panels will hurt the value of my property causing financial loss also this farm is been in our family since 1863 land it is her story property stagecoaches used to drive through here there's a barn where they used to switch their horses out there's also Indian artifacts all over the ground on the ridge that you guys are going to build on or try to build on I have seen other solar facilities become wasteland garbage dumps after 20 years when the panels were out instead of replacing with new and rebuilding they just pull up stakes move somewhere else and leave it to the landowner to have to clean up was all the plastics and pcbs in this crap becomes a scrap yard of plastic and concrete not usable for anything except parking junk cars or eye sores, I am also concerned about people coming and going all night long to pressure wash off these panels as much grass that flies around during the windy part of farming season I suspect there will be lots of fires on these panels due to whirlwinds full of grass hanging all over them running around with headlights in the middle of the night would run off the game would be harassing the game ducks geese deer elk in the middle of the night with spotlights and pressure washers loud running we don't need it here. I am opposing your proposed site thank you for hearing me out.

Comment Date: 08-09-2023

From: Barbara Jansen

Email Address: bobbie.j.jansen@gmail.com

Source: portal

Comment Summary: I am excited to see any new renewable projects in Oregon! If neighbors are concerned about the ecosystem around them (comments about wildlife concerns from neighbors) they should consider becoming organic farmers. Otherwise it is disingenuous to suggest harm to the environment.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

As a 6th generation Oregonian, and a 44 year resident of Linn County, I support renewable energy projects in Linn County. The more the better!

Comment Date: 08-09-2023

From: Cheryl Stevenson

Email Address: chesteve45@gmail.com

Source: portal

Comment Summary: The loss of farmland is unfortunate, but some land must be sacrificed for the climate emergency we now face. Please allow this solar farm.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-09-2023

From: Michael Neiman

Email Address: michaelneiman@gmail.com

Source: portal

Comment Summary: I support the capture and use of solar energy. We need to provide space to create solar energy. Grass seed or filberts are not as much of a priority as addressing global warming. How the property owner chooses to use their land is up to the property owner.

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s):

Council Standards:

Comment:

Energy production by using fossil fuels is no longer viable. Solar energy is definitely a resource that can be captured and utilized to fuel our existing electrical system infrastructure. I do think that waiting to find an alternate location is not an option. Time is a priority! Access to areas that will be using energy produced is a priority. The amount of available sunshine is an area that needs to be looked at to find the best use of solar energy. Action now is the most important element under consideration. Replacing fossil fuel consumption is the answer.

Comment Date: 08-09-2023

From: stephanie hagerty

Email Address: stephaniehagerty@gmail.com

Source: portal

Comment Summary: I am in opposition to the siting of an industrial solar park on EFU ground in Linn County, Oregon. The proposal must adhere to local land laws and permits. We must adhere to our Linn County Land Use Process, effective May 29, 1973. This project must address the fact that this proposal is an EXPERIMENT on EFU ground. This project must address water runoff, toxic leaching, wetlands, fish, wildlife, endangered and threatened species. What will reclamation costs be in 40 years?

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

I am in opposition to the siting of an industrial solar park on EFU ground in Linn County, Oregon. This proposal must adhere to local land laws and permits. We must adhere to our Linn County Land Use Process, effective May 29, 1973. This project must address the fact that this proposal is an experiment on EFU ground. This project must address water runoff, toxic leaching, wetlands, fish, wildlife and endangered and threatened species. What will reclamation costs be in 40 years? Is there a crystal ball that tells us what costs will be to reclaim and restore this land to its natural state in 30-40 years? Installation of this proposed facility will directly financially cost and impact farmers, their equipment, harvest and planting anytime the roadways are closed or delays due to construction.

MDAC Farms, Inc.
P O BOX 649
Albany, OR 97321

Notice Timing

Summer harvest season is widely regarded as the busiest time of year for farm families. Low community attendance to the public meeting discussing the proposed Muddy Creek Energy Park, is expected for this time of year. Furthermore, the offsite location of the meeting in a much too small room contributed to poor attendance. Additionally, there was no advance communication as to the meeting time and place – my family owns two parcels two miles North of the proposed solar installation and we received no notice.

Developers and Oregon Department of Energy Staff: The process of identifying “high-value farmland” is extremely complex, involving a tract-by-tract assessment of specific soil type and interactions with yield potential. Staff and applicant confirmed at the July 25, 2023, meeting that this analysis had not been completed.

The developers state 34,000 homes in the Willamette Valley will be served with energy from the solar installation. Where will these homes be located? – Population of Harrisburg, Brownsville, Shedd and Tangent=6951 people, approximately 2300-3400 homes in our area. Where is the energy going to serve? Urban centers? Or the rural population where the solar installation is proposed?

The developers state 100-300 people will be employed during the installation. Will the employees be residents of the local community? Brought in from elsewhere? Where will these people live, eat, entertain themselves? Eugene/Corvallis/Albany? There are no sites in the immediate area of the proposed solar installation to accommodate this number of people. This means that dollars spent by construction workers will be spent out of our communities.

EXPERIMENTAL OSU research test plots range in size from 1-10 acres, KGW May 2023 reported agrivoltaic as experimental – a **big experiment**. Is it a good idea to lose 1588 acres of prime arable land to an experiment? If successful, Qcells will benefit, if unsuccessful, our community will suffer.

See link below to read about the 5-acre research site in Aurora:

<https://engineering.oregonstate.edu/all-stories/crops-and-killowatts-agrivoltaics-project-will-harvest-solar-energy-farmland>.

Solar energy is not clean enough energy to lose/consume/waste high value farmland. Ecosystems services of farmland are well documented, studied, and understood. Agrovoltatics is a new discipline that is not well documented, studied, or understood in the PNW.

Qcells parent company is based in Seoul South Korea. Some of the largest solar installations are in South Korea and East Africa. Qcells website below:

<https://www.q-cells.eu/about-q-cells/about-hanwha-q-cells.html>

Use of High Value Exclusive Farm Use farmland – Senate Bill 100 Amendment 101 signed May 29, 1973

Hector McPherson authored this Senate Bill to keep our EFU ground in Exclusive Farm Use.

We must adhere to our County Land Use Processes

Our County Commissioners Need to be the decision makers on this scale of an Experimental project

Project scope Facility Site Size is 1588 acres proposed on EFU zoned land. The Public Notice issued by the Department states that the applicant “may choose to meet the Council’s Land Use Standard, OAR 345-022-0030, by obtaining land use approval from the affected local governments or by seeking a determination of compliance from Council”.

It appears that the Project is required to proceed as a “renewable energy facility” within the meaning of ORS 215.446. See ORS 215.446

Water Runoff Issues

While the Notice refers to controlling temporary water runoff impacts from construction activity, the Notice fails entirely to take account of one of the most significant impacts of the construction, which will be to add an enormous quantity of impervious surfaces that will concentrate stormwater and cause significant erosion. Rather than address this concern, the Notice falsely asserts

Toxic leaching

The Applicant’s website claims that “the soil is healthier following the project,” but provides no basis for this statement. Rainwater on solar panels is associated with potentially significant toxic metal leaching. See, e.g., Nain & Kumar, “Metal dissolution from end-of-life solar photovoltaics in real landfill leachate versus synthetic solutions: One-year study,” *Waste Management*, Vol. 114, pp. 351-61 (August 1, 2020) (“Rainwater simulating solution was found to be predominant for metal release from silicon-based photovoltaics, with silver, lead and chromium being released up to 683.26 mg/L (26.9%), 23.37 mg/L (17.6%), and 14.96 mg/L (13.05%), respectively”).

Which agency will monitor toxic materials contained in solar panels and leached?

Wetlands Issues

The entire area identified by the Applicant is full of wetlands, and often flooded. The Applicant’s summer surveys will not produce sufficient knowledge of the site conditions to provide adequate site engineering and planning.

Fish and Wildlife Issues

At the July 25th public meeting, the Applicant indicated that all field studies would be wrapped up by the end of this summer. As numerous members of the public confirmed, this time period does not include extensive use of the area by elk, migrating wildfowl and other species. The project order should be based on a careful review of these studies and ensure that important data gaps are filled.

Endangered Species

The streaked horned lark, once common in the Willamette Valley, was listed as “threatened” in 2013. The U.S. Fish and Wildlife Service has long emphasized that “agricultural lands in the Willamette Valley are important and will be necessary for the recovery of the streaked horned lark” and that “active agricultural lands . . . have become critical for the continued survival and recovery of the streaked horned lark” and the “largest area of potential habitat for streaked horned larks is the agricultural land base in the Willamette Valley” (87 Fed. Reg. 21783, 21787 (April 13, 2022); *see also* 78 Fed. Reg. 20074, 20078 (April 3, 2013).) More specifically, “maintenance of extensive agricultural lands (primarily grass seed farms) is crucial to maintaining the population of streaked horned larks”. (87 Fed. Reg. at 21788.)

Wildlife Movement

The project site is directly in pathways used by a large local elk herd of 80-100 individuals. The importance of such wildlife movement corridors is well-recognized in conservation literature, along with the adverse impacts that come from breaking habitat linkages.

The Applicant has indicated an intent to place a chain link fence around the perimeter of the project, including barbed wire. This will tend to push migrating elk toward I-5, causing increased risks of traffic fatalities as well as injury to the elk.

The site is in direct pathway with migrating waterfowl, feeding areas various threatened and endangered species to include streaked horned lark, dusky geese, golden eagles, cutthroat trout, bass, bluegill etc. bullfrogs’ lizards and snakes.

Bird Impacts, Including Migratory Wildfowl

Because of the unique location of Applicant’s project, in an area heavily used by birds, losses of bird migration may be high. Located immediately to the north of the project area is the Diamond Hill Wetlands, private land under the protection of the U.S. Department of Agriculture’s NRCS Wetland Reserve Program. The project has been underway since 2007, and involves restoration of 350 acres of native prairie, 130 acres of marsh, and 100 acres of riparian forest. It supports large bird populations, including wintering waterfowl.

Reclamation/Restoration Issue

Whether reviewed by the Council or Linn County, the applicant will be required to demonstrate that the site “can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility”. OAR 345-022-0050; ORS 215.446(3)(c). At the July 25th public meeting, the Applicant vaguely referred to a “30+” year horizon for repowering or decommissioning.

Wetland removal, drainage impacts, leaching of contaminants into waterways (Muddy Creek, Little Muddy Creek, Willamette River).

Remediation Costs

Bond requirements are insufficient to have no understanding of remediation costs in 30-40 years. Disposal impacts the environment.

Weed Control

As local farmers have testified, the Applicant's plan to graze sheep in connection with the solar panels will not produce effective weed control, and the Applicant will be required to make extensive application of chemical herbicides to control the growth of weeds that not only impair grazing but may also provide shade interfering with panel efficiency. Uncontrolled weed growth threatens local farming practices and costs, and a solid weed control plan is required. Sheep scarify many noxious weeds and therefore this plan may actually worsen weed pressure – this will impact surrounding farms.

OSU's research and experiment stations employ full-time farm managers to help manage issues such as weed control and mowing. Who will be responsible for 'mowing' and managing/monitoring weeds and grazing animals and harvest?

Direct Farming Interruption during installation

De-Valuation of farming – cost of farming practices during construction of proposed solar installation could sky-rocket. Seed trucks on the highway waiting for construction flaggers delay harvest, shut down combines. Tractors on the highway waiting for construction flaggers delay planting, fertilizing etc.

Devaluation of Properties

With the unsightly solar installation, which neighbor will want to view the proposed solar installation? The unsightly solar panels will be in plain sight of many residential homes. Residents of the proposed area likely purchased properties, built homes and agricultural facilities for a reason. The quiet, beauty of Exclusive Farm Use zoned properties is very attractive to many. To have one's home's view obstructed by a non-complying use will be detrimental to property values.

Fire Hazard

The Notice acknowledges the substantial risk of battery fires with references to a "fire prevention system" and "cooling units" for the batteries. The risks associated with large lithium-based batteries, some of which may be the size of shipping containers or larger, are well known, and resulting fires often cannot be controlled. The project order should be conditioned to require a detailed demonstration of fire control to minimize toxic releases—even under conditions where power is lost.

Corvallis Boys and Girls Club Solar Fire June 17, 2023:

<https://kpic.com/news/local/corvallis-boys-and-girls-club-roof-fire-linked-to-solar-panels-investigation-underway>

Stephanie Glaser Hagerty, Landowner

Map 15-3W-10 Tax Lot 100

Map 15-3W-3 Tax Lot 300

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: I am vehemently opposed to the Muddy Creek Energy Project. The Notice of Intent identifies the project being built on Prime Exclusive Farm Use (EFU) properties and the project should be rejected on this basis alone. Farm land has been considered "sacred" since 1973 when SB 100 and subsequent SB 101 were enacted and passed into law.

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s):

Council Standards:

Comment:

"SECTION 1. The Legislative Assembly finds and declares that: (1) Open land used for agricultural use is an efficient means of conserving natural resources that constitute an important physical, social, aesthetic and economic asset to all of the people of this state, whether living rural, urban or metropolitan areas of the State" There is, absolutely, no way an Industrial Solar Facility can do to identify or align itself within this law. Should the ODOE even consider this project it will permit landowners to lease their property to the highest bidder and open the way for a multitude of options rather than farming. For instance; what is the difference from installing an Industrial Solar Installation to subdividing the property and placing homes on 5 acre lots and grazing cattle or sheep on the property and calling the subdivision dual purpose? SECTION 1 goes on.... (2) The preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources and the preservation of such land in large blocks is necessary in maintaining the the agricultural economy of the state for the assurance of adequate, healthful and nutritious food for the people of this state and nation. (3) Expansion of urban development into rural areas is a matter of public concern because of the unnecessary increases in costs of community services, conflicts between farm and urban activities and the loss of open space and natural beauty around urban centers occurring as the result of such expansion. (4) Exclusive farm use zoning as provided by law, substantially limits alternatives to the use of rural land and, with the importance of rural lands to the public, justifies incentives and privileges offered to encourage owners of rural lands to hold lands in exclusive farm use zones. Again, to me this law is very clear and succinct. How can the State permit anyone to vary from this law? Even the Conditional Land Use laws specifically state the maximum of 20 acres. How can the State or ODOE overlook their own laws for something that is the flavor of the month?

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: The proposed EFU properties all consist of wetland and drainage areas

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

In the winter months through spring months there is significant standing water and drainage. The ODOE should require the party to review at least two seasons to insure these areas are taken into consideration. Drainage of the entire East side of I-5 is a critical consideration. Should this drainage not be taken into consideration, there could be significant negative impacts to adjoining EFU properties as well as Muddy Creek Irrigation District management. All these waters flow to Little Muddy Creek, Muddy Creek and, ultimately, the Willamette River. This is concerning due to potential contaminants affecting the health of these streams and rivers. Redirection of drainage will have a significant impact on those aforementioned adjoining properties and impact the neighboring farmers. A detailed erosion and drainage plan to mitigate impacts of these industrial sites must be addressed!

Comment Date: 08-09-2023

From: Eric Pimm

Email Address: pimmfarmsinc@gmail.com

Source: portal

Comment Summary: Letter of Objection

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

I object to the poor timing chosen for the public to give comment on this proposal and request that it be extended into the late fall when the surrounding farmland owners such as myself have time to attend public meetings. I farm over 2900+ acres in Muddy Creek area and more beyond that, and can tell you that farmland is becoming more and more scarce every year here in Oregon and in the US in general, especially here in Linn County. Even farmland with low-quality soils are very high priced these days as the acres as so few. The benefit of projects like these will not benefit our local residents but go to urban areas. Additionally, EFU ground is for EXCLUSIVE farm use. Not projects like these.

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: Remediation of these areas will be more expansive in both cost and impacts due to the long term damage to the soils.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The proposed dual purpose of grazing sheep is not a feasible approach and will likely be abandoned early in the life of these Industrial Solar sites. Ask any rancher. I request the ODOE to request Q-Cell to do a study over the next two years to prove this approach is practical. Based on the premise this approach is not practical, the dual approach with sheep will be abandoned early on. This will force the project to mow/spray grass and noxious weeds. In turn, this will basically "nuke" the ground over the duration of the project. All nutrients will be removed from the soil and will require multiple years of proper soils management in order to recover the original health of the soils. Noxious weeds will negatively impact neighboring farms requiring additional costs to the neighboring farmers. ODOE should require a detailed evaluation and noxious weed program acceptable to normal farming practices.

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: Removal of these EFU farmlands will impact 10's of thousands migratory birds, raptors, fish and protected and threatened species

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Wetland removal for Industrial Solar Panels impacts 10's of thousands of migrating waterfowl - Feeding areas. 40-50 thousand Cackler, Western, Snow and Dusky geese feed in the fields identified by the project. Thousands of Pintail, Mallard and Widgeon ducks feed in these fields as well. There will be a significant impact on these migratory birds. A study of these areas is a must. At the July 25, 2023 public meeting the Q-Cell representatives indicated they did a May to August study. This makes absolutely no sense. ODOE should require a two season study of their proposed location of the Industrial Solar Panels. Additionally, there has been a significant effort by both the United State Fish and Wildlife as well as private parties to increase the flyway and provide habitat for migratory waterfowl, songbirds, owls, eagles and other raptors here on the East side of I-5. This proposed project will have a significant negative impact to their efforts. Again an in-depth study of these efforts is required. In addition to birds, there is a significant Elk and Deer population in this area. Fencing will impact these animals and force them to new and uncharted areas. This could lead to more negative interaction with vehicles and these large animals. A fencing plan review to insure these animals are not funneled to the 1-5 corridor is a necessity. Other animals that will be impacted as well: take into consideration and require a study on the impacts to River Otter, Ground Squirrel, Raccoon, Mink, Opossum etc For the ODOE information there are a large population of fish existent in Putnam Creek, Bishop Creek and the Little Muddy Creek. They include but are not limited to Cutthroat Trout, Fresh water muscles, Crayfish, Bass, Catfish, Suckers, Carp, Sunfish, Bluegill. The runoff and potential leaching of the materials from the proposed facility could have a significant negative impact on these fish. Many of which are protected. A detailed study must be addressed to insure these fish are not impacted.

Comment Date: 08-09-2023

From: PEGGY RIDINGS

Email Address: peggysue5297446@icloud.com

Source: portal

Comment Summary: As a homeowner in the Mount Tom area of Harrisburg, I am concerned about the environmental impact the Muddy Creek Energy Park will bring to the wetlands, wildlife and the 1,500 acres of prime farm land for the proposed solar energy park. It also concerns me that the project site is deceptively referred to as "eight miles south of Brownsville near Harrisburg" when in fact it's true location is Harrisburg. Aesthetically speaking, the project will destroy the natural beauty of the countryside.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: Cultural and Native American Artifacts are readily available in this area.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Living in this area, I am aware of significant amount of Native American Artifacts in the area. Arrowheads, tools and other artifacts readily available in areas surrounding the proposed project. These artifacts can be found after the farmers complete cultivating the soil and after rains. The timeline for finding these items are late fall to early spring. The ODOE should require the project to provide a sufficient and adequate timeline for investigating the cultural aspect of these EFU properties. Perhaps the Department of Archeology should be involved in this matter.

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: The Streaked Horned Lark is a "threatened" species. Bald and Golden Eagles are protected.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The Streak Horned Lark is a threatened species. The USFW has identified a parcel of land (2 miles North of the proposed Industrial Solar Panel site) as a refuge area. Golden and Bald Eagles are abundant in the area and are counted annually by the Audubon Society, BLM and USFW. There must be a detailed study and plan for protection of these protected and threatened birds and raptors.

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: Lighting and noise plan is required.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

The proposed location for the Industrial Solar Panels is a rural location. The movement, maintenance , operation of this facility will require a great deal of lighting and create a great deal of noise. Local residents cherish the lack of lighting and noise in our area. A impact and mitigation study should be done prior to any permits being supplied to the proposed project.

Comment Date: 08-09-2023

From: Troy Jones

Email Address: mtroyjones@gmail.com

Source: portal

Comment Summary: De-valuation of adjoining properties and cost impacts to adjoining properties

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Due to the proposed site being in a rural location, the impact of the Industrial site being adjacent to neighboring properties will have a significant impact on the value of our properties and cost to neighboring farms. A detailed study of the impact of these and a consideration for the negative impacts to neighboring properties should be studied and addressed.

Comment Date: 08-09-2023

From: Tessi Sims

Email Address: tessi.sims@gmail.com

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

My parents, my brother's family, and my husband and I have lived on property that is across from the proposed solar farm for the last 60 years. Our family is very opposed to the Muddy Creek Energy Park for many reasons. Soil Protection: We are very fortunate to live in the "Grass Seed Capital of the World." The soil is fertile and full of nutrients growing lush, beautiful grass which produces high quality seed that is shipped around the world. What a crime to have this prime farmland taken out of production and replaced with solar farms that deplete the soil and have the potential to pollute the groundwater for our children and their children. I am a 1st grade teacher. Each year, in the Spring, we have Grass Seed Day. On this day students learn about the production of grass seed in our area, the oxygen that is produced by the fields their buses pass by each day, and they are blessed to meet local farmers who have farmed this fertile land for over a hundred years. You should see how proud they are to know that they live in the middle of the "Grass Seed Capital of the World." You can be sure we won't be having "Solar Farm Day!" Fish, Wildlife Habitat, Scenic Resources, and Recreation: If you are lucky enough to drive Priceboro Drive each morning and evening you would wholeheartedly understand why we are opposed to this solar farm. As the sun comes up and the mist is still hovering over the grass fields you will very often see herds of elk in the fields along the way. They are amazing to watch! I am always in awe that they are so large but can travel silently across the grass seed fields. Further down the road you may be lucky enough to catch sight of a red or gray fox looking for a morning meal, dodging in and out of the grass that is emerging for another year of production. Finally, the bald eagles and the many varieties of birds seen daily. Our family wants to continue to see these gifts each morning and evening. We DO NOT want to look upon the metal monstrosity, producing intense heat and light which has been proven to destroy the flora and fauna we have come to adore! You can't put a price tag on that! It is no surprise that many bicycling, motorcycle, and car groups choose to frequent Priceboro Drive and Gap Road because they have discovered the beauty, we are privy to each day. I am sure they won't be returning to look at the eyesore the solar farm will provide. Wildfire Prevention: This weekend the Priceboro Wildfire showed that wildfires in this area are a true threat! As illustrated by this fire, it travels fast in this area as we are surrounded by forests. Our fire department is amazing, but it is manned by volunteers, many who are farmers who are on their machinery during the highest fire risk months. It takes them longer to get to the station, loaded, and out to our area. This combined with being in a rural area, with water not easily accessible, is cause for much concern. Even if solar farm fires are not common the aftermath of just one would be devastating! Why take the risk and put all of us and our property in danger. In closing, my grandfather searched far and wide for the cattle ranch my family is so lucky and blessed to live on. He

worked hard to provide his family with a piece of paradise. We had the beginning of our 4th generation arrive last year in July. Our grandson already notices the green grass fields, the bald eagles, and the farm machinery that he may drive one day as did his grandma, mommy, great uncle, and uncle once did. It was mentioned that there is a need for this solar park farm. There is also a need for the preservation of prime farmland. My family is not against solar parks, we are opposed to solar parks being placed in an area for the reasons described above. Please choose an area that is not prime farmland, home to amazing wildlife, frequently visited because of its beauty, at risk for wildfires, and that affects properties that have been in families for generations. Sincerely,
Monty Jelden Tessi Sims (Jelden) Joyce Jelden Kevin Sims Travis Jelden

Comment Date: 08-09-2023

From: lynda chambers

Email Address: lynda_chambers@hotmail.com

Source: portal

Comment Summary: Oppose Muddy Creek Energy Park

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I absolutely oppose the Energy Park. This is prime farm land , it is suppose to be protected land. I would like to know what minerals are being used and where they are being sourced ? What about the species of birds that are also suppose to be protected? What about all the other wildlife that live there? They said they consider this to be experimental, I think you should take this an build it closer to Eugene or Portland, they will love you there! Here we say "NO" "Not here!"

Comment Date: 08-09-2023

From: Susan Cade

Email Address: cadeslp@gmail.com

Source: portal

Comment Summary: OPPOSITION TO MUDDY CREEK ENERGY PARK

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s): ?

Council Standards:

Comment:

AUGUST 11, 2023 RE:COMMENTS ON MUDDY CREEK ENERGY PARK NOTICE OF INTENT FOR THE RECORD I SUSAN CADE AM STATING HOW TOTALLY OPPOSED I AM TO THIS SOLAR FARM/PARK OR WHATEVER YOU'VE DECIDED TO CALL IT! THERE'S SO MUCH THIS AGENCY AND Q-CELL HAVE FAILED TO ADDRESS AND SO MANY QUESTIONS THEY'VE NOT ANSWERED! THESE 1,800 ACRES ARE TO BE PROTECTED AND USED AS THEY HAVE BEEN AND NOT REMOVED FROM EFU STATUS! I ONLY LEARNED ABOUT THIS PROJECT ON MONDAY JULY 24 THE DAY BEFORE THE HEARING IN BROWNSVILLE. IT'S REALLY OUTRAGEOUS THAT YOU'VE PURPOSELY NOT BEEN OPEN ABOUT THIS PROJECT WITH FOLKS IN THE VALLEY AND ESPECIALLY THOSE OF US WITH HARRISBURG ADDRESSES! ALL THESE MEETINGS TAKE PLACE ELSEWHERE AND YOU NEVER EVEN MENTION THE REAL LOCATION OF IT..JUST THAT IT'S 8 MILES SOUTH OF BROWNSVILLE. IT APPEARS YOU'RE TRYING TO MAKE IT SOUND LIKE IT'S IN THE MIDDLE OF NOWHERE?..NOT NEAR A CITY BUT 8 MILES AWAY!! YOU'VE PROVIDED AN INSUFFICIENT NOTICE TO US ABOUT THIS PROJECT AND THE FACILITY FOR THE PREPARATION OF THE DEPARTMENT OF ENERGY'S PROJECT ORDER! ORS 469.330(1) YOUR COUNCIL STANDARD MENU ABOVE DID NOT ALLOW ME TO CLICK AND SELECT MULTIPLE ITEMS TO DISCUSS SO I'VE ENTERED THEM HERE. OAR 345--022-0022 IS ABOUT SOIL PROTECTION! HOW HAVE YOU SHOWN US THAT AND THESE LANDS WILL NOT BE MISUSED OR ALTERED SO THAT THEY ARE NOT LONGER USEFUL? THE FACT THAT YOU'VE NOT PERFORMED A "FARM IMPACT TEST" SHOULD CURTAIL ANY FURTHER CONSIDERATION OF THIS PROJECT. IF YOU HAVE PREFORMED THIS TEST WHERE'S THE RESULTS? YOU'VE NOT PROVEN HOW YOU'D GO ABOUT ASSURING THAT PROTECTION! OAR-345-022-0030 STATES THESE ACRES ARE EXCLUSIVE FARM USE ONLY AND NOT TO BE USED FOR OTHER PURPOSES! YOU'VE WALKED ALL OVER THAT RULING AND LAW ! SENATE BILL 100 AND AMENDMENT 101 GIVE SPECIFICS ABOUT THIS HIGH VALUE AND EXCLUSIVE FARM USE LAND! HOW HAVE YOU SHOWN ANY OF US THAT THAT IS NOW OBSOLETE? OAR 345-022-0040 THESE ARE THE PROTECTED WETLANDS AREAS THAT ARE VULNERABLE TO YOUR CONSTRUCTION AND TAKE OVER! YOU'VE NOT SHOWN HOW THESE AREAS WON'T BE HARMED! HOW WILL THOSE 3 CREEKS THAT FLOW THROUGH THIS AREA TO THE WILLAMETTE RIVER BE KEPT FREE OF CONTAMINANTS THAT CAN LEECH INTO WATER SYSTEMS? OAR 345-022-0060 THESE LANDS ARE WILDLIFE HABITATS THAT WILL TOTALLY BE AFFECTED BY THE INVASIVENESS OF YOUR SOLAR PANELS, FENCING, CONTAMINATION TO THE WATERWAYS THEY DRINK FROM AND CHEMICALS LEACHING INTO THE SOILS WHERE THEIR HOMES ARE BY DISRUPTING THEIR HABITS AND POTENTIALLY KILLING THEM! YOU'VE NOT PROVEN TO US THAT THAT WON'T HAPPEN! WE WANT OUR ELK HERDS, DEER, GEESE, BIRDS, DUCKS AND ALL OTHER CRITTERS TO CONTINUE TO HAVE FREE RANGE OF THESE LANDS! WE HAPPEN TO ENJOY THEIR PRESENCE AROUND OUR PROPERTIES AND I STRONGLY OBJECT TO YOUR TAKING THAT AWAY FROM ME AND MY NEIGHBORS WITH THIS PROJECT ! OAR 345-022-0070 THERE IS AN ENDANGERED STREAKED HORNED LARK THAT MAKES THE WILLAMETTE VALLEY IT'S HOME! THESE FIELDS ARE CRUCIAL TO MAINTAINING THEIR POPULATIONS (87 FED REG.AT 21788) AND YOUR OPERATION WILL LEAD TO THEIR EXTINCTION! DO YOU REALLY WANT TO GO ON RECORD FOR BEING THE COMPANY THE LED TO THE TERMINATION OF THIS LARK BY THE DEATH OF ITS LAST MEMBER ? YOUR OPERATION DOES NOT BELONG ON THIS LAND. THESE

BIRDS ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT AND YOUR PROJECT VIOLATES THAT! OAR 345-022-80 THIS IS A VERY SCENIC AND BEAUTIFUL PLACE TO LIVE WHICH IS WHY WE CHOSE TO MOVE HERE AND INVEST THE LAST 29 YEARS OF OUR LIVES LIVING AND IMPROVING OUR LAND AND HOME! WE ARE LOCATED ON MOUNT TOM AT ABOUT 500 FEET ABOVE THESE FIELDS AND THEY'LL NEVER BE THE SAME NOR LOOK THE SAME TO US ONCE YOUR PANELS ARE INSTALLED. YOU STATED IN YOUR INTRODUCTION TO US THAT YOU'LL PLANT TREES AND OTHER SCREENINGS TO OBSTRUCT THE VIEWS OF THOSE SOLAR PANELS... MAKING IT LESS INTRUSIVE. REALLY?...PLEASE TELL THOSE OF US THAT LOOK DOWN ON THIS SOLAR PROJECT JUST HOW YOU INTEND TO LESSEN THE IMPACT ON OUR HOMES? HOW DO YOU INTEND TO LESSEN THE GLARE FOR US? YOU'VE NOT ADDRESSED THAT PROBLEM AT ALL AND I DOUBT YOU HAVE AN ANSWER! THESE ARE TROUBLING PROBLEMS FOR US UP HERE AND YOU'VE NO RIGHT TO IMPOSE ON US THE REAL POTENTIAL TO SUBSTANTIALLY DEVALUE OUR HOMES, OBSTRUCT OUR VIEWS WITH THIS HORRENDOUS PROJECT AND INVADE OUR NEIGHBORHOOD! OAR 345-022-0120 JUST HOW HAVE YOU PLANNED FOR THE DISPOSAL OF THE HARMFUL, TOXIC WASTE THAT YOU'LL BE PRODUCING? YOU HAVEN'T BECAUSE THERE IS NO PLAN OTHER THAN TO SAY "IT'LL BE DUMPED IN A LANDFILL"! YOUR NOTICE PROVIDED NO DETAILS AS TO THE MATERIALS YOU USE THAT COULD POTENTIALLY LEACH TOXINS INTO THE GROUND. YOUR STATEMENT THAT "THE SOIL IS HEALTHIER FOLLOWING THE PROJECT" IS RIDICULOUS AND CERTAINLY NOT TO BE BELIEVED SINCE YOU AGAIN NEVER PROVIDE ANY PROOF TO SUCH CLAIMS ! THERE ARE MANY MORE QUESTIONS AND NO ANSWERS PROVIDED BY YOU AND WHAT YOU HAVE GIVEN IS PRETTY FLIMSY. I REPEATEDLY HEARD AT THE JULY 25TH MEETING "WE'LL GET BACK TO YOU ABOUT THAT"..NO..YOU NEEDED THOSE ANSWERS BEFORE PROPOSING THIS PROJECT AND YOU'RE STILL RESPONSIBLE TO ANSWER THEM AND PROVIDE PROVEN FACTS THAT YOU'VE TESTED AND DONE THE RESEARCH. THE FACT THAT THIS WOULD BE THE LARGEST SOLAR "EXPERIMENT" IN OREGON SAYS A GREAT DEAL AND MY NEIGHBORHOOD AND I DON'T WANT TO BE YOUR TESTING GROUND FOR ANY OF YOUR EXPERIMENTS! FIND ANOTHER LOCATION!

Comment Date: 08-10-2023

From: Phil Ermer

Email Address: crocus1@msn.com

Source: portal

Comment Summary: I strongly oppose the massive solar project proposed near Brownsville. Productive Farmland is a commodity that must be carefully guarded. Once it is gone, it is gone forever. This project belongs in Eastern Oregon on land that has no agricultural value. As a Professional Electrical Engineer, I know this is possible. Phil Ermer, PE

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-10-2023

From: Lynn Kampfner

Email Address: cowranch101@gmail.com

Source: portal

Comment Summary: Our family is strongly in opposition to this project. Its too large, never been tried before and tremendously risky in terms of wildlife and agriculture disruption and safety. Give the panels to rooftops of the people who charge their electric vehicles and cut out all this middle profit. The answer for our community is no.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s): Page 1,2,3

Council Standards:

Comment:

To whom it may concern, August 3, 2023 We live and work on a large generational ranch east of Harrisburg. Outside developers and their plans to build a massive solar panel farm in Linn County are wrong, wrong, wrong. Let us explain, using some of the Energy Facility Siting Commission standards why. First of all, the proposed area is high value agriculturally productive ground that the state has designated Exclusive Use Farmland. Senate Bill 100 and amendment 101 were made law in May of 1973 to protect the build up of infrastructure on irreplaceable agricultural lands. The zoning cannot be changed based on the Oregon Conditional Land use laws. Farmers and ranchers cannot change these zoning laws, why should a foreign corporation get that privilege? The area could not be more unsuitable to produce solar power based on lack of sunshine during the year, dust from farming practices and unpredictable high wind gusts. The promised energy production of power for 34,000 homes will never be attained. This project will never make a profit. We will be left with a remediation and cleanup project. Has there even been consideration of the idea installing those panels directly on the homes themselves? Other states do that quite successfully. That would be a win-win. How will the farmland be affected by the complete lack of nutrient management for 40 years? Obviously, this part of South Linn County has the grasslands that are a wintering ground for 10's of thousands of migratory waterfowl. This gets disturbed and removed with the installation of a massive solar farm. Wild ducks, geese and a variety of migratory wild birds need these grasslands to survive. The Little Muddy creek drainage is critical habitat for endangered and threatened bird species, not to mention all the vulnerable populations of fish and amphibians like cutthroat trout, bass, catfish, frogs, lizards and snakes. Building this solar installation will require the use of chemical weed control because it is truly incompatible with the grazing of sheep. Then the elk need to continue to use that area to seasonally travel for grazing. Oregon Dept. of Fish and Wildlife recognize that more than 100 animals are in one herd. The fencing required for this size of project is going to need to be taller than standard and also heavier gauge. You won't keep them out and when they get in how will you remove them from the solar panel compound? The proposed pattern of land parcels and fencing creates a natural and highly dangerous funnel for them to travel right down to I-5. The elk herd will end up following that fencing right into traffic. The health concerns expand when considering the people who live and farm nearby. Materials that leech from this facility will go right to the groundwater, putting us at risk for exposure to carcinogens in the future. A solar farm this large would create noise and light pollution that is unacceptable, unsightly and grotesque. The devaluation of

neighboring properties is guaranteed. Multigenerational families here have been following Oregon's strict EFU laws, we know that they protect us from urban growth. This proposed solar farm would break those laws as they exist today. No such changes should even be considered. The first real Oregonians, the Kalapuya Indians resided on the lands identified to become massive solar panel installations. How can it be known at this time that nothing of archeological significance would be disturbed or destroyed by this type of development? The surrounding areas are replete with native cultural artifacts and others must be identified, protected and preserved. Finally, the main access road to this potential project has 1 bridge with a very minimum limited weight capacity. Accordingly, construction equipment of the size necessary to build this facility literally could not legally use this bridge. Nothing about these important issues will change. As their representative at the Brownsville meeting stated, the company has no experience with a project of this scope and size. There is no way to make this size facility work. We look forward to seeing no solar panel installation here in south Linn county on our precious EFU farmland and look forward to explaining this further as our community focuses on what is our critical mission, to protect the high yield agricultural lands of our great state. Sincerely, Lynn and Elise Kampfer 23533 Gap Rd. Harrisburg, OR 97446 (541) 221-8597

Comment Date: 08-10-2023

From: Tony Langdon

Email Address: info@coburghillsenergy.com

Source: portal

Comment Summary: Letter in support of proposed solar pasture at Coburg Hills as a current area resident and lessee.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Please see attached letter.

Oregon Department of Energy
Chase McVeigh-Walker, Senior Siting Analyst
chase.mcveigh-walker@energy.oregon.gov

Re: Muddy Creek Energy Park

Dear Mr. McVeigh-Walker,

I am writing in support of the proposed solar pasture at Coburg Hills as a current area resident and lessee. This innovative solar project in Linn County will combine renewable energy with traditional agriculture to generate 200 megawatts of clean energy for Linn County and the state of Oregon.

My decision to lease some of my land for solar was made as a diversification play. The extra income I will generate on some of my land will have a positive impact during times when agricultural prices are low and could help save family farms. Some don't realize that not all soils are equal, and solar is a way for even poor soils to help produce energy.

The proposed solar project in Linn County is in the right area, as the quality of soil and ground is lower on the agricultural scale. Very few crops will grow on these soils. Primarily annual ryegrass. Much of the Valley's ryegrass straw is shipped overseas for feed filler adding to its global footprint. There are issues with some of the crops currently being grown as well, and they are not without issue as ryegrass and similar crops require annual or bi-annual cultivation and the process creates dust pollution and has its impact on wildlife as herbicides, insecticides and created fertilizers are used.

The proposed Langdon properties I have leased for the project have 2 paved entrances- one from the north, and one from the west making construction access manageable and reducing delays for any local residence.

The period that the solar panels are on my land where no crops are being grown will only help the soil, and when the project is done my lands can be farmed again on regenerated soil. I have been told that grazing sheep within the project area between solar panels is planned to keep the grass down, I consider this a smart and favorable approach when compared to herbicides that are currently used by many farmers in the area.

Landowners should have the right to diversify their crop income, and I consider solar power and the panels just as another crop, that you don't have to water, cultivate, or apply harmful substances and in many ways has a similar structure and layout to the local hazelnut orchards you see in the area.

Tony Langdon
OregonRice.com
Langdon.Ag

Comment Date: 08-10-2023

From: Robert Gilbert

Email Address: info@coburghillsenergy.com

Source: portal

Comment Summary: Letter in support of proposed solar pasture at Coburg Hills as a current area resident and lessee.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Please see attached letter.

Oregon Department of Energy
Chase McVeigh-Walker, Senior Siting Analyst
chase.mcveigh-walker@energy.oregon.gov

Re: Muddy Creek Energy Park

Dear Mr. McVeigh-Walker,

I am writing in support of the proposed solar pasture at Coburg Hills as a current area resident and lessee. This innovative solar project in Linn County will combine renewable energy with traditional agriculture to generate 200 megawatts of clean energy for Linn County and the state of Oregon.

With careful and deliberate consideration, we have contracted with Q Cells to participate in the solar project in Linn County. This project and the income generated from it will allow us to keep the farm in the family as it has been for nearly 100 years. The farm is where the current owner Laura Gilbert was born and raised. For many years, the farm was sharecropped by her parents, Ed and Laura Leabo, which eventually allowed them to buy the farm in the early 1930s. With such a long family history, we are doing everything we can to keep the farm within the family.

Diversifying the farm revenues will not only provide needed income, but it will also allow the land to rest and regenerate after the extensive rye grass farming over the years, including annual weed control chemicals. We understand that Q Cells plans to have sheep graze the property during the term of the solar project while the land heals from the decades of intensive farm use, we support and look forward to that occurring as we believe the grazing will also benefit the land as well.

The area where the project will be located on our farm is in the back of the property in the open flatland where it doesn't take away from the natural habitat, and where it does not impact the views of the neighbors or visitors in the area, the balance of our 100 acres is not included in the project.

With Oregon continuing to push forward with its renewable energy standards, we feel compelled to do our part to help meet those goals. We also know that solar doesn't work everywhere in Oregon and there are only limited opportunities for solar projects in general because of the weather, terrain and other factors, so we feel fortunate our land meets the requirements to be included in a solar project.

For all the reasons we mentioned above, we strongly believe that this project is an all-around WIN for the resident farmers, and the county, state and power companies' goals toward a cleaner environment here in Oregon.

RESPECTFULLY,

THE GILBERT FAMILY TRUST...
ROBERT AND LAURA GILBERT
TERRY AND BRENDA SHINE
PEGGY GILBERT

Comment Date: 08-10-2023

From: Aleah Abeyta

Email Address: aleahabeyta@hotmail.com

Source: portal

Comment Summary: I OPPOSE the Muddy Creek Energy Park vehemently. Linn County and Brownsville residents specifically, have no interest in this kind of energy park. This is valuable farm land and a solar energy park does not fit the character or values of this county and it's residents. Additionally, the wildlife impact is not acceptable. Additionally, the potential fire hazard is too high to tolerate, as we've seen with the Priceboro Fire and how fast it spread from farmland to trees and surrounding acreage.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

This proposed site is not acceptable or tenable to residents. Taking valuable farmland, in a farming county, and turning it into an energy park, degrades the character of the area and residents. There are wild life impacts, potential fire hazards, and then the fact that an obscene eye sore is being built near people's homes adds insult to injury. There are plenty of wide open spaces in Central and Eastern Oregon for a farm like this, where it is also sunnier during a larger portion of the year. Creating solar energy is not more important than the opinions of the surrounding residents. 1500 acres to power 35000 homes is not an acceptable trade off. Frankly, for that amount of acreage, it would need to power the entire county. Please do not grant a permit for this solar park in a town like Brownsville or in Linn County and disregard the opinions of those who live there. You will further erode trust between two groups and make them distrust and despise solar power. Solar power is amazing, however, it cannot be forced upon residents in a hostile manner, which is how this feels. You will lose buy in from small town folk, and people in Lane County, as they are pretty close neighbors. This will hurt your clean energy cause, not help it.

Comment Date: 08-10-2023

From: Barbara Hauge

Email Address: blbhauge@yahoo.com

Source: portal

Comment Summary: Request to stop the Muddy Creek Energy Park until further investigation is completed and all Oregon Land Use Planning procedures and processes have been completed and made public.

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s):

Council Standards:

Comment:

This is in response to learning about the Muddy Creek Energy Park, promoted by Qcell. It appears that very little of the normal Land Use Planning process was used before it reached the stage for public comment. As a resident of Linn County I just found out about the plan via the Capital Press newspaper article of 7/28/23 and The Times newspaper article of 8/3/23. Timing of the Public Comment period of 6/27- 8/11/2023 was poorly planned. This Muddy Creek Plan impacts the farming community. Since June to August are the major harvesting months for the Agriculture community in the Willamette Valley, was this public comment time planned to conflict with the agriculture business communities busiest time of the year. Perhaps to prevent or limit public comments from interested community members? This project is proposed to use High Value Exclusive Farm Use Farmland, which is not in line with the Senate Bill 100, Amendment 101 of 1973. Please review the purpose and limits of the HVEFU Senate Bill as there is a major conflict for the use of the land proposed by Qcell. Has this proposed plan been through all Land Use Planning requirements and processes? There are several concerns that have not been addressed. From the concerns listed below, the Muddy Creek Energy Park is unsuitable for the designated 1,500 acres of their plan. Have the following concerns been addressed, published, and made available to the public prior to the Public Comment period? Use of High Value Exclusive Farm Use Land, Water Runoff issues, Wetlands, Migratory birds, Elk Herd Movement in the area, Run off from solar panels leaching into the soil, Loss of farm land value, Lack of County Commissioners involvement in the decision making process. Until these and other concerns that are negative impacts to our Agriculture Business Community, this plan needs to be put on hold until they are resolved and/or shown to be so negative the proposal should be stopped and not allowed to proceed in the future.

Comment Date: 08-10-2023

From: Eric Hill

Email Address: EHill_E@yahoo.com

Source: portal

Comment Summary: OPPOSED to the experimental project.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Our Family is strongly OPPOSED to this experimental Mega panel money grab. Our family has been in Oregon since 1847, and let much of the family farm go for pennies on the dollar, as it was all zoned EFU. With deep pockets, out of state interests, and huge subsidies, it is now lucrative for this special treatment that is now occurring. This has been EFU land since the beginning of Oregon's land use laws. Nearly all people in Oregon have paid a premium for the land they have because of this. This is high value fertile soil best used for crops. This has a negative impact to the value on all adjacent land owners. This project would never pencil out to be profitable if it weren't for subsidies at all levels. While we are all for energy diversification and potentially renewable means, this is not a good location for this experiment. Try Eastern Oregon where water is already sparse and it is sunny more often. Go anywhere in the Willamette Valley fields from December to May, and it is definitely muddy, as the name of the area implies. There likely won't be enough sunny days to warrant the operation of this when the subsidies expire. Furthermore, go behind any house or structure on the North side in this area, and there is moss. Grass then doesn't grow. That will be the case on the shadow area cast by these panels. So the notion of raising a crop and having sheep in it, will likely fail. If it weren't all about money and costs, the logical step would be to start with a small area to see if the plan even works. Furthermore, in the event this doesn't work (and these panels will be obsolete in short order), the neighbors will be left looking with piles of scrap. Likely much of the reasoning for this location is pure proximity to the PPL transmission, which greatly reduced installation costs. It appears to be very short sighted for a short term money grab.

Comment Date: 08-10-2023

From: Carl Sylvester

Email Address: ricknkatie69@gmail.com

Source: portal

Comment Summary: California businesses need to stay out of Oregon business & the park is a waste & it hurt every bit of wildlife in that area & it won't return. If anything linn county needs a place built for the homeless & less fortunate with the sky rocketing rental prices that is forcing so many people & families on the street to live instead of a home or apartment.

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-10-2023

From: Thad Akins

Email Address: thad@akinstrailersales.com

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I am writing in opposition to the Muddy Creek Energy Project. The Notice of Intent identifies the project being built on Prime Exclusive Farm Use (EFU) properties and the project should be rejected for this alone. Farm ground is in limited supply and should be guarded at all costs. There are many other non-resource sites that would be much more suitable for solar energy generation. We have lived on Mt Tom for 19 years and large game also frequently forages and traverses the ground that is under review. I urge you to find another location.

Comment Date: 08-10-2023

From: Bart Griffith

Email Address: bgriff@harrisburgfire.org

Source: portal

Comment Summary: See Attachment.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: bgriff@harrisburgfire.org
Sent: Thursday, July 27, 2023 1:46 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Muddy Creek Energy Park

You don't often get email from bgriff@harrisburgfire.org. [Learn why this is important](#)

Good afternoon. My name is Bart Griffith, and I am the fire chief for Harrisburg Fire & Rescue. I was informed by a member of the public that you held a meeting in Brownsville to talk about a solar energy project that is scheduled for Harrisburg. I was unaware of this meeting or the fact that there is a project that has been proposed to be built in my district. Please send me all relevant information and contact me if there are any future meetings pertaining to the Muddy Creek Energy Park, I need to be involved with this project.

Thank you,

Bart Griffith
Fire Chief
Harrisburg Fire & Rescue
541-995-6412



Virus-free. www.avg.com

Comment Date: 08-10-2023

From: Johanna Witzig

Email Address: carlwitzig@hotmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Carl Witzig](#)
Sent: Wednesday, July 26, 2023 10:10 AM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Muddy Creek

Follow Up Flag: Follow up
Flag Status: Flagged

You don't often get email from carlwitzig@hotmail.com. [Learn why this is important](#)

Good morning, Mr. McVeigh-Walker:

I was one of the folks at the meeting last night and wondered if you would answer a few questions when you have time. If the solar company is granted a permit for their project and IF one of the components is that they use the land for an agricultural use in conjunction with the solar panels, will your agency or perhaps another agency monitor the project for compliance? How can compliance be ensured? What redress is there if the company does not use the property for an ag use ?

This case will set an interesting precedent for large (in my mind massive) being sited on working agriculture land and in my opinion, eviscerate the land use laws of Oregon.

Thank you for your time,
Johanna Witzig

PS I wish agency employees would speak not in jargon but rather in layman terms when doing presentation. For example, I know what mitigation means as a word but have no idea the meaning attached to it by your agency. Does it mean the company gets brownie points for doing something like having ag use in conjunction with the solar panels?

Sent from [Mail](#) for Windows

Comment Date: 08-10-2023

From: Nancy Schatz

Email Address: nancyschatz96@hotmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [nancy.schatz](#)

Sent: Sunday, August 6, 2023 6:10 PM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject: Muddy Creek Energy Park

You don't often get email from nancyschatz96@hotmail.com. [Learn why this is important](#)

My name is Nancy Schatz, I live at 33525 Priceboro Drive Harrisburg Oregon. My property borders with the Muddy Creek Energy Parks on both the North side and East side of the project site. My husband and I bought our property forty four years ago and raised our two son here.

My husband died three years ago and I am now a widow living on a fixed income. My son and his wife were planning on moving in with me when I was unable to live here on my own, but with the solar farm going in I am not sure this will happen. The following are a list of my concerns and questions:

Will I be provided a survey of the property lines between the project and my property line? What is the easement between my property line and the project? How tall is the fencing around the project going to be? Are all materials used on the project from the United States or are the assembled only in the United States? Will there be fire protection for the property site and will the local volunteer fire department have access to the site incase of a fire? There is currently a 250 plus fire burning less than a 3/4 mile from the project site, how will a fire be handled at the site. I had a fire on my property last year and a fire a few years ago on the vary site you are building the Muddy Creek Energy Park on.

Check with the local Harrisburg Fire Department I'm sure they can give you the information.

What toxic materials are used and if the equipment is damaged because of fire, lighting wind storm (act of god) how and whom will be in charge of safety?

During construction of the Muddy Creek Energy Park who will be responsible for damages to my home, the out buildings and water systems (well and pump, water softener and purification systems. Who is my contact person if there are any problems?

What hours of operations will there be during construction and during operation.

As you can tell I'm opposed to this project it makes no sense, is not cost effective. Only people to benefit are PPL, local farmers and qcells (Foreign company) Very short term employment.

I live only a few feet from the project however I do not receive my electricity from PPL. Consumer Power is my electric company, how will they be able to service the lines.

What are the health effects on people living so near to a solar farm? Is there a recommended distance to live from a large solar farm? Will they effect my electronics and my satellite system,

computer televisions etc

I have many questions and hope you will answer all of them.

Thank you for your time

Nancy Schatz
33525 Priceboro Drive
Harrisburg OR
541-995-8289

Comment Date: 08-10-2023

From: JD Morris

Email Address: 9736r@wcn.net

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [JD Morris](#)
Sent: Monday, August 7, 2023 12:00 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Muddy Creek Elk Concerns

You don't often get email from 9736r@wcn.net. [Learn why this is important](#)

Hello ,

As a long time Coburg Hills resident, I feel that I have a much deeper understanding of the Elk and their habits than somebody who lives elsewhere. This Project is an absolute guarantee that there WILL be Elk on I-5.

Unless you live in the hills and see the Elk herd's habits on a daily basis, you really do not understand them. The amount of animals and the frequency of their presence is something that only the people that live there are aware of. The proposed Muddy Creek project will change their path of travel and will force them onto the freeway. There is a 100% certainty that this will happen. The Elk usually do the bulk of their "travelling" at night, while they tend to seek cover during the day, so you now have them crossing the freeway in the dark. You don't need a degree to see what is going to happen .

While there are many concerns relating to this project, they all pale in comparison to this. The reason – people are going to die. It is super obvious that nobody in the planning of this project has any understanding of this concern. There are really good reasons to NOT build a shooting range in a populated area, right? It is a horrible idea that everyone understands. With true firsthand knowledge of the Elk herd's habits, you would see that very same public opinion. You just don't know ... what you don't know. I would encourage you to show this note to any and all local residents and I can promise you that every single one will agree.

My fear is that the proponents of the project will discount this concern and they will put a spin on it that serves their desires. Some crazy landowner without a degree just making stuff up. When the 911 call comes in that a family of 4 in a mini-van are now dead – remember this letter .

JD Morris
254-979-9701

Comment Date: 08-10-2023

From: Susan Cade

Email Address: cadeslp@gmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Susan Cade](#)

Sent: Thursday, August 10, 2023 3:07 PM

To: [MCVEIGH-WALKER Chase](#) * ODOE

Subject: RE:COMMENTS ON MUDDY CREEK ENERGY PARK NOTICE OF INTENT

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AUGUST 11, 2023

RE:COMMENTS ON MUDDY CREEK ENERGY PARK NOTICE OF INTENT

I TOTALLY AM OPPOSED TO THIS SOLAR FARM/PARK OR WHATEVER YOU'VE DECIDED TO CALL IT! THERE'S SO MUCH THIS AGENCY AND Q-CELL HAVE FAILED TO ADDRESS AND SO MANY QUESTIONS THEY'VE NOT ANSWERED! THESE 1,500 ACRES ARE TO BE PROTECTED AND USED AS THEY HAVE BEEN AND NOT REMOVED FROM EFU STATUS!

I ONLY LEARNED ABOUT THIS PROJECT ON MONDAY JULY 24 THE DAY BEFORE THE HEARING IN BROWNSVILLE. IT'S REALLY OUTRAGEOUS THAT YOU'VE PURPOSELY NOT BEEN OPEN ABOUT THIS PROJECT WITH FOLKS IN THE VALLEY AND ESPECIALLY THOSE OF US WITH HARRISBURG ADDRESSES! ALL THESE MEETINGS TAKE PLACE ELSEWHERE AND YOU NEVER EVEN MENTION THE REAL LOCATION OF IT..JUST THAT IT'S 8 MILES SOUTH OF BROWNSVILLE. IT APPEARS YOU'RE TRYING TO MAKE IT SOUND LIKE IT'S IN THE MIDDLE OF NOWHERE?..NOT NEAR A CITY BUT 8 MILES AWAY!! **YOU'VE PROVIDED AN INSUFFICIENT NOTICE TO US ABOUT THIS PROJECT AND THE FACILITY FOR THE PREPARATION OF THE DEPARTMENT OF ENERGY'S PROJECT ORDER! ORS 469.330(1)** YOUR COUNCIL 'STANDARD MENU' ABOVE DID NOT ALLOW ME TO CLICK AND SELECT MULTIPLE ITEMS TO DISCUSS SO I'VE ENTERED THEM HERE.

OAR 345--022-0022 IS ABOUT SOIL PROTECTION! HOW HAVE YOU SHOWN US THAT AND THESE LANDS WILL NOT BE MISUSED OR ALTERED SO THAT THEY ARE NOT LONGER USEFUL? THE FACT THAT YOU'VE NOT PERFORMED A "FARM IMPACT TEST" SHOULD CURTAIL ANY FURTHER CONSIDERATION OF THIS PROJECT. IF YOU HAVE PERFORMED THIS TEST WHERE'S THE RESULTS? YOU'VE NOT PROVEN HOW YOU'D GO ABOUT ASSURING THAT PROTECTION!

OAR-345-022-0030 STATES THESE ACRES ARE EXCLUSIVE FARM USE ONLY AND NOT TO BE USED FOR OTHER PURPOSES! YOU'VE WALKED ALL OVER THAT RULING AND LAW ! SENATE BILL 100 AND AMENDMENT 101 GIVE SPECIFICS ABOUT THIS HIGH VALUE AND EXCLUSIVE FARM USE LAND! HOW HAVE YOU SHOWN ANY OF US THAT THAT IS NOW OBSOLETE?

OAR 345-022-0040 THESE ARE THE PROTECTED WETLANDS AREAS THAT ARE VULNERABLE TO YOUR CONSTRUCTION AND TAKE OVER! YOU'VE NOT SHOWN HOW THESE AREAS WON'T BE HARMED! HOW WILL THOSE 3 CREEKS THAT FLOW THROUGH THIS AREA TO THE WILLAMETTE RIVER BE KEPT FREE OF CONTAMINANTS THAT CAN LEACH INTO WATER SYSTEMS?

OAR 345-022-0060 THESE LANDS ARE WILDLIFE HABITATS THAT WILL TOTALLY BE AFFECTED BY THE INVASIVENESS OF YOUR SOLAR PANELS, FENCING, CONTAMINATION TO

THE WATERWAYS THEY DRINK FROM AND CHEMICALS LEACHING INTO THE SOILS WHERE THEIR HOMES ARE BY DISRUPTING THEIR HABITS AND POTENTIALLY KILLING THEM! YOU'VE NOT PROVEN TO US THAT THAT WON'T HAPPEN! WE WANT OUR ELK HERDS, DEER, GEESE, BIRDS, DUCKS AND ALL OTHER CRITTERS TO CONTINUE TO HAVE FREE RANGE OF THESE LANDS! WE HAPPEN TO ENJOY THEIR PRESENCE AROUND OUR PROPERTIES AND I STRONGLY OBJECT TO YOUR TAKING THAT AWAY FROM ME AND MY NEIGHBORS WITH THIS PROJECT !

OAR 345-022-0070 THERE IS AN ENDANGERED STREAKED HORNED LARK THAT MAKES THE WILLAMETTE VALLEY IT'S HOME! THESE FIELDS ARE CRUCIAL TO MAINTAINING THEIR POPULATIONS (**87 FED [REG.AT 21788](#)**) AND YOUR OPERATION WILL LEAD TO THEIR EXTINCTION! DO YOU REALLY WANT TO GO ON RECORD FOR BEING THE COMPANY THE LED TO THE TERMINATION OF THIS LARK BY THE DEATH OF ITS LAST MEMBER ? YOUR OPERATION DOES NOT BELONG ON THIS LAND. THESE BIRDS ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT AND YOUR PROJECT VIOLATES THAT!

OAR 345-022-80 THIS IS A VERY SCENIC AND BEAUTIFUL PLACE TO LIVE WHICH IS WHY WE CHOSE TO MOVE HERE AND INVEST THE LAST 29 YEARS OF OUR LIVES LIVING AND IMPROVING OUR LAND AND HOME! WE ARE LOCATED ON MOUNT TOM AT ABOUT 500 FEET ABOVE THESE FIELDS AND THEY'LL NEVER BE THE SAME NOR LOOK THE SAME TO US ONCE YOUR PANELS ARE INSTALLED. YOU STATED IN YOUR INTRODUCTION TO US THAT YOU'LL PLANT TREES AND OTHER SCREENINGS TO OBSTRUCT THE VIEWS OF THOSE SOLAR PANELS... MAKING IT LESS INTRUSIVE. REALLY?...PLEASE TELL THOSE OF US THAT LOOK DOWN ON THIS SOLAR PROJECT JUST HOW YOU INTEND TO LESSEN THE IMPACT ON OUR HOMES? HOW DO YOU INTEND TO LESSEN THE GLARE FOR US? YOU'VE NOT ADDRESSED THAT PROBLEM AT ALL AND I DOUBT YOU HAVE AN ANSWER! THESE ARE TROUBLING PROBLEMS FOR US UP HERE AND YOU'VE NO RIGHT TO IMPOSE ON US THE REAL POTENTIAL TO SUBSTANTIALLY DEVALUE OUR HOMES, OBSTRUCT OUR VIEWS WITH THIS HORRENDOUS PROJECT AND INVADE OUR NEIGHBORHOOD!

OAR 345-022-0120 JUST HOW HAVE YOU PLANNED FOR THE DISPOSAL OF THE HARMFUL, TOXIC WASTE THAT YOU'LL BE PRODUCING? YOU HAVEN'T BECAUSE THERE IS NO PLAN OTHER THAN TO SAY "IT'LL BE DUMPED IN A LANDFILL"! YOUR NOTICE PROVIDED NO DETAILS AS TO THE MATERIALS YOU USE THAT COULD POTENTIALLY LEACH TOXINS INTO THE GROUND. YOUR STATEMENT THAT "THE SOIL IS HEALTHIER FOLLOWING THE PROJECT" IS RIDICULOUS AND CERTAINLY NOT TO BE BELIEVED SINCE YOU AGAIN NEVER PROVIDE ANY PROOF TO SUCH CLAIMS!

THERE ARE MANY MORE QUESTIONS AND NO ANSWERS PROVIDED BY YOU AND WHAT YOU HAVE GIVEN IS PRETTY FLIMSY. I REPEATEDLY HEARD AT THE JULY 25TH MEETING "WE'LL GET BACK TO YOU ABOUT THAT"..NO..YOU NEEDED THOSE ANSWERS BEFORE PROPOSING THIS PROJECT AND YOU'RE STILL RESPONSIBLE TO ANSWER THEM AND PROVIDE PROVEN FACTS THAT YOU'VE TESTED AND DONE THE RESEARCH. THE FACT THAT THIS WOULD BE THE LARGEST SOLAR "EXPERIMENT" IN OREGON SAYS A GREAT DEAL AND MY NEIGHBORHOOD AND I DON'T WANT TO BE YOUR TESTING GROUND FOR ANY OF YOUR EXPERIMENTS! FIND ANOTHER LOCATION!

Comment Date: 08-10-2023

From: Jesse Kampfer

Email Address: jesselkampfer@gmail.com

Source: portal

Comment Summary: Violation of GOAL 3: AGRICULTURAL LANDS OAR 660-015-0000(3)

Notice of Intent Exhibit: Exhibit I - Choice of Land Use Standards

Page Number(s): 25

Council Standards:

Comment:

The use of EFU land for production of solar energy is in obvious violation of the State Land use planning priorities and in violation of GOAL 3: AGRICULTURAL LANDS OAR 660-015-0000(3). If the State of Oregon or Linn County allowed an exception to Goal 3 and allowed the development of a solar facility, removing this land from its protected farm use, it not only would have detrimental effects on the acreage referenced in this application, but it would open up a precedence for all future applications. It is so far reaching that this project would meet the requirements of Goal 3 B. IMPLEMENTATION 1. Non-farm uses permitted within farm use zones under ORS 215.213(2) and (3) and 215.283(2) and (3) should be minimized to allow for maximum agricultural productivity, that the State of Oregon would set a precedent for all future applications for non-farm use on EFU land.

Oregon's Statewide Planning Goals & Guidelines

GOAL 3: AGRICULTURAL LANDS

OAR 660-015-0000(3)

To preserve and maintain agricultural lands.

Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

USES

Counties may authorize farm uses and those nonfarm uses defined by commission rule that will not have significant adverse effects on accepted farm or forest practices.

IMPLEMENTATION

Zoning applied to agricultural land shall limit uses which can have significant adverse effects on agricultural and forest land, farm and forest uses or accepted farming or forest practices.

Counties shall establish minimum sizes for new lots or parcels in each agricultural land designation. The minimum parcel size established for farm uses in farmland zones shall be consistent with applicable statutes. If a county proposes a minimum lot or parcel size less than 80 acres, or 160 acres for rangeland, the minimum shall be appropriate to maintain the existing commercial agricultural enterprise within the area and meet the requirements of ORS 215.243.

Counties authorized by ORS 215.316 may designate

agricultural land as marginal land and allow those uses and land divisions on the designated marginal land as allowed by law.

LCDC shall review and approve plan designations and revisions to land use regulations in the manner provided by ORS Chapter 197.

DEFINITIONS

Agricultural Land -- in western Oregon is land of predominantly Class I, II, III and IV soils and in eastern Oregon is land of predominantly Class I, II, III, IV, V and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land-use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

More detailed soil data to define agricultural land may be utilized by local governments if such data permits achievement of this goal.

Agricultural land does not include land within acknowledged urban growth boundaries or land within acknowledged exceptions to Goals 3 or 4.

Farm Use -- is as set forth in ORS 215.203.

High-Value Farmlands -- are areas of agricultural land defined by statute and Commission rule.

growth. The interchange of such lands should not be subject to tax penalties.

GUIDELINES

A. PLANNING

1. Urban growth should be separated from agricultural lands by buffer or transitional areas of open space.
2. Plans providing for the preservation and maintenance of farm land for farm use, should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. Non-farm uses permitted within farm use zones under ORS 215.213(2) and (3) and 215.283(2) and (3) should be minimized to allow for maximum agricultural productivity.
2. Extension of services, such as sewer and water supplies into rural areas should be appropriate for the needs of agriculture, farm use and non-farm uses established under ORS 215.213 and 215.283.
3. Services that need to pass through agricultural lands should not be connected with any use that is not allowed under ORS 215.203, 215.213, and 215.283, should not be assessed as part of the farm unit and should be limited in capacity to serve specific service areas and identified needs.
4. Forest and open space uses should be permitted on agricultural land that is being preserved for future agricultural

Comment Date: 08-10-2023

From: Jesse Kampfer

Email Address: jesselkampfer@gmail.com

Source: portal

Comment Summary: Wild geese migration, feeding, and mortality impacts. Scenic impacts.

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s): 30

Council Standards:

Comment:

This land is habitat for migrating and wintering geese during the winter months. Taking 1,500 + acres out of habitat will not only reduce the area where these geese feed and rest, but it will push them to adjacent farms and impart excessive field damage on other farmers. In addition, it is normal for geese to move near nightfall and from reading other studies about waterfowl mortality, the geese will be fooled into landing on the solar farm, especially when approaching from the south and seeing the reflection coming from the light western sky. Preserving this EFU farm land also preserves vital habitat. The solar farm will take away the scenic properties of the contiguous farmland in the Willamette Valley, especially when viewed from higher elevations. Although this farmland may not be considered scenic to many, those of us who have chosen to make our homes in this area have chosen it due to its farming and ranching heritage.

Comment Date: 08-10-2023

From: Simone Streeter

Email Address: simonestreeter@me.com

Source: portal

Comment Summary: OPPOSE This is a terrible idea; we need to be growing more food for Oregonians and if we are worried about electricity, we should consider conservation before we desecrate our beautiful farmland with environmentally harmful junk.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

I am an Oregon voter writing to comment on the siting request for the solar farm called Muddy Creek Energy Park. I am a resident of Lane County, and frequently do business in Linn County. I vehemently oppose the siting of this project anywhere in the Willamette Valley, and most especially on productive farmland and sensitive wetlands. My main concern is the taking from our farmlands, and our future food supply. Farming for food, e.g. wheat and cereal crops and orchard crops, has increased in recent years, over the former emphasis on grass seed growing. This is a very positive development for our future food security, a subject that is on the minds of most Americans these days. The gain in energy generation is not nearly enough to warrant this loss, as the quoted 30,000 homes is not at all an impressive number. The fact that it is considered 'sustainable' energy is moot, as it has been well shown, and common sense will indeed indicate, that solar and wind are nowhere near technologically ready to supplant our traditional sources of energy, such as hydroelectric. The manufacture of solar panels, which need near constant replacement, is highly detrimental to the environment, as well. Oregon deserves strong leadership in preserving our beautiful land and ensuring food security for our people. If we are that concerned about energy, the state can implement conservation measures to encourage citizens to conserve, as those have nearly disappeared since they were first introduced in the 70s. Until then, we are not in a state of need dire enough warrant the desecration of prime farmland.

Comment Date: 08-10-2023

From: Lindsey Tatum

Email Address: lindseyt78@gmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Lindsey Tatum](#)

Sent: Thursday, August 10, 2023 4:28 PM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject: Muddy Creek energy park

You don't often get email from lindseyt78@gmail.com. [Learn why this is important](#)

I am writing in opposition to the Muddy Creek energy park. Living in close proximity to where the solar panels would be placed causes me concern. I am concerned of potential health risks for my family, the devaluation of nearby properties, and the disruption of the wildlife living in this area.

Thank you for taking the time to read this.

Lindsey Tatum

Comment Date: 08-10-2023

From: Arnie Kampfer

Email Address: arniekampfer101@gmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Arnie Kampfer](#)
Sent: Thursday, August 10, 2023 4:33 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Fwd: Solar Complex Comments
Attachments: [Industrial Solar Complex - Google Docs.pdf](#)

You don't often get email from arniekampfer101@gmail.com. [Learn why this is important](#)

Sent from my iPhone

Begin forwarded message:

From: Kim Buzzard <buzzardkim@gmail.com>
Date: August 10, 2023 at 4:16:00 PM PDT
To: Arnie kampfer <arniekampfer101@gmail.com>
Subject: **Solar Complex Comments**

Major Concerns and Objections to
Proposed Industrial Solar Complex
“Muddy Creek Energy Park”

Exhibit I - Land Use - OAR 345-020-0011(1)(i)

- a) EFU Land - The county has very stiff rules concerning EFU land. An industrial solar complex has nothing to do with farming and contradicts Oregon’s rules and laws. Should these rules and laws not be enforced then we should all be entitled to do as we please on our EFU lands regardless of the zoning. In addition, the soil in this area of the Willamette Valley is zoned high value EFU soil. Why waste this precious soil and remove it from production when there is such a high demand for food, forage, and crops which this soil is essential for producing.

Exhibit J - Environmental Impacts - OAR 345-020-0011(1)(j)

- a) Air Quality - The solar park has the potential to raise the temperature of the air which will have a negative impact on the environment including: ground temps, stream temps and the increased risk of fires in the area.
- b) Surface and Ground Water - QCell plans to use sheep to graze in the area of the solar complex. Those of us familiar with farming and grazing practices know that sheep grazing is a short term possibility (1-3 years at most). We also know that it is the law to control noxious plants and weeds. The only possible way to conform to these laws is by either mowing or spaying. Mowing would only work in open areas, which means weeds would need to be controlled by spray. Mowing has the risk of starting a fire in high or extreme fire danger. Spaying herbicides will create build up in the soil in a short period of time. The spray in the soils is problematic when the soil becomes saturated. Saturated soils contaminated by spray would then run off into the streams and wetlands damaging and or killing aquatic life including the extremely sensitive Western Pearl Shell Muscle, native cutthroat trout along with other species of fish, frogs, turtles, insects, bird nesting sights, etc. destroying nature’s balance of life.
- c) Wetlands - A large portion of this acreage would be considered wetlands. Standing water is present in the winter and spring months which presents the same issues as explained above with the contamination of the soil and the water that would then contaminate the streams.
- d) Wildlife - The wildlife in the area will be deeply affected by the solar complex. We were told the entire solar project would be enclosed with a six foot chain link fence. This will stop and or disrupt the natural flow,

migration and habitat of many species of wildlife including: elk, deer, coyotes, racoons, skunks, possums, nutria, mink, weasels, frogs, insects, all aquatic life and a many birds including the endangered Streaked Horn Lark, the endangered Golden Eagle and Bald Eagles, thousands of geese, Western Meadowlarks, ducks, and many other birds and animals that are depending on this land, streams and wetland habitats to survive. There is a large herd of elk (80-100 head) that live and migrate through this proposed area on a regular basis. This will most certainly disrupt their natural flow. When elk are migrating from the north to the south and approach this fence, they will be left with three options: first, they could travel east around the fence to the hills. Second, they could jump the fence and end up in the complex causing injury to the elk. Third, they could become forced to enter an area with fencing on three sides which would confuse, constrain and cause stress to the animals, which in turn would risk injury by jumping the fence to enter the complex. Finally, and most disastrous would be for the elk to head west and attempt to cross Interstate 5 which borders the western boundary of the proposed complex, leading to the tragic possibility of a major traffic catastrophe involving the lives of elk and humans. **The extreme risk of this possible event puts an enormous amount of liability on those who permitted this complex to be developed.**

- e) Sensitive, Threatened, and Endangered Species - please note the above concerns related to: Western Pearl Shell Muscle, Streaked Horned Lark, Golden Eagle and the steadily declining Western Meadowlark.
- f) Historic, Cultural and Archaeological Resources - The construction process of driving posts and piling into the ground poses risks of disturbing and disrupting deep soils which certainly contain Native American artifacts commonly found in this area.
- g) Wildfire Risk - Solar complexes can and do catch on fire which could result in a devastating wildfire in our surrounding area (reference Priceboro devastating fire dated August 4, 2023). The topography of this area is steep, wooded and the terrain is often inaccessible which makes fighting fires difficult if not impossible from the ground. Loss of timber, structures, homes, wildlife, livestock and most importantly human lives are at risk. In addition to the fire risks in the surrounding areas, the solar panels themselves and the equipment in a fire could result in serious toxic fumes and emissions to be released into the environment also causing serious health risks to animals and human lives.
- h) Traffic Safety - See above concerns for Interstate 5 (elk risk). During the construction process, the increased vehicle traffic activity in the immediate

area presents a danger to animals by disrupting their patterns and habitat. The extreme added traffic in the area increases the risk for human caused fire danger, noise and disruption of the peaceful, natural, rural farming community.

- i) Police and Fire Protection - As mentioned above, fire is a major concern and this complex would place a burden on our rural volunteer fire department. Additional stress and concerns are heightened in the community because of the lack of safety resources that are available in the event of an emergency (fire).

Exhibit R - Scenic Aesthetic Values -

No one can put a value on the aesthetic values! This solar complex would affect the views of hundreds of homes in the area. Families who live in the area built their homes with views in mind. The land we look out upon is EFU land. It needs to be protected from industrial buildings, solar panels, or anything else that violates the strict zoning laws that are meant to safeguard and preserve Oregon Farm Lands, especially here in the Grass Seed Capital of the World! In addition, property values of neighboring homes will decline! A home with a view is more valuable and there are studies showing that views promote healing, reduce stress, aid in learning, along with many other health and wellness benefits.

Exhibit X - Noise -

Construction noise is a major concern for the disruption of the quality of life for neighbors and animals alike. With the size of the proposed complex, the length of time of construction is cause for distress that is immeasurable.

In closing, the possibility of this project has and will continue to have a large effect on my personal mental well being. These are but a few of my personal concerns. My family has owned and operated a 4800 plus cattle ranch since 1943 which is located directly across the road from the north east corner of this proposed, unwanted project. It would be a huge disgrace to allow this to happen not only for me, but for my family members who reside on the ranch as well as all of the people in our farming and ranching community. I would trust that my statements have been read and taken to heart. We as residents of Linn County and citizens of Oregon can not and should not permit this project to happen.

Sincerely,

Arnold H and Jamie D Kampfer

Comment Date: 08-10-2023

From: Johanna Witzig

Email Address: carlwitzig@hotmail.com

Source: portal

Comment Summary: EFFECTS ON LOCAL ECONOMY

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Effects on Local Economy: Currently, the land for the proposed solar project is productive farmland and has been so for decades. Not only does farming the land help support local farmers and their families; it also provides jobs for local teens who learn job skills, contributes to the livelihood of seed brokers, farm equipment salespeople, fertilizer and pesticides producers, seed warehouse workers and specialty seed purveyors. If the Muddy Creek Solar project is allowed, all these contributions from the 1588 acres currently farmed would be lost. The proposed project will not replace the jobs lost. The company estimates 200 to 300 hundred construction jobs would be created during construction of the project and one to three permanent employees to run the project after construction is completed. This does not come close to providing the number of jobs adversely affected by the project and does not, by and large, provide local employees with the stability and security now provided by farming the land. Over half of the acreage in the proposed project is owned by out of the area landowners (real estate investment companies). The lease money paid will completely bypass the local economy. The money paid to local families who lease their land is concentrated in a small group of people and does not provide jobs. Historically, companies such as QCell have made contributions to the local area by funding charitable projects. The company then receives excellent publicity and tax breaks. None of these contributions offset what the company takes from the local area. People in rural areas such as Harrisburg appreciate stable jobs more than handouts. Finally, land such as that in the project leases for no more than \$200.00 per acre for farming annually. In one example, QCell has provided contracts to lease the property for \$400 per acre during the construction phase and \$800 per acre once the solar panels are functional. In addition, there are substantial bonuses. The leases appear to be for 30 years. Local farmers simply cannot compete with this amount of money.

Comment Date: 08-10-2023

From: Johanna Witzig

Email Address: carlwitzig@hotmail.com

Source: portal

Comment Summary: Drainage and Irrigation:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Issues of drainage from the property should be thoroughly explored. The slope and soil type (heavy clay) mean without adequate drainage, water stands on the property periodically. Rainwater from higher elevations accumulate in season creeks which flow into irrigation and drainage ditches serve the Muddy Creek Irrigation Association. Many of these ditches and creeks are on the property QCell seeks to use. Irrigation and the flow of water should be adequately addressed, including how the changed use of the property will affect those currently using the irrigation system.

Comment Date: 08-10-2023

From: Johanna Witzig

Email Address: carlwitzig@hotmail.com

Source: portal

Comment Summary: Agrivoltaics and Fallow Land

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Agrivoltaics...what a wonderful win-win concept when used appropriately. QCell RELIES a recent study of sheep and solar panels conducted through Oregon State University. The study was on six acres of soil said to be of a similar type as the soil in the Muddy Creek Project. A study of six acres cannot be compared to 1588 acres, especially given the difference in slope, drainage, forage nutrients and other factors. QCell has an appealing idea but no clear plan on how to graze sheep on the property. At the July 25, 2023, public meeting, QCell's representative indicated the company had no other agricultural plan for the property if grazing did not work. In fact, mowing and herbicides were mentioned as an alternative. If permission is granted for this project contingent on agricultural use, how will the use be monitored; which governmental agency will monitor compliance? What is the consequence of non-compliance? Sheep grazing cannot replace the benefits rye grass farming offers this land and the community. Fallow land; If this project is allowed, the productive farm land will be fallow for decades without the benefit of care from farmers. Nutrients in the land will be depleted, paving the way for invasive blackberries and other noxious weeds. If the solar panels are removed and the land returned to the owners, it will not be productive due to lack of fertilizer and soil amendments. Maintenance roads will undoubtedly be at least graveled and concrete will be in the ground in some spots. This productive farmland will resemble an industrial site. How is remediation possible for land neglected and altered to the extent this project requires?

Comment Date: 08-10-2023

From: Todd Hargrove

Email Address: tch757@gmail.com

Source: portal

Comment Summary: This project is bad for the area, the neighborhood, wildlife, environment and goes against the EFU zoning. The location for the solar panels is regular feeding and calving grounds for elk and deer. Seasonal wetlands frequent the area making prime habitat for waterfowl and countless other plants and animals. We don't want a massive solar panel array in our little piece of paradise!

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-10-2023

From: Christoph Schauwecker

Email Address: christoph.schauwecker@gmail.com

Source: portal

Comment Summary: No to turning agricultural land into solar farms! Land in the Willamette valley is much too valuable as farm land to turn it into solar farms especially at this scale. The land will NEVER be available again as good farm land. The idea of grazing animals around the panels is not the same as having true agricultural land. The better solution to this issue is roof top solar and solar fields on brown field sites and parking lots.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-10-2023

From: Cynthia Linsenbardt

Email Address: c.linsenbardt@gmail.com

Source: portal

Comment Summary: I oppose this project as it presents a danger to wildlife. I drive Mt. Tom and Priceboro multiple times a week and throughout winter there are thousands of migrating birds and geese in the fields and ponds that might think the solar panels are water and try to land but get hurt. Bald eagles (still protected under the Migratory Bird Treaty Act) are often seen in the area. I see herds of elk grazing through those areas. The solar panels will remove their habitats and be a danger to them.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

I oppose this project because it presents a danger to wildlife. I drive Mt. Tom and Priceboro multiple times a week and throughout winter there are thousands of migrating birds and geese in the fields and ponds that might think the solar panels are water and try to land but get hurt. Bald eagles (still protected under the Migratory Bird Treaty Act) are often seen in the area. I see herds of elk grazing through those areas. The solar panels will remove their habitats and be a danger to them and affect all the surrounding ecosystems.

Comment Date: 08-10-2023

From: Jim Fairchild

Email Address: jim@alderspring.net

Source: portal

Comment Summary: Streaked Horned Lark Species and Habitat Impact

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s):

Council Standards:

Comment:

TetraTech, consultant for the applicant, stated at the that field surveys (un-described) were about to be completed. A single typical passerine breeding season (April-July) survey described would be insufficient to determine presence or absence of use by streaked horned larks. This is a comparatively difficult passerine to detect, and can be found using suitable habitat throughout the year. As it is also dependent on seasonally frequent disturbance patterns across the landscape, determining potential impact to the species within or around the project area would require multi-year, multi-season field surveys by experienced observers. As an open prairie obligate species, proposed solar panel arrays and support infrastructure disrupt and eliminate usable foraging and nesting sites anywhere in or nearby, resulting in a commensurate lark habitat loss. Grazing amongst infrastructure should be expected to provide no increase in lark habitat. Any mitigation strategy that does not first prove suitability of replacement habitat through actual lark use and habitation cannot be accepted. Additionally, replacement mitigation acreage must perpetually provide for ongoing habitat manipulations that will ensure ongoing lark use. Belated inclusion of grazing as a land use within the solar project allows the applicant to continue with solar array development as a conforming use on agricultural (EFU) land. This may technically maintain the ESA 4(d) rule exception that avoids identifying lark critical habitat designation, and provides for continued "take" of the species without adverse impact. But it does not provide for continued streaked horned lark use. Any federal support for the project, whether through tax credits, energy development incentives, business incentives, or grants, creates a nexus whereby all applicable federal laws apply. These would include both the Endangered Species Act and the National Environmental Policy Act.. Finally, streaked horned lark use is compatible and consistent with current land uses in the project area.

Comment Date: 08-11-2023

From: Christie Meacham

Email Address: meacham83@hughes.net

Source: portal

Comment Summary: Do not place the Muddy Creek Energy Project on farmland near people. There are better locations for the Muddy Creek Energy Park. It will be placed next to my property. This type of project should not be placed on exclusive farmland and can be placed where it will not impact local residents' health, not endangered and endangered wildlife. It impacts property value.

Notice of Intent Exhibit: Exhibit F - Adjacent Property Owners

Page Number(s): 1-5 (all pages)

Council Standards:

Comment:

There are better locations for the Muddy Creek Energy Park. It will be placed next to my property. This type of project should not be placed on exclusive farmland and can be placed where it will not impact local residents' health, not endangered and endangered wildlife. It impacts property value. Then there are the unintended consequences that won't be seen until later. Christie (Leabo) Meacham 541-580-5507 meacham83@hughes.net

Comment Date: 08-11-2023

From: Ronald Rhatigan

Email Address: ronrhatigan@msn.com

Source: portal

Comment Summary: I support the proposed solar project in general. It is important to create more energy sources that do not create carbon dioxide. We installed 31 solar panels on our property and are pleased with the results. Please try to keep agricultural operations on the property and be good neighbors. Thank you! Ronald G Rhatigan

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-11-2023

From: Denver Pugh

Email Address: denverpugh@yahoo.com

Source: portal

Comment Summary: Comments regarding the NOI for the Muddy Creek Energy Park.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Please see attached letter.

August 10, 2023

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301

Re: Comments regarding Muddy Creek Energy Park

Dear Mr. Chase McVeigh-Walker,

Thank you for the opportunity to provide feedback for the proposed Muddy Creek Energy Park.

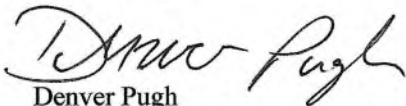
My name is Denver Pugh and I am the President of the Linn County Farm Bureau where I try to be the voice for our over 2,600 members. These members are farmers, ranchers, foresters and local community members who have an invested interest in preserving agricultural rights.

I am writing you to express our concerns for the proposed Muddy Creek Energy Park. The ground that is being proposed for this park currently is designated EFU (exclusive farm use) and is in production agriculture. I do understand due to the size and intent of this facility there is a law that allows the applicant to go through the state and not the county for re-designation. However, just because this makes it legal doesn't necessarily make it the right thing to do. Farm ground is being consumed by urban and industrial growth at a rapid pace of which we can never get back and this facility is no different. The plans state having to add infrastructure that will be very difficult to remove and expensive to revert back to farmable conditions if technology or consumption should ever dictate the need to close this facility.

Other concerns include the "dual purpose" use of this land housing solar panels and pasturing sheep amongst the panels. This practice hasn't been proven to be sustainable in Oregon as of yet. There are studies currently being done by Oregon State University Extension on this. Some of the concerns with doing this practice are whether or not the sheep will have adequate weight gain amongst the panels, the ability for predator control, the ability to control the spread of noxious weed plant species, and the potential destruction of the panels from the sheep. Further more, I've heard concerns for the natural wildlife habitat the farmed fields provided will be in jeopardy, solar panels destroying the beautification of the land therefor decreasing property values of nearby land, and questioning where the power will be distributed and if it will benefit the local community by decreasing their electrical costs. These are all concerns that myself and other Farm Bureau members have.

Lastly, I'd like to add, the Farm Bureau organization is a grassroots foundation where our policies are conceived at the county level then brought forth to the state delegation to be voted into state policy. Oregon Farm Bureau's policy regarding: Solar Siting in EFU, essentially states, "We oppose siting of non-agricultural solar panel facilities on productive agricultural lands when alternative sites are available." Therefor, on behalf of the membership of Linn County Farm Bureau, I encourage you to oppose this site and the development of the Muddy Creek Energy Park.

Respectfully,



Denver Pugh
President, Linn County Farm Bureau
31561 Fayetteville Dr.
Shedd, OR 97377
denverpugh@yahoo.com

Comment Date: 08-11-2023

From: Lisa John

Email Address: lisa.d.john@gmail.com

Source: portal

Comment Summary: Against Site

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

Do not place the Muddy Creek Energy Project on farm land. The purpose of farm land is to grow crops not for anything else. There are better locations for the Muddy Creek Energy Park. This will affect people who live near by, wild life, & property values. This is placed next to my property & will affect my property value.

Comment Date: 08-11-2023

From: Alex Bauman

Email Address: alexpbauman@gmail.com

Source: portal

Comment Summary: I strongly support the proposed location for Muddy Creek

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I strongly support the proposed location for Muddy Creek. Solar ranching is absolutely an agricultural use and compatible with other agricultural uses. Climate change caused by fossil fuel source power generation is creating extreme weather conditions that threaten individual farms and in many cases are causing entire regions to be nonviable for agriculture. Converting our power systems to clean sources such as solar are essential for the survival of large-scale agriculture, which is why the Muddy Creek project is vital. Please approve the proposed site for this project.

Comment Date: 08-11-2023

From: James Buchal

Email Address: jbuchal@mbllp.com

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Please see attached letter along with its supporting exhibit submitted on behalf of Friends of Gap Road.

Murphy & Buchal LLP

P.O. Box 86620
Portland, Oregon 97286

James L. Buchal

telephone: 503-227-1011
fax: 503-573-1939
e-mail: jbuchal@mbllp.com

August 11, 2023

BY FIRST CLASS MAIL AND E-MAIL (chase.mcveigh-walker@energy.oregon.gov)

Oregon Department of Energy
Attn: Chase McVeigh-Walker, Senior
Siting Analyst
500 Capitol Street NE
Salem, OR 97301

Re: *Comments on Muddy Creek Energy Park Notice of Intent*

Dear Mr. McVeigh-Walker,

Thank you for the opportunity to present public comments on the Notice of Intent to construct the Muddy Creek Energy Park. These comments are presented on behalf of Friends of Gap Road, an informal association that has arisen in opposition to the project, whose interests are described in greater detail below. These comments are organized as follows:

- I. [Statement of Interest](#)
- II. [Insufficiency of Notice](#)
- III. [Legal Background](#)
 - A. [Importance of County Land Use Processes](#)
 - B. [Inconsistency with Oregon's Land Use Planning Goals](#)
 - C. [The Need to Consider Siting Alternatives](#)
 - D. [The Need for a Solar End-of-Life Policy](#)
- IV. [Fish and Wildlife Issues](#)
 - A. [Endangered Species](#)
 - B. [Wildlife Movement](#)
 - C. [Bird Impacts, Including Migratory Wildfowl](#)
- V. [Water Runoff Issues](#)
 - A. [Stormwater Velocities and Erosion](#)
 - B. [Toxic leaching](#)
- VI. [Wetlands Issues](#)
- VII. [Reclamation/Restoration Issues](#)
- VIII. [Fire Risks](#)
- IX. [Weed Control](#)
- X. [Recommended Provisions for Project Order](#)

Comments of the Friends of Gap Road in Opposition to the Muddy Creek Energy Park**I. Statement of Interest**

Friends of Gap Road consists of an informal association of ten local landowners, united in opposition to the project. They include Mr. Troy Jones, Mr. Arnie Kampfer, Mr. Lynn Kampfer, Mr. Monty Jelden, Mr. Travis Jelden, Mr. Dave Rogers, Mr. Steven Hood, Mr. Mark Emblade, Mr. Dan Fenske and Ms. Stephanie Glaser Hagerty. Several of these landowners are represented in the Notice's "Attachment 2" listing of property holders within 500 feet of the project.

All of these landowners, many of which live within sight of the project, regard it as aesthetically displeasing (both in appearance and from glare¹ and reflections off the solar cells) and harmful to their personal interests as farmers or landowners. The adverse aesthetic impacts, and even noise from project operation, are expected to reduce local property values. All of these landowners believe that the project will have significant adverse effects on their current farming practices and increase their costs, in violation of state law. They are, of course, not unique in their views as the overwhelming show of hands at the July 25, 2023, public meeting confirmed.

The Friends of Gap Road expect the Council to coordinate with Linn County to ensure full enforcement of existing land use and zoning laws for EFU land. Each member of the association expected and depended on these laws to protect their homes and farms from commercial and industrial installations.

II. Insufficiency of Notice

The Notice of Intent is supposed to "provide information about the proposed site and the characteristics of the facility sufficient for the preparation of the Department of Energy's project order". ORS 469.330(1). Notice is in turn to be provided to the public to "provide a description of the proposed site and facility in sufficient detail to inform the public of the location and proposed use of the site". ORS 469.330(2). The project order establishes "the statutes, administrative rules, council standards, local ordinances, application requirements and study requirements for the site certificate application". ORS 469.330(3). The Notice of Intent does not provide sufficient information to meet these statutory requirements.

First, the Notice does not specify the acreage to be used, only that it lies within a "Facility site boundary" of "approximately 1,588 acres". The Notice does specify that it will involve 199 MW of solar production, which should be associated with a particular surface area of solar cells, but does not provide this surface area, or any estimate of the EFU farmland to be covered with solar cells.

The Applicant was supposed to identify in Exhibit C "the proposed site of each related or supporting facility and all areas that might be temporarily disturbed during construction of

¹ The Notice suggests in Exhibit E that glare may be so extreme as to require permitting from the Federal Aviation Administration.

the facility, *including the approximate land area of each*". OAR 345-020-0010(1)(c) (emphasis added). Exhibit C to the Notice of Intent makes no attempt to do this, instead providing an estimate of the total area within "the Facility site boundary" and noting it contains at least three separate areas. This is also a violation of OAR 345-020-0011(1)(b)(A)(ii), which requires "a description of the *size*, type and configuration of equipment used to generate, store, transmit, or transport electricity, useful thermal energy, or fuels".

Staff reported at the public meeting held on July 25, 2023 that it regarded the project as being within the Council's jurisdiction because it was a solar facility "using more than . . . 160 acres located on high-value farmland as defined in ORS 195.300". ORS 469.300(11)(a)(D)(i). However, without knowing which particular land is to be used, this cannot be confirmed. The process of identifying "high-value farmland" is extremely complex, involving a tract-by-tract assessment of particular soils, and staff and applicant confirmed at the July 25th public meeting that no such analysis had been completed.

The map provided with the Public Notice does not help, because the project area covers only an absurdly tiny portion of the page and has no detail whatsoever, merely showing the site boundaries of parcels and tracts involved. The Notice refers to a "solar area fence line that will occur within the Facility Site boundary" (Notice at 7), but provides no map of where this fence line might be. Unless and until the Applicant provides additional information on land use, the Department is in no position to prepare the project order.

The Notice refers to an "up to 199-MW battery energy storage system" without specifying the size. No attention is paid to the toxicity of the batteries that may be placed in the Facility, and without specific identification of the battery technology, the public cannot meaningfully comment on the project, and the Department cannot prepare appropriate application requirements.

The Notice is supposed to disclose "the amount of wastewater the applicant anticipates, the applicant's plans for disposal of wastewater and storm water, and the location of disposal". OAR 345-020-0011(1)(b)(A)(iii). Exhibit K states that water will be "managed on-site, typically using retention and infiltration systems that will be described in the Facility NPDES 1200-C construction permit and accompanying Erosion and Sediment Control Plan, but the Applicant is not permitted to defer disclosure of its plans until long after the Notice.

Finally, the Applicant touts benefits of reducing greenhouse gas emissions. Without information concerning the types of solar or battery technologies to be employed, however, one cannot identify the carbon footprint of the plant. It has recently been demonstrated that solar panels are perhaps three times more carbon-intensive than regulators have generally assumed, in part because of enormous amounts of coal-fueled electricity utilized in the manufacture of photovoltaic cells.² Indeed, the energy inputs are so large that solar farms

² C. P. Colum & L. Booth, "Solar Panels Are Three Times More Carbon-Intensive Than IPCC Claims," Environmental Progress (July 3, 2023).

may have a substantially greater carbon footprint than natural gas generation with carbon sequestration.³

Ultimately, the plans proposed in the Notice of Intent are so vague as to deny the public (and the Department) the opportunity to provide meaningful comment. The Applicant should be required to provide an amended Notice of Intent meeting the regulatory requirements, with an additional public notice and comment period so that interested parties may respond to the additional information that should have already been supplied.

III. Legal Background

A. Importance of County Land Use Processes

The Public Notice issued by the Department states that the applicant “may choose to meet the Council’s Land Use Standard, OAR 345-022-0030, by obtaining land use approval from the affected local governments or by seeking a determination of compliance from Council”. (It also states that the applicants propose to seek a determination from Council only.)

We question whether the Project is an “energy facility” within the meaning of the Council’s governing statutes, insofar as the statute defines “energy facility” as “a solar photovoltaic power generation facility *using more than . . . 1,280 acres* located on land that is predominantly cultivated”. ORS 469.300(11)(a)(D)(ii). Aerial photographs confirm that the land is predominantly cultivated, but it does not appear that the Project will use more than 1,280 acres.

It appears that the Project is required to proceed as a “renewable energy facility” within the meaning of ORS 215.446. *See* ORS 215.446 (defining “renewable energy facility” as “a solar photovoltaic power generation facility using . . . [m]ore than 100 acres but not more than 1,280 acres located on land that is predominantly cultivated . . .”). The applicant is required to make an application to Linn County and demonstrate “to the satisfaction of the county” that the facility meets the standards set forth in ORS 215.446(3). ORS 215.446(2).

B. Inconsistency with Oregon’s Land Use Planning Goals

Agricultural lands are an important part of Oregon’s statewide land use system. *See generally* Edward Sullivan & Ronald Eber, *The Long and Winding Road: Farmland Protection in Oregon 1961-2009*, 18 San Joaquin Agric. L. Rev. 1 (2009) (describing the history of Oregon’s tax and land use policies to protect agricultural land and farming).

As the Oregon Supreme Court has emphasized, “preservation of agricultural land, particularly in large blocks, is an important statewide policy and that limitations on urban expansion into, and alternative uses of, agricultural and forest lands are necessary and a

³ *Ibid.* (“Italian researcher, Enrico Mariutti, suggests that the number is closer to between 170 and 250 gCO₂/kWh, depending on the energy mix used to power PV production. If this estimate is accurate, solar would not compare favorably with natural gas, which is around 50 gCO₂/kWh with carbon capture, and 400 to 500 without . . .”).

matter of statewide concern.” *Stop the Dump Coal. v. Yamhill Cty.*, 364 Or. 432, 442, 435 P.3d 698, 704 (2019).

The land involved is zoned for exclusive farm use. Goal 3 requires that “[a]gricultural lands shall be preserved and maintained for farm use” and defines “farm use” as the uses “set forth in ORS 215.203.” ORS 215.203(1) requires farmland to be used “exclusively for farm use except as otherwise provided” in ORS 215.283.

By its terms, Goal 3 “both (1) promotes preservation of agricultural land for ‘farm use’ and ‘maximum agricultural productivity’ and (2) limits nonfarm uses of agricultural lands to those ‘that will not have significant adverse effects’ on accepted farming or forest practices”. *Stop the Dump*, 364 Or. at 444. This test, known as the “farm impact test,” should itself bar further consideration of the project.

Specifically, while ORS 215.283(2)(g) may authorize establishment of a solar facility in an EFU zone, the “farm impact test” specifies that the use may only be allowed if the solar facility will not:

“(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

“(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.”

ORS § 215.296(1). This test is to be applied on a “farm-by-farm” and “farm practice-by-farm practice” basis. *Stop the Dump*, 364 Or. at 445. The test for significance places the burden upon Applicant to demonstrate that the project will not significantly affect local farms and their practices.

Each acre of conversion of local farmland into alternative uses injures the overall farming character of the local community, and reduces resources and increases costs for local farmers. While a single 1,588-acre project may only involve losses associated with a single large farm, the effects of losing farms and support for local farm-based economies—and economies of scale—are cumulative. The Oregon Supreme Court has confirmed that “changes for individual farms can have ripple effects: ‘[L]oss of productive capacity from individual farms and associated land converted to other uses translates into loss of demand for inputs, services, equipment, processing, and related activities.’” *Stop the Dump*, 364 Or. at 441. Here, the local feed company has already testified at the July 25th public meeting that it expects financial impacts from lost local production.

Other potential impacts include the creation of a local heat island produced by hundreds if not thousands of acres of panels that will affect adjacent crops and farmers, an effect that cannot be mitigated. Moreover, much of the equipment gets very hot just from the nature of moving, inverting, transforming, and manipulating the high voltages. This may be considered waste heat generated by the facility, and the Department’s regulations are defective insofar as they require discussion of “waste heat” only for thermal power plants. OAR 345-020-0011(b)(A)(iv)(III).

Particularly in an era of sharp food price increases, the prospect of taking more Oregon farmland out of agricultural production should be viewed with skepticism. We understand that researchers at OSU are pursuing a concept called “agrivoltaic technology,” typically referring to placing solar panels on land where crops are grown. However, there is no evidence proving this concept, and the OSU website reports, as of February 2, 2023, that “Agrivoltaic principles will be put to the test *for the first time* on a 5-acre working farm” run by OSU in Aurora, Oregon.⁴

In short, the concept is entirely unproven, and OSU is using a specially-designed array that has no apparent relationship with the arrays to be installed by the Applicant. The OSU professor testified at the July 25th public meeting that the Aurora farm was attempting to grow melons, tomatoes, marijuana and grass seed, all of which have nothing to do with the plans of the Applicant. The Applicant has claimed it is pursuing a “dual-use farming and grazing,” by reference to “native plants,”⁵ without providing any information sufficient to evaluate these claims. As local residents pointed out at the July 25th public meeting, there is, as a practical matter, no feed available for sheep beginning early in the summer, making the use of sheep a very short-term alternative—followed by weed production.

C. The Need to Consider Siting Alternatives

The Notice carefully explains that no consideration of alternative solar site locations is required under current regulations, which points out a very significant defect in those regulations if true. It is generally recognized that consideration of alternatives is at the “heart” of any environmental analysis. The Council should engage in emergency rulemaking procedures to ensure that consideration of alternative sites is required for this and future solar site locations, at least where project proponents propose to use EFU lands.

The Notice provides no reason to believe that the selected location is particularly well-suited to solar energy, or to believe it is the highest and best use of this valuable EFU land. No particular suitability in terms of local energy needs, transmission system constraints, or solar availability appears to have been considered. By all appearances, we simply see local farmers who see higher value in abandoning farming efforts in favor of collecting lease payments from the California operator. But it is nearly always true that a higher value can be found for EFU land than farming—*e.g.*, residential development. The core of Oregon’s land use planning process has always been to preserve a long-term, sustainable economy that does not involve retiring productive farmland, perhaps permanently, in support of short-term gain.

The Applicant has attempted to justify the siting by reference to existing capacity on the Diamond Hill substation and the assertion that there is “demand” for electric power, but has presented no evidence or studies to support these claims, or through which the Council might assess the wisdom of this particular sight in light of current transmission grid usage and electrical demand. The Applicant has presented no information concerning the relationship between this

⁴ <https://engineering.oregonstate.edu/all-stories/crops-and-killowatts-agrivoltaics-project-will-harvest-solar-energy-farmland> (emphasis added; accessed 8/1/23).

⁵ <https://coburghillsenergy.com/> (accessed 8/1/23).

project and the Department's energy planning, or the regional planning exercises of the Northwest Power and Conservation Council.

The lifespan of current solar cell and battery technologies is not very long, particularly of the battery technologies, and the ongoing costs of replacing solar cells and batteries may well cause the Facility to be a money-losing venture but for public subsidies—such that approval of the project would make Oregonians, and all Americans, poorer.

Solar power may make sense in the Pacific Northwest to the extent it can be backed up by dispatchable hydroelectric capacity, but the idea of utilizing a full 100% battery backup is contrary to Oregon's environmental goals, and all of the adverse impacts discussed above, particularly those associated with battery technology, counsel against approval of any application.

D. The Need for a Solar End-of-Life Policy

The [U.S. EPA reports](#) that

“different varieties of solar panels have different metals present in the semiconductor and solder. Some of these metals, like lead and cadmium, are harmful to human health and the environment at high levels. If these metals are present in high enough quantities in the solar panels, solar panel waste could be a hazardous waste under RCRA. Some solar panels are considered hazardous waste . . .”

While Oregon does not currently have a state solar panel end-of-life policy as do California and [Washington](#), the Notice provides evidence that the Oregon Energy Department needs such a policy, which should be adopted on an emergency basis to provide guidance for the consideration of this application, and requirements for any ultimate project.

IV. Fish and Wildlife Issues

At the July 25th public meeting, the Applicant indicated that all field studies would be wrapped up by the end of this summer. As numerous members of the public confirmed, this time period does not include extensive use of the area by elk, migrating wildfowl and other species. The project order should be based on a careful review of these studies and ensure that important data gaps are filled.

Also at the July 25th public meeting, a representative of the Applicant stated that it was the Applicant's preference to use moving, single-axis solar panels, requiring a vast motorized apparatus to track the sun. The Applicant has provided no details concerning the energy consumption and noise production of such a system.

A. Endangered Species

The streaked horned lark, once common in the Willamette Valley, was listed as “threatened” in 2013. The U.S. Fish and Wildlife Service has long emphasized that “agricultural lands in the Willamette Valley are important and will be necessary for the recovery of the streaked horned lark” and that “active agricultural lands . . . have become

critical for the continued survival and recovery of the streaked horned lark” and the “largest area of potential habitat for streaked horned larks is the agricultural land base in the Willamette Valley” (87 Fed. Reg. 21783, 21787 (April 13, 2022); *see also* 78 Fed. Reg. 20074, 20078 (April 3, 2013).) More specifically, “[m]aintenance of extensive agricultural lands (primarily grass seed farms) is crucial to maintaining the population of streaked horned larks”. (87 Fed. Reg. at 21788.)

By contrast, “industrial development”—akin to the project here—has significantly reduced habitat. (*Id.* at 21795.) The larks required “bare or sparsely vegetated areas within or adjacent to grass seed fields, pastures or fallow fields” or other areas of bare ground including “‘drown outs’ (*i.e.*, washed out and poorly performing areas within grass seed or row crop fields)”. *Id.* at 21808. The projects proposed fenced area of solar cells and sheep grazing is utterly inconsistent with the needs of the lark, and represents a material loss of habitat.

Although listed as “threatened,” the lark is subject to a “§ 4(d)” rule extending the Endangered Species Act prohibition against “take” of the lark as if the species were “endangered”. While the § 4(d) rule contains exceptions for certain forms of “take incidental to any otherwise lawful activity,” including certain “agricultural (farming) practices,” there is no exception for take resulting from the construction of an industrial facility such as the project on important lark habitat. 40 C.F.R. § 17.41(2)(iv)(C).

As set forth below, solar farms are generally associated with a high level of bird “takings,” killing them as they fly into the solar panels and the Council should presume that the project would “take” streaked horned larks, in violation of the Endangered Species Act’s taking prohibition. *See also* 40 C.F.R. § 17.21(c)(1). At the July 25th public meeting, the Applicant stated that it had “no answer” concerning possible mitigation for impacts on the larks, presumably because one cannot mitigate unlawful take at all. On the basis of lark impacts, the project should be regarded as dead on arrival, and actions taken to advance the project may well expose regulatory agencies to liability for taking as well.

The Notice ignores lark issues in favor of a reference to possible take of federally protected eagles (Exhibit E), and suggests that an incidental take permit may be required. The Applicant must secure regulatory compliance with respect to all listed species.

B. Wildlife Movement

As multiple residents testified at the July 25th public hearing, the project site is directly in pathways used by a large local elk herd of 80-100 individuals. The importance of such wildlife movement corridors is well-recognized in conservation literature, along with the adverse impacts that come from breaking habitat linkages.

The Applicant has indicated an intent to place a chain link fence around the perimeter of the project, including barbed wire. This will tend to push migrating elk toward I-5, causing increased risks of traffic fatalities as well as injury to the elk.

C. Bird Impacts, Including Migratory Wildfowl

Friends of Gap Road submits as Exhibit A, April 2023 testimony presented by Shawn Smallwood, Ph.D, in opposition to solar project proposed for farmland in Tulare County, California. He reports substantial adverse experience with solar facilities in California, including that “as of 2020, California’s utility-scale solar projects were already interfering with the movement of 267,732 birds and 11,418 bats by killing them while these animals were in the process of moving”. (Exhibit A, at 11.) He calculated that the 40 MW facility at issue in Tulare County would likely kill 464 birds per year for the life of the project (*id.* at 12); scaling these numbers up to the 199 MW size of Applicant’s project would result in a bird loss of 2,308 birds a year for the life of the project.

These figures address mortality from collisions with solar panels. Large solar fields fool birds into changing flight direction, sometimes during migration, to approach them because they appear to be lakes from a distance. Many of the birds that have been killed at these large solar sites are waterbirds, which indicates that these birds fly to solar fields and realize too late in their descent that the solar panels are not water. The waterbirds then collide with the solar panels and are critically wounded or killed. Some waterbirds also have great difficulty taking off from non-water surfaces, which could leave them stranded in desert areas without food, water or shelter.

Additional sources of mortality include collisions with power lines and the fencing. (Exhibit A, at 13.) Total bird mortality for a project on the scale of Applicants could be approximately 3,871 birds (*id.* at 15 (scaling up Tulare figures)).

Because of the unique location of Applicant’s project, in an area heavily used by birds, losses may be even higher. Located immediately to the north of the project area is the Diamond Hill Wetlands, private land under the protection of the U.S. Department of Agriculture’s NRCS Wetland Reserve Program. The project has been underway since 2007, and involves restoration of 350 acres of native prairie, 130 acres of marsh, and 100 acres of riparian forest. It supports large bird populations, including wintering waterfowl.

The Diamond Hill Wetlands is only one of the many wetlands utilized by migratory birds in the immediate vicinity of the project. Local residents testified at the July 25th public meeting that the project would essentially bifurcate a four-mile-long stretch of wetlands.

V. Water Runoff Issues

A. Stormwater Velocities and Erosion

As noted above, the Notice of Intent is insufficient for failure to provide sufficient detail about stormwater and wastewater. While the Notice makes reference to controlling temporary water runoff impacts from construction activity, the Notice fails entirely to take account of one of the most significant impacts of the construction, which will be to add an enormous quantity of impervious surfaces that will concentrate stormwater and cause significant erosion. Rather than address this concern, the Notice falsely asserts that

“[c]onstruction of the proposed Facility will add only a minimal amount of impervious surfaces within the Facility” (p. 33).

The Applicant claims that the project “was designed to minimize the impact on waterways,”⁶ but provides no design details to support this assertion. Large areas of land surface impervious to water will inherently produce different runoff patterns, with impacts the Applicant does not propose to mitigate, including erosion and loss of soil moisture that will run off rather than accumulate where solar panels are located.

Portions of the parcels to be used appear, contrary to the statements of the Applicant at the July 25th public meeting, to include land included within the Muddy Creek Irrigation District. Bishop Creek, Putnam creek and many other creeks/drainages feed directly into Little Muddy Creek, and the changes in water discharge associated with the project may adversely affect local irrigators served by the Muddy Creek Irrigation District.

As the U.S. EPA has explained, in pursuing Clean Water Act violation claims against solar plants,

“[s]olar farm construction involves clearing and grading large sections of land, which can lead to significant erosion and major runoff of sediment into waterways if stormwater controls at the site are inadequate. Increased sediment in waterways can injure, suffocate, or kill aquatic life; damage aquatic ecosystems; and cause significant harm to drinking water treatment systems.”

While the Applicant makes reference to obtaining an NPDES 1200-C permit to cover releases during construction activities, this permit does not cover “Post-construction stormwater discharges that originate from the site after completion of construction activities . . .”.⁷ Nor does the WPCF 1700-B permit⁸ mentioned in Exhibit E cover activities outside washing solar cells, such that the Applicant has no proposal to secure NPDES permitting for the general disposal of stormwater from the facility.

B. Toxic leaching

The Applicant’s website claims that “the soil is healthier following the project,” but provides no basis for this statement. Rainwater on solar panels is associated with potentially significant toxic metal leaching. *See, e.g.,* Nain & Kumar, “Metal dissolution from end-of-life solar photovoltaics in real landfill leachate versus synthetic solutions: One-year study,” *Waste Management*, Vol. 114, pp. 351-61 (August 1, 2020) (“Rainwater simulating solution was found to be predominant for metal release from silicon-based photovoltaics, with silver, lead and chromium being released up to 683.26 mg/L (26.9%), 23.37 mg/L (17.6%), and 14.96 mg/L (13.05%), respectively”).

The Notice provides no details as to the materials content of the solar cells to be employed. At the July 25th public meeting, the applicant discussed “Qcells,” but the

⁶ <https://coburghillseenergy.com/> (answer to “How will it affect the land?”) (accessed 8/1/23).

⁷ <https://www.oregon.gov/deq/FilterPermitsDocs/1200Cpermit.pdf>, at 2 (accessed 8/6/23).

⁸ <https://www.oregon.gov/deq/FilterPermitsDocs/1700bpermit.pdf>.

associated website contains no information on the materials content, but merely general statements about “proprietary Q.ANTUM Technology”. As far we know, there is no regulatory agency that would control the employment of toxic materials in solar cell production, and we recommend that the applicant be required to make detailed disclosures concerning its manufacturing processes related to the potential for toxic leaching.

VI. Wetlands Issues

The entire area identified by the Applicant is full of wetlands, and often flooded. We note that the Linn County GIS mapping system shows numerous wetland areas not appearing on Applicant’s Figure 6, which fails to capture the wetlands character of the area. Here are three pictures of the parcel 15S03W14 00200 taken on April 7, 2023 that shows the wetland character typical of most if not all of the parcels to be utilized by Applicant:





Summer surveys by the Applicant, as referenced at the July 25th public meeting, will not produce sufficient knowledge of the site conditions to provide adequate site engineering and planning.

Some of the wetlands are under the jurisdiction of the U.S. Army Corps of Engineers, which may require permitting under § 404 of the Clean Water Act for activities that cause fill or concrete to be placed on the wetlands. As a matter of federal law, wetlands are “special aquatic sites” (40 C.F.R. § 230.41), triggering special federal permitting rules.

Among these rules is a flat ban on any fill on wetlands “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem”. 40 C.F.R. § 230.10(a). Because solar facilities do not inherently require use of wetlands, they are not “water dependent” within the meaning of the federal regulations, and “practicable alternatives that do not involve special aquatic sites are presumed to be available”. 40 C.F.R. § 230.10(a)(3). In short, federal law demands a sort of alternative analysis for better siting of this and other federal projects that avoid wetland impacts.

VII. Reclamation/Restoration Issues

Whether reviewed by the Council or Linn County, the applicant will be required to demonstrate that the site “can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility”. OAR 345-022-0050; ORS 215.446(3)(c). At the July 25th public meeting, the Applicant vaguely referred to a “30+” year horizon for repowering or decommissioning.

A number of papers have highlighted the “end-of-life solar photovoltaics (PV) waste stream [a]s a huge concern before solid waste professionals due to presence of hazardous metals like lead or cadmium”. *E.g.*, Nain & Kumar, “Understanding metal dissolution from solar photovoltaics in MSW leachate under standard waste characterization conditions for informing end-of-life photovoltaic waste management,” *Waste Management*, Vol. 123, pp. 97-110 (March 15, 2021).

There are no apparent means to recycle the solar waste, and the capacity to recycle battery waste of unknown technology is unknown. Any reclamation bond must make adequate allowance for unknown technological change and full and environmentally-responsible disposal of the project components.

At the July 25th public meeting, the Applicant also indicated continuing uncertainty as to whether and to what extent concrete would be required to hold down solar panels in prevailing wind conditions; it would certainly be used to pave over other portions of the EFU farmland within the parcels for battery storage and perhaps other project components. Moreover, the applicable Oregon Building Code (605.12.2) requires at least a “gravel or other non-combustible base acceptable to the fire code official [to be] installed and maintained under and around the installation”. Any reclamation bond must provide for full removal of not just the above-ground components, but all concrete and below-ground components to restore the EFU character of the land.

VIII. Fire Risks

The project threatens to impose significant burdens on the responsible fire agency, the Harrisburg Fire Department, and we are informed that the Applicant has made no effort to meet with Fire Chief Bart Griffith concerning the risks posed by the project, or those associated with the general area. Fires in the area pose risks to thousands of acres of timber and hundreds of homes.

The Notice acknowledges the substantial risk of battery fires with references to a “fire prevention system” and “cooling units” for the batteries. The risks associated with large lithium-based batteries, some of which may be the size of shipping containers or larger, are well known, and resulting fires often cannot be controlled. The project order should be conditioned to require a detailed demonstration of fire control to minimize toxic releases—even under conditions where power is lost.

As demonstrated by a recent fire in the area (photos below), it is already subject to significant fire risks:



Applicant's equipment will be vulnerable to fast-moving grass fires, and the battery storage facilities in particular will tend to massively magnify the risk and damages of such fires.

IX. Weed Control

As local farmers have testified, the Applicant's plan to graze sheep in connection with the solar panels will not produce effective weed control, and the Applicant will be required to make extensive application of chemical herbicides to control the growth of weeds that not only impair grazing but may also provide shade interfering with panel efficiency. The Applicant indicated some experience with mowing as a means of controlling plant growth, but has no experience with grazing, and mowing will not control weeds that grow up immediately adjacent to the panels. Uncontrolled weed growth threatens local farming practices and costs, and a solid weed control plan is required. Weed control is also part of effective maintenance of non-combustible areas necessary to minimize fire risk.

X. Recommended Provisions for Project Order

1. Applicant should be required to specify the acreage used by the facilities described, so as to assist in an appropriate jurisdictional determination.

2. Applicant should be required to specify the particular battery technology to be utilized, and provide detailed plant designs with a sufficient detail to meet related project order conditions.

3. Applicant should be required to disclose the material utilized in its proprietary QCell Q.ANTUM Technology or such other technology as will be employed in the solar cells to be installed on site, and sufficient information concerning the manufacturing processes to assess the potential for toxic leaching. The Applicant has presumably conducted some tests of the durability of these technologies, and should be required to release these tests for Department review.

4. Insofar as Applicant committed at the July 25th public meeting to utilizing U.S.-made solar cells in the project, sourcing from its Georgia plant should be a mandatory condition in the project order.

5. Applicant should be required to update any reclamation bond after construction to account for as-built changes, particularly increased use of concrete backfill (*e.g.*, Notice at 6).

6. Applicant should be required to provide a weed control plan, particularly noxious weed control.

7. The Applicant should be required to provide specific information concerning the energy impacts of the project, including but not limited to:

a. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

b. The effects of the project on local and regional energy supplies and on requirements for additional capacity.

c. The effects of the project on peak and base period demands for electricity and other forms of energy.

d. The degree to which the project complies with existing energy standards.

e. The effects of the project on energy resources.

f. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

8. The Applicant should be required to provide a full lifecycle analysis of the environmental impacts of mining the diverse metals and other minerals required to manufacture solar cells, batteries, and other components, extending to the manufacturing impacts, and going beyond Facility operation to ultimate decommissioning costs.

9. The Applicant should be required to propose and fund a detailed post-construction monitoring plan.

10. The Applicant should be required to present a detailed plan concerning its “dual use farming and grazing plan,” including information concerning proposed “sheep grazing” and the “native plants” associated with the project.

11. The Applicant should be required to provide baseline fish and wildlife research to address each of the species of particular concern, including but not limited to:

- a. Bald and Golden Eagles.
- b. Streaked horned lark.
- c. Western Pearl Shell Mussels, and important indicator species of stream health in Putnam and Bishop Creek.
- d. Cut-throat trout in Putnam Creek, Bishop Creek, and the Little Muddy Creek.
- e. Deer that utilize the project area as important fawning areas.
- f. Elk that migrate through the project area.

The studies should address construction and operation impacts, including the effects of treated water disposal, glare and reflections, noise, physical barriers and all other attributes of the project with potential adverse effects on fish and wildlife.

12. The Applicant should be required to fund wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to local wildlife rehabilitation facilities for care. Wildlife rehabilitators should not bear the costs of care for wildlife injured by the project.⁹

13. The Applicant should be required to present data concerning noise levels associated with a large scale moving-panel plant, and assessment of the impacts of such noise, including analysis of the peak period (presumably) when solar panels return to the morning position.

14. The Applicant should be required to present specific sourcing information for the 20 million gallons of water it proposes to use during Facility construction (Notice at 27, suggesting an average use of 60,000 gallons/day), and in particular to show the adequacy of the unidentified “existing municipal water rights” it proposes to exploit.

⁹ More specific conditions relating to bird mortality are contained in Dr. Smallwood’s testimony (Exhibit A, at 17-18).

15. The Applicant should be required to present detailed hydrological studies concerning the impact on other local water users of the possible “new well” or “use of an existing well” it proposes in the event of inadequate municipal sources.

16. The Applicant should be required to present an analysis of the impact of a large solar facility on the micro-climate of the surrounding area, with a focus on heat-related and runoff effects.

17. The Applicant should be required to present an analysis of the impact of a large solar facility on local creek flows, and effects on groundwater availability for local farmers and those served by the Muddy Creek Irrigation District.

18. The Applicant should be required to conduct a survey concerning historic, cultural and archeological resources, as there are a great number of Native American artifacts that have been found in the area.

19. The Applicant should be required to provide a detailed analysis of the impacts of construction traffic, noise, dust and other factors on local farm practices and costs, as well as a long-term analysis on local farm practices and costs.

20. The Applicant should be required to provide an effective fire risk assessment, to identify potential fire-related hazards and identify means of alleviating risks, if any, including potential fire suppression systems for not just the battery storage facilities, but also electrical cabinets and inverter enclosures and other facilities associated with waste heat generation. This should be a multisystem assessment including all elements of the Facility.

* * *

Thank you for your consideration of these comments, and we trust that the Department will prepare a project order addressing these concerns. The Friends of Gap Road expect to continue their opposition to the project through additional phases of the regulatory process.

Sincerely,

A handwritten signature in blue ink, appearing to read 'JLM', is written over a faint circular official stamp.

James L. Buchal

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Attn: Aaron Bock, Planning Director
Hector Guerra, Chief, Environmental Planning Division
County of Tulare
Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277

21 April 2023

RE: Tulare 40 Generation Facility Project (PSP 23-012)

Dear Mr. Bock and Mr. Guerra,

I write to comment on the analysis of potential impacts to wildlife in the Initial Study and Mitigated Negative Declaration (“IS/MND”) that was prepared for the Tulare 40 Generation Facility Project (PSP 23-012), which I understand would, for at least 35 years, convert 160 acres of Prime Farmland to 40 MW of solar photovoltaic (PV) electrical generation, a substation, and 20 MW of battery storage at two sites, one at 16398 Avenue 208 and the other south of the intersection of Avenue 208 and Road 164, Strathmore (County of Tulare 2023). I also reviewed a memo from Jessica Willis (2023), which reports on her biological resources evaluation (Attachment B to the IS/MND).

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I authored numerous papers on special-status species issues. I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I’ve been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology’s premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-five years, including at many proposed project sites. My CV is attached.

PROJECT DESCRIPTION

The elements of the proposed project that are important to analyzing potential impacts to wildlife are those that would destroy habitat, pose risks of collision, entanglement, and electrocution. The project description of the IS/MND clearly describes the number of solar panels and their supporting mounting frames, but is unclear about the length and composition of transmission lines to tie generation into the substation and the length of the 6-foot-tall perimeter security fence. Tables in the IS/MND indicate that

power lines have been removed from a previous version of the planned project, but a map of the project shows 1.92 km of “utility line” leading from both solar arrays to the substation. No information is provided of the nature of these lines, such as whether they are above ground, how many cables are involved, what voltage they would carry, and whether they would meet APLIC (<https://www.aplic.org/>) standards to minimize risk to birds. Also, the IS/MND reports there would be 1.9 miles of 6-foot-tall cyclone perimeter security fence, but the map indicates the length of security fence would be more like 4.17 miles, or 6.71 km. These project elements should be accurately described so that an expert can analyze and report their hazards to wildlife.

EXISTING ENVIRONMENTAL SETTING

The first step in analysis of potential project impacts to biological resources is to accurately characterize the existing environmental setting, including the biological species that use the site, their relative abundances, how they use the site, key ecological relationships, and known and ongoing threats to those species with special status. A reasonably accurate characterization of the environmental setting can provide the basis for determining whether the site holds habitat value to wildlife, as well as a baseline against which to analyze potential project impacts. For these reasons, characterization of the environmental setting, including the project’s site’s regional setting, is one of CEQA’s essential analytical steps (§15125). Methods to achieve this first step typically include (1) surveys of the site for biological resources, and (2) reviews of literature, databases and local experts for documented occurrences of special-status species. In the case of this project, these essential steps remain incomplete and misleading.

Environmental Setting informed by Field Surveys

To CEQA’s primary objective to disclose potential environmental impacts of a proposed project, it helps for the analysis to be informed of which biological species are known to occur at the proposed project site, which special-status species are likely to occur, as well as the limitations of the survey effort directed to the site. Analysts need this information to characterize the environmental setting as a basis for opining on, or predicting, potential project impacts to biological resources.

No field survey has been completed to inform the IS/MND prepared for this project. The lack of any survey obligates the use of desktop review and speculative assumptions as the bases for characterizing the wildlife community as part of the existing environmental setting. At minimum, a wildlife ecologist should be directed to survey the project area for flight activity of birds and bats during each season of the year. Flight activity is the principal factor that determines susceptibility of wildlife to collision risk with anthropogenic structures constructed into their aerial habitat. Also needed from surveys is a list of the species that use the project site as habitat. To go forward with the project absent appropriate wildlife surveys would be to do so without having accurately characterized the existing environmental setting. In my expert opinion, moving the project forward without appropriate surveys would likely result in substantial, significant impacts to volant wildlife.

Biological Setting informed by Data Base Review

The purpose of literature and database review and of consulting with local experts is to inform the reconnaissance-level surveys, to augment the informational value of the surveys, and to help determine which, if any, protocol-level detection surveys should be implemented. Analysts need this information to identify which species are known to have occurred at or near the project site, and to identify which other special-status species could conceivably occur at the site due to geographic range overlap and site conditions. This step is important because the reconnaissance-level surveys are not going to detect all of the species of wildlife that make use of the site. This step can identify those species yet to be detected at the site but which have been documented to occur nearby, or whose available habitat associations are consistent with site conditions. Some special-status species can be ruled out of further analysis, but consistent with the precautionary principle of risk analysis, only if compelling evidence is available in support of such determinations (see below).

The IS/MND's desktop analysis for wildlife occurrences is flawed and unreliable. According to Willis's (2023:2) query of the California Natural Diversity Data Base (CNDDDB) for special-status species occurrence records in the project area, "There are no special status plant or animal species, or natural community recorded within the Project site." IS/MND (p. 46) takes this conclusion further: "...the Project will not significantly impact any biological plant or animal species." As I will show in the following paragraphs and in Table 1, Willis's conclusion is factually inaccurate, and the IS/MND's conclusion is unfounded.

By including only species whose documented occurrences within the nearest CNDDDB quadrangles, Willis (2023) and the IS/MND screen out many special-status species from further consideration in their characterization of the wildlife community as a component of the baseline environmental setting. This is because CNDDDB was not designed to support absence determinations or to screen out species from characterization of a site's wildlife community. As noted by CNDDDB, "*The CNDDDB is a positive sighting database. It does not predict where something may be found. We map occurrences only where we have documentation that the species was found at the site. There are many areas of the state where no surveys have been conducted and therefore there is nothing on the map. That does not mean that there are no special status species present.*" Willis (2023) and the IS/MND misapply CNDDDB, which means their list of special-status species that warrant impacts analysis is likely incomplete.

CNDDDB relies entirely on volunteer reporting from biologists who were allowed access to whatever properties they report from. Many properties have never been surveyed by biologists. Many properties have been surveyed, but the survey outcomes never reported to CNDDDB. Many properties have been surveyed multiple times, but not all survey outcomes reported to CNDDDB. Furthermore, CNDDDB is interested only in the findings of special-status species, which means that species more recently assigned special status will have been reported many fewer times to CNDDDB than were species assigned special status since the inception of CNDDDB. (A species assigned special status this year would not have been reported to CNDDDB in preceding years.) The lack of many CNDDDB

records for species recently assigned special status had nothing to do with true geographic distributions. And because negative findings are not reported to CNDDDB, CNDDDB cannot provide the basis for estimating occurrence likelihoods, either.

In my assessment based on database reviews and site visits, 105 special-status species of wildlife are known to occur near enough to the site to be analyzed for occurrence potential (Table 1). Of these, 3 have been reported on the project site, including turkey vulture, Swainson's hawk and red-tailed hawk, and another 14 (13%) have been documented within 1.5 miles of the site ('Very close'), another 20 (19%) within 1.5 and 4 miles ('Nearby'), and another 62 (59%) within 4 to 30 miles ('In region'). More than a third (35%) of the species in Table 1 have been reportedly seen within 4 miles of the project site. The site therefore is known to support three special-status species of wildlife and carries the potential for supporting many more special-status species of wildlife based on proximity of recorded occurrences and the abilities of members of most of these species to travel far and wide.

More than half of the special-status species in Table 1 that have been recorded as occurrences within 4 miles of the project site have also been documented as fatalities at utility-scale solar projects in California (Smallwood 2022). Due to fatality monitoring that has been completed at 14 of California's solar projects, substantial evidence is on the record that 18 special-status species of wildlife documented within 4 miles of the project site are vulnerable to direct mortality caused by utility-scale solar projects. For this reason, and because CNDDDB is misapplied in the IS/MND, it is my opinion that the desktop review of wildlife species occurrences is incomplete and misleading, and that if the project was to go forward based on the IS/MND's review, substantial and significant impacts to wildlife are likely to occur.

Table 1. Occurrence likelihoods of special-status bird species at or near the proposed project site, according to eBird/iNaturalist records (<https://eBird.org>, <https://www.inaturalist.org>) and on-site survey findings, where ‘Very close’ indicates within 1.5 miles of the site, “nearby” indicates within 1.5 and 4 miles, and “in region” indicates within 4 and 30 miles, and ‘in range’ means the species’ geographic range overlaps the site.

Common name	Species name	Status ¹	Data base records	Known collision deaths at PV, fence (F), Gen-tie (G)
Monarch	<i>Danaus plexippus</i>	FC	Nearby	
Crotch’s bumble bee	<i>Bombus crotchii</i>	CCE	In region	
California tiger salamander	<i>Ambystoma californiense</i>	FT, CT, WL	In region	
Western spadefoot	<i>Spea hammondi</i>	SSC	In region	
Western pond turtle	<i>Emys marmorata</i>	SSC	In region	
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	FE, CE, CFP	In region	
Blainville’s horned lizard	<i>Phrynosoma blainvillii</i>	SSC	In region	
Northern California legless lizard	<i>Anniella pulchra</i>	SSC	In region	
Fulvous whistling-duck	<i>Dendrocygna bicolor</i>	SSC1	In region	
Cackling goose (Aleutian)	<i>Branta hutchinsii leucopareia</i>	WL	In region	
Redhead	<i>Aythya americana</i>	SSC2	In region	
Western grebe	<i>Aechmophorus occidentalis</i>	BCC	In region	PV, G
Clark’s grebe	<i>Aechmophorus clarkii</i>	BCC	In region	
Black swift	<i>Cypseloides niger</i>	SSC3, BCC	In region	
Vaux’s swift	<i>Chaetura vauxi</i>	SSC2, BCC	In region	
Costa’s hummingbird	<i>Calypte costae</i>	BCC	In region	
Rufous hummingbird	<i>Selasphorus rufus</i>	BCC	In region	
Allen’s hummingbird	<i>Selasphorus sasin</i>	BCC	In region	PV
Mountain plover	<i>Charadrius montanus</i>	SSC2, BCC	In region	
Snowy plover	<i>Charadrius nivosus</i>	BCC	In region	PV
Western snowy plover	<i>Charadrius nivosus nivosus</i>	FT, SSC, BCC	In range	
Whimbrel	<i>Numenius phaeopus</i>	BCC	Very close	
Long-billed curlew	<i>Numenius americanus</i>	BCC, WL	Very close	
Marbled godwit	<i>Limosa fedoa</i>	BCC	In region	

Common name	Species name	Status¹	Data base records	Known collision deaths at PV, fence (F), Gen-tie (G)
Red knot (Pacific)	<i>Calidris canutus</i>	BCC	In region	
Short-billed dowitcher	<i>Limnodromus griseus</i>	BCC	In region	
American avocet	<i>Recurvirostra americana</i>	BCC	Very close	F
Willet	<i>Tringa semipalmata</i>	BCC	In region	
Western gull	<i>Larus occidentalis</i>	BCC	In region	
California gull	<i>Larus californicus</i>	BCC, WL	Very close	PV
California least tern	<i>Sternula antillarum browni</i>	FE, CE, FP	In region	
Caspian tern	<i>Hydroprogne caspia</i>	BCC	In region	
Black tern	<i>Chlidonias niger</i>	SSC2, BCC	In region	
Common loon	<i>Gavia immer</i>	SSC	In region	PV, F
Double-crested cormorant	<i>Phalacrocorax auritus</i>	WL	Very close	PV
American white pelican	<i>Pelacanus erythrorhynchos</i>	SSC1, BCC	Nearby	
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FP	In region	
Least bittern	<i>Ixobrychus exilis</i>	SSC2	In region	PV
White-faced ibis	<i>Plegadis chihi</i>	WL	Nearby	PV, G
Turkey vulture	<i>Cathartes aura</i>	BOP	On site, eBird	
Osprey	<i>Pandion haliaetus</i>	WL, BOP	Nearby	PV
White-tailed kite	<i>Elanus luecurus</i>	CFP, WL, BOP	Very close	
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA, CFP, BOP	Nearby, recent	
Northern harrier	<i>Circus cyaneus</i>	BCC, SSC3, BOP	Very close	F
Sharp-shinned hawk	<i>Accipiter striatus</i>	WL, BOP	Nearby	
Cooper's hawk	<i>Accipiter cooperii</i>	WL, BOP	Nearby	PV
Northern goshawk	<i>Accipiter gentilis</i>	SSC2	In region	
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, BCC, CFP	In region	
Red-shouldered hawk	<i>Buteo lineatus</i>	BOP	Very close	
Swainson's hawk	<i>Buteo swainsoni</i>	CT, BOP	On site, eBird	
Red-tailed hawk	<i>Buteo jamaicensis</i>	BOP	On site, eBird	PV, F, G

Common name	Species name	Status¹	Data base records	Known collision deaths at PV, fence (F), Gen-tie (G)
Ferruginous hawk	<i>Buteo regalis</i>	WL, BOP	Nearby	
Rough-legged hawk	<i>Buteo lagopus</i>	BOP	In region	
Barn owl	<i>Tyto alba</i>	BOP	Nearby	PV, F
Western screech-owl	<i>Megascops kennicotti</i>	BCC, BOP	In region	
Great horned owl	<i>Bubo virginianus</i>	BOP	Nearby	PV
Burrowing owl	<i>Athene cunicularia</i>	BCC, SSC2, BOP	Very close	PV, F, G
Long-eared owl	<i>Asio otus</i>	BCC, SSC3	In range	PV, G
Short-eared owl	<i>Asia flammeus</i>	BCC, SSC3, BOP	Nearby	PV, F
Lewis's woodpecker	<i>Melanerpes lewis</i>	BCC	In region	
Nuttall's woodpecker	<i>Picoides nuttallii</i>	BCC	Very close	
American kestrel	<i>Falco sparverius</i>	BOP	Very close	PV, F, G
Merlin	<i>Falco columbarius</i>	WL, BOP	Nearby	
Peregrine falcon	<i>Falco peregrinus</i>	CFP, BCC, BOP	Nearby	F
Prairie falcon	<i>Falco mexicanus</i>	BCC, WL, BOP	Nearby	
Olive-sided flycatcher	<i>Contopus cooperi</i>	BCC, SSC2	In region	PV
Willow flycatcher	<i>Empidonax trailii</i>	CE, BCC	In region	
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>	SSC2	In region	
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, CE	In region	
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC, SSC2	Nearby, recent	PV, F, G
Yellow-billed magpie	<i>Pica nuttalli</i>	BCC	In region	
Oak titmouse	<i>Baeolophus inornatus</i>	BCC	Nearby	
California horned lark	<i>Eremophila alpestris actia</i>	WL	Very close	PV, F, G
Bank swallow	<i>Riparia riparia</i>	CT	In region	Yes
Purple martin	<i>Progne subis</i>	SSC2	In region	
Wrentit	<i>Chamaea fasciata</i>	BCC	In region	
California thrasher	<i>Toxostoma redivivum</i>	BCC	In region	
Cassin's finch	<i>Haemorhous cassinii</i>	BCC	In region	

Common name	Species name	Status¹	Data base records	Known collision deaths at PV, fence (F), Gen-tie (G)
Lawrence's goldfinch	<i>Spinus lawrencei</i>	BCC	Very close	
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC2	In region	
Black-chinned sparrow	<i>Spizella atrogularis</i>	BCC	In region	
Brewer's sparrow	<i>Spizella breweri</i>	BCC	Nearby	PV, F, G
Bell's sparrow	<i>Amphispiza b. belli</i>	WL, BCC	In region	
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	SSC2, BCC	Nearby	
Yellow-breasted chat	<i>Icteria virens</i>	SSC3	In region	PV, F
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	SSC3	Nearby, recent	PV, F
Bullock's oriole	<i>Icterus bullockii</i>	BCC	Nearby, recent	
Tricolored blackbird	<i>Agelaius tricolor</i>	CT, BCC, SSC1	Very close	
Virginia's warbler	<i>Leiothlypis virginiae</i>	WL, BCC	In region	
Yellow warbler	<i>Dendroica petechia</i>	BCC, SSC2	In region	PV, F, G
Summer tanager	<i>Piranga rubra</i>	SSC1	In region	
Pallid bat	<i>Antrozous pallidus</i>	SSC, WBWG:H	In region	F
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC, WBWG:H	In region	
Canyon bat	<i>Parastrellus hesperus</i>	WBWG:L	In region	PV, F
Big brown bat	<i>Episticus fuscus</i>	WBWG:L	In region	
Silver-haired bat	<i>Lasionycteris noctivagans</i>	WBWG:M	In range	
Western red bat	<i>Lasiurus blossevillei</i>	SSC, WBWG:H	In region	
Hoary bat	<i>Lasiurus cinereus</i>	WBWG:M	In region	
Western small-footed myotis	<i>Myotis cililabrum</i>	WBWG:M	In range	
Yuma myotis	<i>Myotis yumanensis</i>	WBWG:LM	In region	
California myotis	<i>Myotis californicus</i>	WBWG:L	In region	
Mexican free-tailed bat	<i>Tadarida brasiliensis</i>	WBWG: M	In region	PV
Tipton kangaroo rat	<i>Dipodomys nitratoide nitratoide</i>	FE, CE	In range	
American badger	<i>Taxidea taxus</i>	SSC	In region	

Common name	<i>Species name</i>	Status¹	Data base records	Known collision deaths at PV, fence (F), Gen-tie (G)
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	In range	

¹ Listed as FT or FE = federal threatened or endangered, FC = federal candidate for listing, BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern, CT or CE = California threatened or endangered, CCT or CCE = Candidate California threatened or endangered, CFP = California Fully Protected (California Fish and Game Code 3511), SSC = California Species of Special Concern (not threatened with extinction, but rare, very restricted in range, declining throughout range, peripheral portion of species' range, associated with habitat that is declining in extent), SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3, respectively (Shuford and Gardali 2008), WL = Taxa to Watch List (Shuford and Gardali 2008), and BOP = Birds of Prey (CFG Code 3503.5), and WBWG = Western Bat Working Group with priority rankings, of low (L), moderate (M), and high (H).

IMPACTS TO BIOLOGICAL RESOURCES

Determination of occurrence likelihoods of special-status species is not, in and of itself, an analysis of potential project impacts. But this is where Willis (2023) and the IS/MND left the analysis. No mention is made of the habitat loss that would result from replacement of natural vegetation cover with PV panels, nor of the collision mortality the PV panels, utility lines and security fence would cause birds. None of the available literature on these impacts is cited. An impacts analysis should consider whether and how a proposed project would affect members of a species, larger demographic units of the species, or the whole of a species. In the following, I analyze several types of impacts likely to result from the project, and none of which are analyzed in the IS/MND.

HABITAT LOSS

Perhaps because the IS/MND concludes that no special-status species are known to occur at the project site, the potential impacts of habitat loss are not analyzed. The IS/MND's conclusion is factually incorrect, as noted above, but regardless, it fails to consider the many other species of wildlife that likely rely on the project site for forage and reproduction. The IS/MND fails to consider the loss of productive capacity of wildlife species with the loss of agricultural land. Many species of wildlife have adapted to agriculture (Smallwood and Geng 1993, Smallwood 1995, Smallwood et al. 1996). For example, California horned larks often nest on the nearly bare ground of annual field crops. American pipits forage on these fields over the winter months, as do merlin and ferruginous hawks. Swainson's hawks scan for agricultural disturbances of vegetation and soil, such as disking, irrigation, mowing and harvest, where and at which times prey items are exposed to the hawks. Assuming that agricultural land is of no value to wildlife is to ignore the abundant evidence to the contrary.

Although the IS/MND implies that the lifespan of the project would be 35 years, most PV solar projects are lately designed for 40-year lifespans. But anyhow, based on my experience with wind energy projects and their repowering, the project would most likely be proposed for re-permitting, or the site would be proposed for another industrial use that covers the deadened soils with impervious surface. The IS/MND implies that the project site could be returned to agricultural production after 35 years – the site's soils ready for re-use for agriculture -- but the IS/MND does not discuss the factors that would determine whether this would happen or re-permitting would be sought. This discussion is important because the project's impacts to wildlife would continue for as long as the soils are unavailable as a foundation of habitat and as long as solar panels, utility lines and security fences are there to interfere with wildlife movement and to pose collision hazards.

WILDLIFE MOVEMENT

The IS/MND's analysis of whether the project would interfere with wildlife movement in the region is incomplete and conclusory. According to the IS/MND (p. 46), the project “would not interfere substantially with the movement of any native resident or migratory fish or wildlife species...” No foundation is offered in support of this

conclusion. But the evidence shows otherwise. Based on the fatality monitoring completed at 14 of California's utility-scale solar projects, Smallwood (2022) estimated that as of 2020, California's utility-scale solar projects were already interfering with the movement of 267,732 birds and 11,418 bats by killing them while these animals were in the process of moving. Unknown is the number of birds and bats whose movement was interfered with after nonfatal collisions with utility-scale infrastructure resulted in debilitating injuries. And unknown is the number that realized the collision threat just prior to collision and had to waste valuable energy to evade. This latter impact would include waterbirds and shorebirds having to ascend to migration heights after having been lured to the solar panels by the panels' collective Lake Effect – the false appearance from above the solar arrays represent a large body of water.

In addition to the collision mortality as a source of interference with wildlife movement, the security fence would prevent large-bodied terrestrial wildlife from crossing the project site. Analysis of whether the project would interfere with wildlife movement must also consider whether the site is used for stopover opportunities by birds and bats (Taylor et al. 2011), or for staging opportunities (Warnock 2010) during dispersal, migration or home range patrol. Many species of wildlife likely use the site of the proposed project for movement across the region, but this movement is not acknowledged in the IS/MND because no wildlife ecologist was directed to take a look. It is my opinion, based on thousands of hours of flight behavior monitoring during both diurnal and nocturnal surveys, that the project site – like most other areas of land – is used by wildlife to move through the region, and that the installations of PV solar panels, utility lines, batteries and miles of security fence would substantially and significantly interfere with wildlife movement in the region.

COLLISION MORTALITY

The proposed project includes a number of structural features that would cause collision mortality to birds and possibly bats. Although reports of fatality monitoring at utility-scale solar projects are available (e.g., Smallwood 2022), the IS/MND does not cite them. The evidence needed for impact predictions is certainly available, but the IS/MND provides no predictive analysis of potential impacts of collision mortality.

The project would add 40 MW of PV panels, 1.92 km of utility lines, which I assume would serve as the generation tie-in, or gen-tie, and 6.71 km of perimeter security fence. These structures would be inserted into a portion of the aerosphere that is of critical importance to volant wildlife, including wildlife that fly at night. And the volant wildlife using this portion of the aerosphere have been doing so for many thousands of years without the presence of anthropogenic structures in their way. I reviewed the available fatality monitoring reports at California's utility-scale solar projects to quantify fatality rates at solar PV panels, utility lines (gen-ties) and fences, among other project elements. Below are predictions of project impacts based on mean fatality rates estimated from 14 utility-scale solar projects in California (Smallwood 2022).

Collision Mortality at Utility-scale Solar PV Panels

The IS/MND fails to address collision mortality as an issue related to utility-scale solar PV. No mention is made of this issue, despite the available evidence. The Lake Effect has been widely publicized as a likely cause of many of the avian collisions with PV panels within the setting of utility-scale solar projects (Photos 1–4), but other factors must also contribute to the collisions of many other birds not typically associated with large bodies of water (Smallwood 2022).

The project's 40 MW of solar PV panels would kill birds and bats. Recent fatality monitoring at utility-scale solar projects in California provides the basis for predicting avian and bat mortality that would be caused by the project's PV panels. Based on a weighted mean 11.605 (95% CI: 8.570–16.626) bird fatalities/MW/year among California's solar PV projects, the project's 40 MW of solar PV would likely kill 464 (95% CI: 343–665) birds per year. After 35 years of this level of mortality, the project's solar PV would have killed 16,240 (95% CI: 12,005–23,275) birds. Its annual death toll caused by the PV panels would persist for as long as the PV panels remain beyond my projected 35-year lifespan of the solar PV equipment, or as long as replacement panels operate. It is my opinion that this predicted level of mortality would easily qualify as an unmitigated significant impact to birds.



Photos 1 and 2. Smudge marks on solar panel (left) where western grebe collided with the panel and fell to the ground where it was photographed (right) at the Desert Sunlight Solar Project.



Photos 3 and 4. *The location (left) where an endangered Yuma clapper rail was found dead (right) in the Desert Sunlight Solar Project.*

Collision Mortality along the Gen-tie (or Utility Lines)

The 1.92-km length of gen-tie or “utility lines” would kill birds. Recent fatality monitoring along gen-ties of utility-scale solar projects in California provides the basis for predicting avian mortality that would be caused by the project’s gen-tie. Based on a weighted mean 113.162 (95% CI: 71.780–198.424) fatalities/km/year along gen-ties of California’s solar projects, the project’s gen-tie would likely kill 217 (95% CI: 138–381) birds per year. After 35 years of this level of mortality, the project’s gen-tie would have killed 7,595 (95% CI: 4,830–13,335) birds. Its annual death toll caused by the gen-tie, or utility line, would persist for as long as it remains beyond my projected 35-year lifespan of the solar PV equipment. It is my opinion that this predicted level of mortality would easily qualify as an unmitigated significant impact.

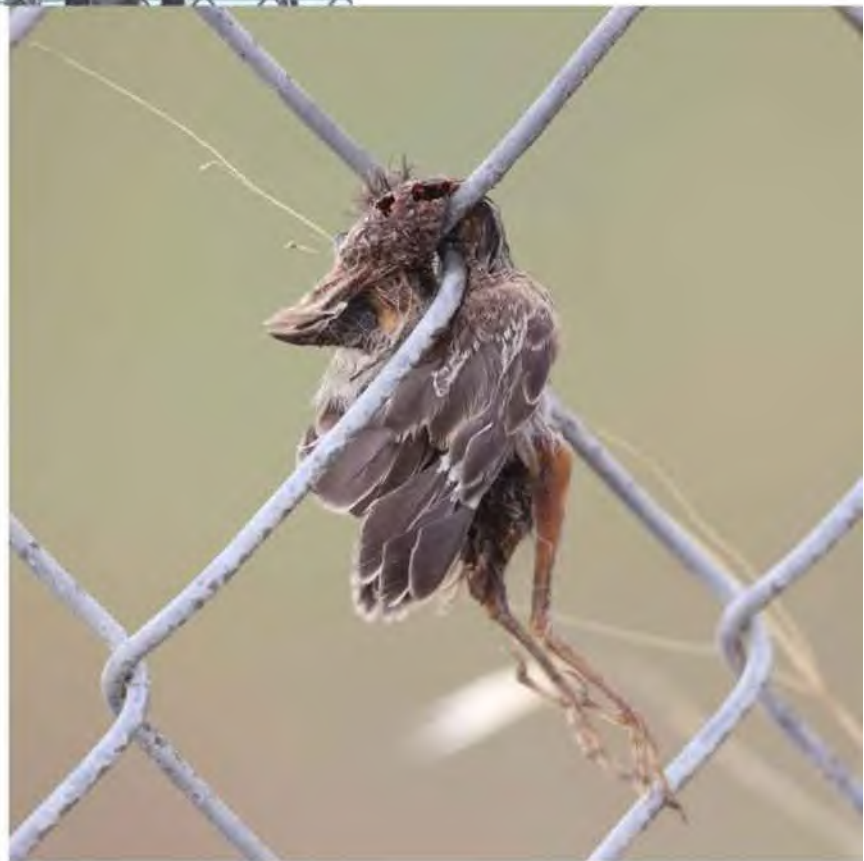
Collision Mortality along Fences

The 6.71 km of fencing of the project would kill birds (Photos 6 and 7). Recent fatality monitoring along fences of utility-scale solar projects in California provides the basis for predicting avian mortality that would be caused by the project’s fence. Based on a weighted mean 14.435 (95% CI: 10.880–20.339) birds/km/year along fences of California’s solar projects, the project’s fence would likely kill 97 (95% CI: 73–136) birds per year. After 35 years of this level of mortality, the project’s fencing would have killed 3,395 (95% CI: 2,555–4,760) birds. Its annual death toll caused by the fence would persist for as long as the fence remains beyond my projected 35-year lifespan of the solar PV equipment. It is my opinion that this predicted level of mortality would easily qualify as an unmitigated significant impact.



Photo 5. A great-horned owl died after becoming entangled on the razor wire placed on top of this cyclone fence surrounding a substation in Alameda County. Photo by Joanne Mount.

Photo 6. Fledgling house finch that fatally collided with a security fence, 26 June 2022. Photo by Noriko Smallwood.



Estimated Combined Numerical Impacts to Volant Vertebrate Wildlife

Based on the fatality monitoring that has been completed and analyzed as of 2020 (Smallwood 2022), the project's combined numerical impacts of collision mortality is predicted to be 778 birds per year (range 554 to 1,182). The combined 35-year toll for birds would be 27,230 (95% CI: 19,390–41,370). It is my opinion that this level of potential project impact would qualify as an unmitigated significant impact.

CUMULATIVE IMPACTS

The IS/MND provides a flawed cumulative effects analysis which is inconsistent with the very definition of cumulative effects in the CEQA Guidelines. At p. 47, the IS/MND explains that “The Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur.” However, CEQA Guideline §15355 defines cumulative impacts as “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” An appropriate cumulative impacts analysis would, for example, apply the weighted averages of collision fatality rates to other utility-scales solar projects that already exist or are planned in Tulare County. Another such analysis would be to estimate the impacts of habitat loss caused by these types of projects throughout the County.

MITIGATION MEASURES

“4-2: *San Joaquin Kit Fox and Nesting Raptors/Migratory Birds*: If Project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to 1/2-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.”

The nesting season recognized by California Department of Fish and Wildlife is now 1 February through 15 September. Furthermore, all of the standards of the recommended survey protocol for Swainson's hawk would need to be achieved, and not just a vague survey within a radial distance from the project. The survey guidelines of the Swainson's Hawk Technical Advisory Committee (2000) specify investigator qualifications and survey conduct, as well as multiple surveys according to a nesting season schedule.

Even meeting the standards of Swainson's Hawk Technical Advisory Committee (2000), this measure would not prevent the impacts associated with habitat loss, nor would they prevent collision mortality of Swainson's hawks with the project's infrastructure.

“4-3: *Employee Education Program*: Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.”

This measure rings hollow because other than Measure 4.2, which would accomplish next to nothing of conservation benefit to wildlife, the IS/MND includes no measures that would be taken to reduce impacts to species during project construction and operation.

RECOMMENDED MEASURES

Habitat Loss: If the project goes forward, compensatory mitigation would be warranted for habitat loss. An equal area of open space should be protected in perpetuity as close to the project site as possible. The impacts of interference with wildlife movement by the security fence should be minimized by reducing the length of fence and using a different type of fencing that increases opacity and minimizes the risk of entanglement. The fence should also include gaps to enable non-volant wildlife to pass through.

Fund Wildlife Rehabilitation Facilities: Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Many animals would likely be injured by collisions with project infrastructure. Wildlife rehabilitators should not be stuck with the cost burden for care of wildlife that are injured by the project.

Post-construction Impacts Monitoring: A plan is needed for fatality monitoring and adaptive management. Based on my review of available reports of monitoring at utility-scale solar projects, it is clear that the causal factors of collisions are little known, and no mitigation measures have yet been suitably tested for efficacy (Smallwood 2022). Research into causal factors of wildlife collisions with utility-scale PV facilities has been non-existent. I therefore recommend that research also be funded as a mitigation measure and that it be linked to fatality monitoring.

Understanding why wildlife fatalities are happening and how to reduce them requires high accuracy in fatality rate estimation. But to understand causal factors also requires behavior surveys performed by qualified behavioral ecologists, who would need to sample the project with sufficient survey effort and at sufficient spatial/temporal grain to discern avian reactions to project elements and to any experimental treatments applied to reduce fatalities. Fatality monitoring and behavior surveys can inform of the efficacies of mitigation measures that are implemented with appropriate tenets of experimental design (Sinclair and DeGeorge 2016).

A post-construction monitoring plan should be prepared. Consideration should be given to the desired carcass detection rate, because that rate would determine the speed at which fatality searches can be completed, the accuracy of fatality estimates, and the appropriate duration of fatality monitoring. It also affects the cost of the fatality monitoring effort. Below is a framework of a fatality monitoring plan that includes best practices:

1. Keep it simple;
2. Have a plan and a budget for responding to the discoveries of injured wildlife;
3. Ask solar company employees to leave carcasses alone;
4. Search all of the solar arrays in the project, or a substantial randomized sample or a systematic sample with random starting points;
5. Delineate unsearchable areas due to hazards, dense vegetation or other factors;
6. Use scent-detection dogs with skilled handlers (Smallwood et al. 2020), either off-leash to achieve detection rates of available carcasses (i.e., those not removed by scavengers yet) of 50% to 60%, or on-leash to achieve detection rates >90%;
7. Implement no more than one search interval, i.e., number of days between searches, but the search interval should be a targeted average rather than a strict time to provide flexibility to the scent-detection dog team;
8. Minimum monitoring duration should be 3 years;
9. Refrain from performing 'clearing searches' because they're ineffective and unnecessary;
10. Upon discovery of feathers, stop and search increasingly larger circles to determine whether more feathers can lead to the carcass;
11. Integrate carcass detection trials into routine fatality monitoring by randomly placing just-thawed, fresh-frozen carcasses of appropriate bird and bat species onto the search areas at a rate of about 2.3 g/ha/year, where appropriate species means those likely to be killed by features of the project and include the full range of body sizes;
12. In carcass detection trials, place many more of the smallest birds and bats because detections of those trial carcasses are necessary but more rarely achieved;
13. Mark trial carcasses discreetly and safely with regard to scavengers – snipping toes and the ends of flight feathers works well, or one foot of each bat;
14. Weigh trial carcasses just prior to placement;
15. Keep searchers blind to the trial placements by using a disciplined trial administrator who places carcasses while searchers are not onsite and who leaves no obvious evidence of each visit other than the carcass itself;
16. Upon placement, drop each trial carcass from waist height, and then photograph and map the location with high-end GPS and take notes of the location, e.g., 10 cm east of white pebble and 2 m north of 1-m long north-south oriented stick, or 2 m west of PV panel number X;
17. Leave all fatality and trial carcasses in the field, thereafter monitoring subsequent detections of the same carcasses;
18. All carcasses in integrated trials are either found or not found, so do not attempt to separate trials for searcher detection and carcass persistence;

19. Count fatalities discovered incidentally to routine fatality monitoring, including those found beyond the maximum search radius of a sampled unit, but omit those found at units not selected for sampling (if sampling was used instead of census);
20. Map and photograph all fatalities and trial carcasses every time they are detected;
21. Enter data into electronic spreadsheet daily and share data with supervisor no less often than weekly to identify and resolve problems in a timely manner;
22. Identify all remains to species, so include sufficient budget for visiting museums or experts to achieve this objective (every species misidentification adds error to two species – to the species misidentified and to the species not identified);
23. See Smallwood et al. (2018) for details on how to use the data in a simple estimator;
24. Repeat the monitoring effort 10 years after the first monitoring effort;
25. Share data and reports publicly and require peer-review by independent party.

Below is a framework for behavior surveys that aim to inform of causal factors via rates of certain risky behaviors and collision near-misses:

1. Use behavioral ecologists to either perform behavior surveys or to train the biologists who would perform the surveys;
2. Perform 1-hour visual scan surveys focused on each sampling plot searched by scent-detection dogs per fatality monitoring;
3. Record positions of behavior survey stations;
4. Alter start times randomly from dawn until dusk, but not while the fatality searchers are on the plot;
5. Limit observations to 300 m from the observer;
6. Record observations into a handheld digital voice recorder, which are to be transcribed to an electronic spreadsheet later the same day;
7. Record significant events to handheld printed photo-maps of the plot, where significant events include collisions, near-misses and other reactions to project elements, as well as uses made of project elements by birds (perching, nesting);
8. Record species of birds visiting the plot, flock size, behavior, height above ground, flight path (record on map) and time on plot;
9. Record wind speed and direction, temperature and weather conditions at beginning and end of each survey;
10. Digitize data recorded on photo-map for spatial analysis using GIS;
11. See methods in Smallwood (2017).

I further recommend that nocturnal surveys be performed. I used a FLIR T620 thermal-imaging camera with an 88.9 mm telephoto lens for this purpose, but other options are available. I recommend surveys are performed within 3 hours after dark to determine whether collisions might be happening at night rather than during the day. Such surveys allowed me to witness actual collisions with wind turbines, but more importantly many near-misses (Smallwood and Bell 2020a,b).

As mentioned in recommended fatality monitoring practice 25, above, transparency is critically important. The fatality monitoring performed at solar projects I reviewed was

hidden from the public for too long. Poor study methods could have been curtailed early had experienced biologists been able to review them. Peer review is essential, and so is the sharing of data in a timely manner. The poor practices of the past should not be repeated at this or any other solar project.

Thank you for your attention,



Shawn Smallwood, Ph.D.

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Curriculum Vitae

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Born May 3, 1963 in
Sacramento, California.
Married, father of two.

Ecologist

Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Wildlife monitoring and field study using GPS, thermal imaging, behavior surveys;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that inform management decisions.

Education

Ph.D. Ecology, University of California, Davis. September 1990.
M.S. Ecology, University of California, Davis. June 1987.
B.S. Anthropology, University of California, Davis. June 1985.
Corcoran High School, Corcoran, California. June 1981.

Experience

- 480 professional publications, including:
- 83 peer reviewed publications
- 24 in non-reviewed proceedings
- 371 reports, declarations, posters and book reviews
- 8 in mass media outlets
- 87 public presentations of research results

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The five-member committee investigated causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC

reviewed the science underlying the Alameda County Avian Protection Program, and advised the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Part-time Lecturer, 1998-2005, California State University, Sacramento. Instructed Mammalogy, Behavioral Ecology, and Ornithology Lab, Contemporary Environmental Issues, Natural Resources Conservation.

Senior Ecologist, 1999-2005, BioResource Consultants. Designed and implemented research and monitoring studies related to avian fatalities at wind turbines, avian electrocutions on electric distribution poles across California, and avian fatalities at transmission lines.

Chairman, Conservation Affairs Committee, The Wildlife Society--Western Section, 1999-2001. Prepared position statements and led efforts directed toward conservation issues, including travel to Washington, D.C. to lobby Congress for more wildlife conservation funding.

Systems Ecologist, 1995-2000, Institute for Sustainable Development. Headed ISD's program on integrated resources management. Developed indicators of ecological integrity for large areas, using remotely sensed data, local community involvement and GIS.

Associate, 1997-1998, Department of Agronomy and Range Science, University of California, Davis. Worked with Shu Geng and Mingua Zhang on several studies related to wildlife interactions with agriculture and patterns of fertilizer and pesticide residues in groundwater across a large landscape.

Lead Scientist, 1996-1999, National Endangered Species Network. Informed academic scientists and environmental activists about emerging issues regarding the Endangered Species Act and other environmental laws. Testified at public hearings on endangered species issues.

Ecologist, 1997-1998, Western Foundation of Vertebrate Zoology. Conducted field research to determine the impact of past mercury mining on the status of California red-legged frogs in Santa Clara County, California.

Senior Systems Ecologist, 1994-1995, EIP Associates, Sacramento, California. Provided consulting services in environmental planning, and quantitative assessment of land units for their

conservation and restoration opportunities based on ecological resource requirements of 29 special-status species. Developed ecological indicators for prioritizing areas within Yolo County to receive mitigation funds for habitat easements and restoration.

Post-Graduate Researcher, 1990-1994, Department of Agronomy and Range Science, *U.C. Davis*.

Under Dr. Shu Geng's mentorship, studied landscape and management effects on temporal and spatial patterns of abundance among pocket gophers and species of Falconiformes and Carnivora in the Sacramento Valley. Managed and analyzed a data base of energy use in California agriculture. Assisted with landscape (GIS) study of groundwater contamination across Tulare County, California.

Work experience in graduate school: Co-taught Conservation Biology with Dr. Christine Schonewald, 1991 & 1993, UC Davis Graduate Group in Ecology; Reader for Dr. Richard Coss's course on Psychobiology in 1990, UC Davis Department of Psychology; Research Assistant to Dr. Walter E. Howard, 1988-1990, UC Davis Department of Wildlife and Fisheries Biology, testing durable baits for pocket gopher management in forest clearcuts; Research Assistant to Dr. Terrell P. Salmon, 1987-1988, UC Wildlife Extension, Department of Wildlife and Fisheries Biology, developing empirical models of mammal and bird invasions in North America, and a rating system for priority research and control of exotic species based on economic, environmental and human health hazards in California. Student Assistant to Dr. E. Lee Fitzhugh, 1985-1987, UC Cooperative Extension, Department of Wildlife and Fisheries Biology, developing and implementing statewide mountain lion track count for long-term monitoring.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

Projects

Repowering wind energy projects through careful siting of new wind turbines using map-based collision hazard models to minimize impacts to volant wildlife. Funded by wind companies (principally NextEra Renewable Energy, Inc.), California Energy Commission and East Bay Regional Park District, I have collaborated with a GIS analyst and managed a crew of five field biologists performing golden eagle behavior surveys and nocturnal surveys on bats and owls. The goal is to quantify flight patterns for development of predictive models to more carefully site new wind turbines in repowering projects. Focused behavior surveys began May 2012 and continue. Collision hazard models have been prepared for seven wind projects, three of which were built. Planning for additional repowering projects is underway.

Test avian safety of new mixer-ejector wind turbine (MEWT). Designed and implemented a before-after, control-impact experimental design to test the avian safety of a new, shrouded wind turbine developed by Ogin Inc. (formerly known as FloDesign Wind Turbine Corporation). Supported by a \$718,000 grant from the California Energy Commission's Public Interest Energy Research program and a 20% match share contribution from Ogin, I managed a crew of seven field biologists who performed periodic fatality searches and behavior surveys, carcass detection trials, nocturnal behavior surveys using a thermal camera, and spatial analyses with the collaboration of a GIS

analyst. Field work began 1 April 2012 and ended 30 March 2015 without Ogin installing its MEWTs, but we still achieved multiple important scientific advances.

Reduce avian mortality due to wind turbines at Altamont Pass. Studied wildlife impacts caused by 5,400 wind turbines at the world's most notorious wind resource area. Studied how impacts are perceived by monitoring and how they are affected by terrain, wind patterns, food resources, range management practices, wind turbine operations, seasonal patterns, population cycles, infrastructure management such as electric distribution, animal behavior and social interactions.

Reduce avian mortality on electric distribution poles. Directed research toward reducing bird electrocutions on electric distribution poles, 2000-2007. Oversaw 5 founts of fatality searches at 10,000 poles from Orange County to Glenn County, California, and produced two large reports.

Cook *et al.* v. Rockwell International *et al.*, No. 90-K-181 (D. Colorado). Provided expert testimony on the role of burrowing animals in affecting the fate of buried and surface-deposited radioactive and hazardous chemical wastes at the Rocky Flats Plant, Colorado. Provided expert reports based on four site visits and an extensive document review of burrowing animals. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals. I testified in federal court in November 2005, and my clients were subsequently awarded a \$553,000,000 judgment by a jury. After appeals the award was increased to two billion dollars.

Hanford Nuclear Reservation Litigation. Provided expert testimony on the role of burrowing animals in affecting the fate of buried radioactive wastes at the Hanford Nuclear Reservation, Washington. Provided three expert reports based on three site visits and extensive document review. Predicted and verified a certain population density of pocket gophers on buried waste structures, as well as incidence of radionuclide contamination in body tissue. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals.

Expert testimony and declarations on proposed residential and commercial developments, gas-fired power plants, wind, solar and geothermal projects, water transfers and water transfer delivery systems, endangered species recovery plans, Habitat Conservation Plans and Natural Communities Conservation Programs. Testified before multiple government agencies, Tribunals, Boards of Supervisors and City Councils, and participated with press conferences and depositions. Prepared expert witness reports and court declarations, which are summarized under Reports (below).

Protocol-level surveys for special-status species. Used California Department of Fish and Wildlife and US Fish and Wildlife Service protocols to search for California red-legged frog, California tiger salamander, arroyo southwestern toad, blunt-nosed leopard lizard, western pond turtle, giant kangaroo rat, San Joaquin kangaroo rat, San Joaquin kit fox, western burrowing owl, Swainson's hawk, Valley elderberry longhorn beetle and other special-status species.

Conservation of San Joaquin kangaroo rat. Performed research to identify factors responsible for the decline of this endangered species at Lemoore Naval Air Station, 2000-2013, and implemented habitat enhancements designed to reverse the trend and expand the population.

Impact of West Nile Virus on yellow-billed magpies. Funded by Sacramento-Yolo Mosquito and Vector Control District, 2005-2008, compared survey results pre- and post-West Nile Virus epidemic for multiple bird species in the Sacramento Valley, particularly on yellow-billed magpie and American crow due to susceptibility to WNV.

Workshops on HCPs. Assisted Dr. Michael Morrison with organizing and conducting a 2-day workshop on Habitat Conservation Plans, sponsored by Southern California Edison, and another 1-day workshop sponsored by PG&E. These Workshops were attended by academics, attorneys, and consultants with HCP experience. We guest-edited a Proceedings published in Environmental Management.

Mapping of biological resources along Highways 101, 46 and 41. Used GPS and GIS to delineate vegetation complexes and locations of special-status species along 26 miles of highway in San Luis Obispo County, 14 miles of highway and roadway in Monterey County, and in a large area north of Fresno, including within reclaimed gravel mining pits.

GPS mapping and monitoring at restoration sites and at Caltrans mitigation sites. Monitored the success of elderberry shrubs at one location, the success of willows at another location, and the response of wildlife to the succession of vegetation at both sites. Also used GPS to monitor the response of fossorial animals to yellow star-thistle eradication and natural grassland restoration efforts at Bear Valley in Colusa County and at the decommissioned Mather Air Force Base in Sacramento County.

Mercury effects on Red-legged Frog. Assisted Dr. Michael Morrison and US Fish and Wildlife Service in assessing the possible impacts of historical mercury mining on the federally listed California red-legged frog in Santa Clara County. Also measured habitat variables in streams.

Opposition to proposed No Surprises rule. Wrote a white paper and summary letter explaining scientific grounds for opposing the incidental take permit (ITP) rules providing ITP applicants and holders with general assurances they will be free of compliance with the Endangered Species Act once they adhere to the terms of a “properly functioning HCP.” Submitted 188 signatures of scientists and environmental professionals concerned about No Surprises rule US Fish and Wildlife Service, National Marine Fisheries Service, all US Senators.

Natomas Basin Habitat Conservation Plan alternative. Designed narrow channel marsh to increase the likelihood of survival and recovery in the wild of giant garter snake, Swainson’s hawk and Valley Elderberry Longhorn Beetle. The design included replication and interspersions of treatments for experimental testing of critical habitat elements. I provided a report to Northern Territories, Inc.

Assessments of agricultural production system and environmental technology transfer to China. Twice visited China and interviewed scientists, industrialists, agriculturalists, and the Directors of the Chinese Environmental Protection Agency and the Department of Agriculture to assess the need and possible pathways for environmental clean-up technologies and trade opportunities between the US and China.

Yolo County Habitat Conservation Plan. Conducted landscape ecology study of Yolo County to spatially prioritize allocation of mitigation efforts to improve ecosystem functionality within the

County from the perspective of 29 special-status species of wildlife and plants. Used a hierarchically structured indicators approach to apply principles of landscape and ecosystem ecology, conservation biology, and local values in rating land units. Derived GIS maps to help guide the conservation area design, and then developed implementation strategies.

Mountain lion track count. Developed and conducted a carnivore monitoring program throughout California since 1985. Species counted include mountain lion, bobcat, black bear, coyote, red and gray fox, raccoon, striped skunk, badger, and black-tailed deer. Vegetation and land use are also monitored. Track survey transect was established on dusty, dirt roads within randomly selected quadrats.

Sumatran tiger and other felids. Upon award of Fulbright Research Fellowship, I designed and initiated track counts for seven species of wild cats in Sumatra, including Sumatran tiger, fishing cat, and golden cat. Spent four months on Sumatra and Java in 1988, and learned Bahasa Indonesia, the official Indonesian language.

Wildlife in agriculture. Beginning as post-graduate research, I studied pocket gophers and other wildlife in 40 alfalfa fields throughout the Sacramento Valley, and I surveyed for wildlife along a 200 mile road transect since 1989 with a hiatus of 1996-2004. The data are analyzed using GIS and methods from landscape ecology, and the results published and presented orally to farming groups in California and elsewhere. I also conducted the first study of wildlife in cover crops used on vineyards and orchards.

Agricultural energy use and Tulare County groundwater study. Developed and analyzed a data base of energy use in California agriculture, and collaborated on a landscape (GIS) study of groundwater contamination across Tulare County, California.

Pocket gopher damage in forest clear-cuts. Developed gopher sampling methods and tested various poison baits and baiting regimes in the largest-ever field study of pocket gopher management in forest plantations, involving 68 research plots in 55 clear-cuts among 6 National Forests in northern California.

Risk assessment of exotic species in North America. Developed empirical models of mammal and bird species invasions in North America, as well as a rating system for assigning priority research and control to exotic species in California, based on economic, environmental, and human health hazards.

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Comments on Environmental Documents

I was retained or commissioned to comment on environmental planning and review documents, including:

- The Villages of Lakeview EIR (2017; 28 pp);
- Notes on Proposed Study Options for Trail Impacts on Northern Spotted Owl (2017; 4 pp);
- San Geronio Crossings EIR (2017; 22 pp);
- Replies to responses on Jupiter Project IS and MND (2017; 12 pp);
- MacArthur Transit Village Project Modified 2016 CEQA Analysis (2017; 12 pp);
- Central SoMa Plan DEIR (2017; 14 pp);
- Colony Commerce Center Specific Plan DEIR (2016; 16 pp);
- Fairway Trails Improvements MND (2016; 13 pp);
- Review of Avian-Solar Science Plan (2016; 28 pp);
- Replies to responses on Initial Study for Pyramid Asphalt (2016; 5 pp);
- Initial Study for Pyramid Asphalt (2016; 4 pp);
- Agua Mansa Distribution Warehouse Project Initial Study (2016; 14 pp);
- Santa Anita Warehouse IS and MND (2016; 12 pp);
- CapRock Distribution Center III DEIR (2016; 12 pp);
- Orange Show Logistics Center Initial Study and MND (2016; 9 pp);
- City of Palmdale Oasis Medical Village Project IS and MND (2016; 7 pp);
- Comments on proposed rule for incidental eagle take (2016, 49 pp);
- Grapevine Specific and Community Plan FEIR (2016; 25 pp);
- Grapevine Specific and Community Plan DEIR (2016; 15 pp);
- Clinton County Zoning Ordinance for Wind Turbine siting (2016);
- Hallmark at Shenandoah Warehouse Project Initial Study (2016; 6 pp);
- Tri-City Industrial Complex Initial Study (2016; 5 pp);
- Hidden Canyon Industrial Park Plot Plan 16-PP-02 (2016; 12 pp);
- Kimball Business Park DEIR (2016; 10 pp);
- Jupiter Project IS and MND (2016; 9 pp);
- Revised Draft Giant Garter Snake Recovery Plan of 2015 (2016, 18 pp);
- Palo Verde Mesa Solar Project Draft Environmental Impact Report (2016; 27 pp);

- Reply Witness Statement on Fairview Wind Project, Ontario, Canada (2016; 14 pp);
- Fairview Wind Project, Ontario, Canada (2016; 41 pp);
- Supplementary Reply Witness Statement Amherst Island Wind Farm, Ontario (2015, 38 pp);
- Witness Statement on Amherst Island Wind Farm, Ontario (2015, 31 pp);
- Second Reply Witness Statement on White Pines Wind Farm, Ontario (2015, 6 pp);
- Reply Witness Statement on White Pines Wind Farm, Ontario (2015, 10 pp);
- Witness Statement on White Pines Wind Farm, Ontario (2015, 9 pp);
- Proposed Section 24 Specific Plan Agua Caliente Band of Cahuilla Indians DEIS (2015, 9 pp);
- Replies to comments 24 Specific Plan Agua Caliente Band of Cahuilla Indians FEIS (2015, 6 pp);
- Willow Springs Solar Photovoltaic Project DEIR (2015; 28 pp);
- Sierra Lakes Commerce Center Project DEIR (2015, 9 pp);
- Columbia Business Center MND (2015; 8 pp);
- West Valley Logistics Center Specific Plan DEIR (2015, 10 pp);
- World Logistic Center Specific Plan FEIR (2015, 12 pp);
- Bay Delta Conservation Plan EIR/EIS (2014, 21 pp);
- Addison Wind Energy Project DEIR (2014, 32 pp);
- Response to Comments on the Addison Wind Energy Project DEIR (2014, 15 pp);
- Addison and Rising Tree Wind Energy Project FEIR (2014, 12 pp);
- Alta East Wind Energy Project FEIS (2013, 23 pp);
- Blythe Solar Power Project Staff Assessment, California Energy Commission (2013, 16 pp);
- Clearwater and Yakima Solar Projects DEIR (2013, 9 pp);
- Cuyama Solar Project DEIR (2014, 19 pp);
- Draft Desert Renewable Energy Conservation Plan (DRECP) EIR/EIS (2015, 49 pp);
- Kingbird Solar Photovoltaic Project EIR (2013, 19 pp);
- Lucerne Valley Solar Project Initial Study & Mitigated Negative Declaration (2013, 12 pp);
- Palen Solar Electric Generating System Final Staff Assessment of California Energy Commission, (2014, 20 pp);
- Rebuttal testimony on Palen Solar Energy Generating System (2014, 9 pp);
- Rising Tree Wind Energy Project DEIR (2014, 32 pp);
- Response to Comments on the Rising Tree Wind Energy Project DEIR (2014, 15 pp);
- Soitec Solar Development Project Draft PEIR (2014, 18 pp);
- Comment on the Biological Opinion (08ESMF-00-2012-F-0387) of Oakland Zoo expansion on Alameda whipsnake and California red-legged frog (2014; 3 pp);
- West Antelope Solar Energy Project Initial Study and Negative Declaration (2013, 18 pp);
- Willow Springs Solar Photovoltaic Project DEIR (2015, 28 pp);
- Alameda Creek Bridge Replacement Project DEIR (2015, 10 pp);
- Declaration on Tule Wind project FEIR/FEIS (2013; 24 pp);
- Sunlight Partners LANDPRO Solar Project Mitigated Negative Declaration (2013; 11 pp);
- Declaration in opposition to BLM fracking (2013; 5 pp);
- Rosamond Solar Project Addendum EIR (2013; 13 pp);
- Pioneer Green Solar Project EIR (2013; 13 pp);
- Reply to Staff Responses to Comments on Soccer Center Solar Project Mitigated Negative

- Declaration (2013; 6 pp);
- Soccer Center Solar Project Mitigated Negative Declaration (2013; 10 pp);
- Plainview Solar Works Mitigated Negative Declaration (2013; 10 pp);
- Reply to the County Staff's Responses on comments to Imperial Valley Solar Company 2 Project (2013; 10 pp);
- Imperial Valley Solar Company 2 Project (2013; 13 pp);
- FRV Orion Solar Project DEIR (PP12232) (2013; 9 pp);
- Casa Diablo IV Geothermal Development Project (2013; 6 pp);
- Reply to Staff Responses to Comments on Casa Diablo IV Geothermal Development Project (2013; 8 pp);
- FEIS prepared for Alta East Wind Project (2013; 23 pp);
- Metropolitan Air Park DEIR, City of San Diego (2013;);
- Davidon Homes Tentative Subdivision Map and Rezoning Project DEIR (2013; 9 pp);
- Analysis of Biological Assessment of Oakland Zoo Expansion Impacts on Alameda Whipsnake (2013; 10 pp);
- Declaration on Campo Verde Solar project FEIR (2013; 11pp);
- Neg Dec comments on Davis Sewer Trunk Rehabilitation (2013; 8 pp);
- Declaration on North Steens Transmission Line FEIS (2012; 62 pp);
- City of Lancaster Revised Initial Study for Conditional Use Permits 12-08 and 12-09, Summer Solar and Springtime Solar Projects (2012; 8 pp);
- J&J Ranch, 24 Adobe Lane Environmental Review (2012; 14 pp);
- Reply to the County Staff's Responses on comments to Hudson Ranch Power II Geothermal Project and the Simbol Calipatria Plant II (2012; 8 pp);
- Hudson Ranch Power II Geothermal Project and the Simbol Calipatria Plant II (2012; 9 pp);
- Desert Harvest Solar Project EIS (2012; 15 pp);
- Solar Gen 2 Array Project DEIR (2012; 16 pp);
- Ocotillo Sol Project EIS (2012; 4 pp);
- Beacon Photovoltaic Project DEIR (2012; 5 pp);
- Declaration on Initial Study and Proposed Negative Declaration for the Butte Water District 2012 Water Transfer Program (2012; 11 pp);
- Mount Signal and Calexico Solar Farm Projects DEIR (2011; 16 pp);
- City of Elk Grove Sphere of Influence EIR (2011; 28 pp);
- Comment on Sutter Landing Park Solar Photovoltaic Project MND (2011; 9 pp);
- Statement of Shawn Smallwood, Ph.D. Regarding Proposed Rabik/Gudath Project, 22611 Coleman Valley Road, Bodega Bay (CPN 10-0002) (2011; 4 pp);
- Declaration of K. Shawn Smallwood on Biological Impacts of the Ivanpah Solar Electric Generating System (ISEGS) (2011; 9 pp);
- Comments on Draft Eagle Conservation Plan Guidance (2011; 13 pp);
- Comments on Draft EIR/EA for Niles Canyon Safety Improvement Project (2011; 16 pp);
- Declaration of K. Shawn Smallwood, Ph.D., on Biological Impacts of the Route 84 Safety Improvement Project (2011; 7 pp);
- Rebuttal Testimony of Witness #22, K. Shawn Smallwood, Ph.D, on Behalf of Intervenors Friends of The Columbia Gorge & Save Our Scenic Area (2010; 6 pp);
- Prefiled Direct Testimony of Witness #22, K. Shawn Smallwood, Ph.D, on Behalf of

- Intervenors Friends of the Columbia Gorge & Save Our Scenic Area. Comments on Whistling Ridge Wind Energy Power Project DEIS, Skamania County, Washington (2010; 41 pp);
- Evaluation of Klickitat County’s Decisions on the Windy Flats West Wind Energy Project (2010; 17 pp);
 - St. John's Church Project Draft Environmental Impact Report (2010; 14 pp.);
 - Initial Study/Mitigated Negative Declaration for Results Radio Zone File #2009-001 (2010; 20 pp);
 - Rio del Oro Specific Plan Project Final Environmental Impact Report (2010;12 pp);
 - Answers to Questions on 33% RPS Implementation Analysis Preliminary Results Report (2009: 9 pp);
 - SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington. Second Declaration to Friends of the Columbia Gorge, Inc. and Save Our Scenic Area (Dec 2008; 17 pp);
 - Comments on Draft 1A Summary Report to CAISO (2008; 10 pp);
 - County of Placer’s Categorical Exemption of Hilton Manor Project (2009; 9 pp);
 - Protest of CARE to Amendment to the Power Purchase and Sale Agreement for Procurement of Eligible Renewable Energy Resources Between Hatchet Ridge Wind LLC and PG&E (2009; 3 pp);
 - Tehachapi Renewable Transmission Project EIR/EIS (2009; 142 pp);
 - Delta Shores Project EIR, south Sacramento (2009; 11 pp + addendum 2 pp);
 - Declaration of Shawn Smallwood in Support of Care’s Petition to Modify D.07-09-040 (2008; 3 pp);
 - The Public Utility Commission’s Implementation Analysis December 16 Workshop for the Governor’s Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 9 pp);
 - The Public Utility Commission’s Implementation Analysis Draft Work Plan for the Governor’s Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 11 pp);
 - Draft 1A Summary Report to California Independent System Operator for Planning Reserve Margins (PRM) Study (2008; 7 pp.);
 - SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington. Declaration to Friends of the Columbia Gorge, Inc. and Save Our Scenic Area (Sep 2008; 16 pp);
 - California Energy Commission’s Preliminary Staff Assessment of the Colusa Generating Station (2007; 24 pp);
 - Rio del Oro Specific Plan Project Recirculated Draft Environmental Impact Report (2008; 66 pp);
 - Replies to Response to Comments Re: Regional University Specific Plan Environmental Impact Report (2008; 20 pp);
 - Regional University Specific Plan Environmental Impact Report (2008; 33 pp.);
 - Clark Precast, LLC’s “Sugarland” project, Negative Declaration (2008; 15 pp.);
 - Cape Wind Project Draft Environmental Impact Statement (2008; 157 pp.);
 - Yuba Highlands Specific Plan (or Area Plan) Environmental Impact Report (2006; 37 pp.);
 - Replies to responses to comments on Mitigated Negative Declaration of the proposed

- Mining Permit (MIN 04-01) and Modification of Use Permit 96-02 at North Table Mountain (2006; 5 pp);
- Mitigated Negative Declaration of the proposed Mining Permit (MIN 04-01) and Modification of Use Permit 96-02 at North Table Mountain (2006; 15 pp);
- Windy Point Wind Farm Environmental Review and EIS (2006; 14 pp and 36 Powerpoint slides in reply to responses to comments);
- Shiloh I Wind Power Project EIR (2005; 18 pp);
- Buena Vista Wind Energy Project Notice of Preparation of EIR (2004; 15 pp);
- Negative Declaration of the proposed Callahan Estates Subdivision (2004; 11 pp);
- Negative Declaration of the proposed Winters Highlands Subdivision (2004; 9 pp);
- Negative Declaration of the proposed Winters Highlands Subdivision (2004; 13 pp);
- Negative Declaration of the proposed Creekside Highlands Project, Tract 7270 (2004; 21 pp);
- On the petition California Fish and Game Commission to list the Burrowing Owl as threatened or endangered (2003; 10 pp);
- Conditional Use Permit renewals from Alameda County for wind turbine operations in the Altamont Pass Wind Resource Area (2003; 41 pp);
- UC Davis Long Range Development Plan of 2003, particularly with regard to the Neighborhood Master Plan (2003; 23 pp);
- Anderson Marketplace Draft Environmental Impact Report (2003: 18 pp + 3 plates of photos);
- Negative Declaration of the proposed expansion of Temple B'nai Tikyah (2003: 6 pp);
- Antonio Mountain Ranch Specific Plan Public Draft EIR (2002: 23 pp);
- Response to testimony of experts at the East Altamont Energy Center evidentiary hearing on biological resources (2002: 9 pp);
- Revised Draft Environmental Impact Report, The Promenade (2002: 7 pp);
- Recirculated Initial Study for Calpine's proposed Pajaro Valley Energy Center (2002: 3 pp);
- UC Merced -- Declaration of Dr. Shawn Smallwood in support of petitioner's application for temporary restraining order and preliminary injunction (2002: 5 pp);
- Replies to response to comments in Final Environmental Impact Report, Atwood Ranch Unit III Subdivision (2003: 22 pp);
- Draft Environmental Impact Report, Atwood Ranch Unit III Subdivision (2002: 19 pp + 8 photos on 4 plates);
- California Energy Commission Staff Report on GWF Tracy Peaker Project (2002: 17 pp + 3 photos; follow-up report of 3 pp);
- Initial Study and Negative Declaration, Silver Bend Apartments, Placer County (2002: 13 pp);
- UC Merced Long-range Development Plan DEIR and UC Merced Community Plan DEIR (2001: 26 pp);
- Initial Study, Colusa County Power Plant (2001: 6 pp);
- Comments on Proposed Dog Park at Catlin Park, Folsom, California (2001: 5 pp + 4 photos);
- Pacific Lumber Co. (Headwaters) Habitat Conservation Plan and Environmental Impact Report (1998: 28 pp);
- Final Environmental Impact Report/Statement for Issuance of Take authorization for listed

- species within the MSCP planning area in San Diego County, California (Fed. Reg. 62 (60): 14938, San Diego Multi-Species Conservation Program) (1997: 10 pp);
- Permit (PRT-823773) Amendment for the Natomas Basin Habitat Conservation Plan, Sacramento, CA (Fed. Reg. 63 (101): 29020-29021) (1998);
 - Draft Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). (Fed. Reg. 64(176): 49497-49498) (1999: 8 pp);
 - Review of the Draft Recovery Plan for the Arroyo Southwestern Toad (*Bufo microscaphus californicus*) (1998);
 - Ballona West Bluffs Project Environmental Impact Report (1999: oral presentation);
 - California Board of Forestry's proposed amended Forest Practices Rules (1999);
 - Negative Declaration for the Sunset Sky ranch Airport Use Permit (1999);
 - Calpine and Bechtel Corporations' Biological Resources Implementation and Monitoring Program (BRMIMP) for the Metcalf Energy Center (2000: 10 pp);
 - California Energy Commission's Final Staff Assessment of the proposed Metcalf Energy Center (2000);
 - US Fish and Wildlife Service Section 7 consultation with the California Energy Commission regarding Calpine and Bechtel Corporations' Metcalf Energy Center (2000: 4 pp);
 - California Energy Commission's Preliminary Staff Assessment of the proposed Metcalf Energy Center (2000: 11 pp);
 - Site-specific management plans for the Natomas Basin Conservancy's mitigation lands, prepared by Wildlands, Inc. (2000: 7 pp);
 - Affidavit of K. Shawn Smallwood in Spirit of the Sage Council, et al. (Plaintiffs) vs. Bruce Babbitt, Secretary, U.S. Department of the Interior, et al. (Defendants), Injuries caused by the No Surprises policy and final rule which codifies that policy (1999: 9 pp).

Comments on other Environmental Review Documents:

- Proposed Regulation for California Fish and Game Code Section 3503.5 (2015: 12 pp);
- Statement of Overriding Considerations related to extending Altamont Winds, Inc.'s Conditional Use Permit PLN2014-00028 (2015; 8 pp);
- Draft Program Level EIR for Covell Village (2005; 19 pp);
- Bureau of Land Management Wind Energy Programmatic EIS Scoping document (2003: 7 pp.);
- NEPA Environmental Analysis for Biosafety Level 4 National Biocontainment Laboratory (NBL) at UC Davis (2003: 7 pp);
- Notice of Preparation of UC Merced Community and Area Plan EIR, on behalf of The Wildlife Society—Western Section (2001: 8 pp.);
- Preliminary Draft Yolo County Habitat Conservation Plan (2001; 2 letters totaling 35 pp.);
- Merced County General Plan Revision, notice of Negative Declaration (2001: 2 pp.);
- Notice of Preparation of Campus Parkway EIR/EIS (2001: 7 pp.);
- Draft Recovery Plan for the bighorn sheep in the Peninsular Range (*Ovis candensis*) (2000);
- Draft Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*), on behalf of The Wildlife Society—Western Section (2000: 10 pp.);
- Sierra Nevada Forest Plan Amendment Draft Environmental Impact Statement, on behalf of The Wildlife Society—Western Section (2000: 7 pp.);

- State Water Project Supplemental Water Purchase Program, Draft Program EIR (1997);
- Davis General Plan Update EIR (2000);
- Turn of the Century EIR (1999: 10 pp);
- Proposed termination of Critical Habitat Designation under the Endangered Species Act (Fed. Reg. 64(113): 31871-31874) (1999);
- NOA Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process, termed the HCP 5-Point Policy Plan (Fed. Reg. 64(45): 11485 - 11490) (1999; 2 pp + attachments);
- Covell Center Project EIR and EIR Supplement (1997).

Position Statements I prepared the following position statements for the Western Section of The Wildlife Society, and one for nearly 200 scientists:

- Recommended that the California Department of Fish and Game prioritize the extermination of the introduced southern water snake in northern California. The Wildlife Society-Western Section (2001);
- Recommended that The Wildlife Society—Western Section appoint or recommend members of the independent scientific review panel for the UC Merced environmental review process (2001);
- Opposed the siting of the University of California’s 10th campus on a sensitive vernal pool/grassland complex east of Merced. The Wildlife Society--Western Section (2000);
- Opposed the legalization of ferret ownership in California. The Wildlife Society--Western Section (2000);
- Opposed the Proposed “No Surprises,” “Safe Harbor,” and “Candidate Conservation Agreement” rules, including permit-shield protection provisions (Fed. Reg. Vol. 62, No. 103, pp. 29091-29098 and No. 113, pp. 32189-32194). This statement was signed by 188 scientists and went to the responsible federal agencies, as well as to the U.S. Senate and House of Representatives.

Posters at Professional Meetings

Leyvas, E. and K. S. Smallwood. 2015. Rehabilitating injured animals to offset and rectify wind project impacts. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S., J. Mount, S. Standish, E. Leyvas, D. Bell, E. Walther, B. Karas. 2015. Integrated detection trials to improve the accuracy of fatality rate estimates at wind projects. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S. and C. G. Thelander. 2005. Lessons learned from five years of avian mortality research in the Altamont Pass WRA. AWEA conference, Denver, May 2005.

Neher, L., L. Wilder, J. Woo, L. Spiegel, D. Yen-Nakafugi, and K.S. Smallwood. 2005. Bird’s eye view on California wind. AWEA conference, Denver, May 2005.

Smallwood, K. S., C. G. Thelander and L. Spiegel. 2003. Toward a predictive model of avian

fatalities in the Altamont Pass Wind Resource Area. Windpower 2003 Conference and Convention, Austin, Texas.

Smallwood, K.S. and Eva Butler. 2002. Pocket Gopher Response to Yellow Star-thistle Eradication as part of Grassland Restoration at Decommissioned Mather Air Force Base, Sacramento County, California. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and Michael L. Morrison. 2002. Fresno kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and E.L. Fitzhugh. 1989. Differentiating mountain lion and dog tracks. Third Mountain Lion Workshop, Prescott, AZ.

Smith, T. R. and K. S. Smallwood. 2000. Effects of study area size, location, season, and allometry on reported *Sorex* shrew densities. Annual Meeting of the Western Section of The Wildlife Society.

Presentations at Professional Meetings and Seminars

Repowering the Altamont Pass. Altamont Symposium, The Wildlife Society – Western Section, 5 February 2017.

Developing methods to reduce bird mortality in the Altamont Pass Wind Resource Area, 1999-2007. Altamont Symposium, The Wildlife Society – Western Section, 5 February 2017.

Conservation and recovery of burrowing owls in Santa Clara Valley. Santa Clara Valley Habitat Agency, Newark, California, 3 February 2017.

Mitigation of Raptor Fatalities in the Altamont Pass Wind Resource Area. Raptor Research Foundation Meeting, Sacramento, California, 6 November 2015.

From burrows to behavior: Research and management for burrowing owls in a diverse landscape. California Burrowing Owl Consortium meeting, 24 October 2015, San Jose, California.

The Challenges of repowering. Keynote presentation at Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 10 March 2015.

Research Highlights Altamont Pass 2011-2015. Scientific Review Committee, Oakland, California, 8 July 2015.

Siting wind turbines to minimize raptor collisions: Altamont Pass Wind Resource Area. US Fish and Wildlife Service Golden Eagle Working Group, Sacramento, California, 8 January 2015.

Evaluation of nest boxes as a burrowing owl conservation strategy. Sacramento Chapter of the Western Section, The Wildlife Society. Sacramento, California, 26 August 2013.

Predicting collision hazard zones to guide repowering of the Altamont Pass. Conference on wind

power and environmental impacts. Stockholm, Sweden, 5-7 February 2013.

Impacts of Wind Turbines on Wildlife. California Council for Wildlife Rehabilitators, Yosemite, California, 12 November 2012.

Impacts of Wind Turbines on Birds and Bats. Madrone Audubon Society, Santa Rosa, California, 20 February 2012.

Comparing Wind Turbine Impacts across North America. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Alameda County Scientific Review Committee meeting, 17 February 2011

Comparing Wind Turbine Impacts across North America. Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 3 May 2011.

Update on Wildlife Impacts in the Altamont Pass Wind Resource Area. Raptor Symposium, The Wildlife Society—Western Section, Riverside, California, February 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Raptor Symposium, The Wildlife Society - Western Section, Riverside, California, February 2011.

Wildlife mortality caused by wind turbine collisions. Ecological Society of America, Pittsburgh, Pennsylvania, 6 August 2010.

Map-based repowering and reorganization of a wind farm to minimize burrowing owl fatalities. California burrowing Owl Consortium Meeting, Livermore, California, 6 February 2010.

Environmental barriers to wind power. Getting Real About Renewables: Economic and Environmental Barriers to Biofuels and Wind Energy. A symposium sponsored by the Environmental & Energy Law & Policy Journal, University of Houston Law Center, Houston, 23 February 2007.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Meeting with Japan Ministry of the Environment and Japan Ministry of the Economy, Wild Bird Society of Japan, and other NGOs Tokyo, Japan, 9 November 2006.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Symposium on bird collisions with wind turbines. Wild Bird Society of Japan, Tokyo, Japan, 4 November 2006.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. California Society for Ecological Restoration (SERCAL) 13th Annual Conference, UC Santa

Barbara, 27 October 2006.

Fatality associations as the basis for predictive models of fatalities in the Altamont Pass Wind Resource Area. EEI/APLIC/PIER Workshop, 2006 Biologist Task Force and Avian Interaction with Electric Facilities Meeting, Pleasanton, California, 28 April 2006.

Burrowing owl burrows and wind turbine collisions in the Altamont Pass Wind Resource Area. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, February 8, 2006.

Mitigation at wind farms. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Incorporating data from the California Wildlife Habitat Relationships (CWHR) system into an impact assessment tool for birds near wind farms. Shawn Smallwood, Kevin Hunting, Marcus Yee, Linda Spiegel, Monica Parisi. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Toward indicating threats to birds by California's new wind farms. California Energy Commission, Sacramento, May 26, 2005.

Avian collisions in the Altamont Pass. California Energy Commission, Sacramento, May 26, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. EPRI Environmental Sector Council, Monterey, California, February 17, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. The Wildlife Society—Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Associations between avian fatalities and attributes of electric distribution poles in California. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Minimizing avian mortality in the Altamont Pass Wind Resources Area. UC Davis Wind Energy Collaborative Forum, Palm Springs, California, December 14, 2004.

Selecting electric distribution poles for priority retrofitting to reduce raptor mortality. Raptor Research Foundation Meeting, Bakersfield, California, November 10, 2004.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. Annual Meeting of the Society for Ecological Restoration, South Lake Tahoe, California, October 16, 2004.

Lessons learned from five years of avian mortality research at the Altamont Pass Wind Resources Area in California. The Wildlife Society Annual Meeting, Calgary, Canada, September 2004.

The ecology and impacts of power generation at Altamont Pass. Sacramento Petroleum Association,

Sacramento, California, August 18, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Consortium meeting, Hayward, California, February 7, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Symposium, Sacramento, November 2, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. National Wind Coordinating Committee, Washington, D.C., November 17, 2003.

Raptor Behavior at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

California mountain lions. Ecological & Environmental Issues Seminar, Department of Biology, California State University, Sacramento, November, 2000.

Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. National Wind Coordinating Committee, Carmel, California, May, 2000.

Using a Geographic Positioning System (GPS) to map wildlife and habitat. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

Suggested standards for science applied to conservation issues. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

The indicators framework applied to ecological restoration in Yolo County, California. Society for Ecological Restoration, September 25, 1999.

Ecological restoration in the context of animal social units and their habitat areas. Society for Ecological Restoration, September 24, 1999.

Relating Indicators of Ecological Health and Integrity to Assess Risks to Sustainable Agriculture and Native Biota. International Conference on Ecosystem Health, August 16, 1999.

A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Southern California Edison, Co. and California Energy Commission, March 4-5, 1999.

Mountain lion track counts in California: Implications for Management. Ecological & Environmental Issues Seminar, Department of Biological Sciences, California State University, Sacramento, November 4, 1998.

"No Surprises" -- Lack of science in the HCP process. California Native Plant Society Annual Conservation Conference, The Presidio, San Francisco, September 7, 1997.

In Your Interest. A half hour weekly show aired on Channel 10 Television, Sacramento. In this episode, I served on a panel of experts discussing problems with the implementation of the Endangered Species Act. Aired August 31, 1997.

Spatial scaling of pocket gopher (*Geomyidae*) density. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Estimating prairie dog and pocket gopher burrow volume. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Ten years of mountain lion track survey. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Study and interpretive design effects on mountain lion density estimates. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Small animal control. Session moderator and speaker at the California Farm Conference, Sacramento, California, Feb. 28, 1995.

Small animal control. Ecological Farming Conference, Asylomar, California, Jan. 28, 1995.

Habitat associations of the Swainson's Hawk in the Sacramento Valley's agricultural landscape. 1994 Raptor Research Foundation Meeting, Flagstaff, Arizona.

Alfalfa as wildlife habitat. Seed Industry Conference, Woodland, California, May 4, 1994.

Habitats and vertebrate pests: impacts and management. Managing Farmland to Bring Back Game Birds and Wildlife to the Central Valley. Yolo County Resource Conservation District, U.C. Davis, February 19, 1994.

Management of gophers and alfalfa as wildlife habitat. Orland Alfalfa Production Meeting and Sacramento Valley Alfalfa Production Meeting, February 1 and 2, 1994.

Patterns of wildlife movement in a farming landscape. Wildlife and Fisheries Biology Seminar Series: Recent Advances in Wildlife, Fish, and Conservation Biology, U.C. Davis, Dec. 6, 1993.

Alfalfa as wildlife habitat. California Alfalfa Symposium, Fresno, California, Dec. 9, 1993.

Management of pocket gophers in Sacramento Valley alfalfa. California Alfalfa Symposium, Fresno, California, Dec. 8, 1993.

Association analysis of raptors in a farming landscape. Plenary speaker at Raptor Research Foundation Meeting, Charlotte, North Carolina, Nov. 6, 1993.

Landscape strategies for biological control and IPM. Plenary speaker, International Conference on Integrated Resource Management and Sustainable Agriculture, Beijing, China, Sept. 11, 1993.

Landscape Ecology Study of Pocket Gophers in Alfalfa. Alfalfa Field Day, U.C. Davis, July 1993.

Patterns of wildlife movement in a farming landscape. Spatial Data Analysis Colloquium, U.C. Davis, August 6, 1993.

Sound stewardship of wildlife. Veterinary Medicine Seminar: Ethics of Animal Use, U.C. Davis. May 1993.

Landscape ecology study of pocket gophers in alfalfa. Five County Grower's Meeting, Tracy, California. February 1993.

Turbulence and the community organizers: The role of invading species in ordering a turbulent system, and the factors for invasion success. Ecology Graduate Student Association Colloquium, U.C. Davis. May 1990.

Evaluation of exotic vertebrate pests. Fourteenth Vertebrate Pest Conference, Sacramento, California. March 1990.

Analytical methods for predicting success of mammal introductions to North America. The Western Section of the Wildlife Society, Hilo, Hawaii. February 1988.

A state-wide mountain lion track survey. Sacramento County Dept Parks and Recreation. April 1986.

The mountain lion in California. Davis Chapter of the Audubon Society. October 1985.

Ecology Graduate Student Seminars, U.C. Davis, 1985-1990: Social behavior of the mountain lion; Mountain lion control; Political status of the mountain lion in California.

Other forms of Participation at Professional Meetings

- Scientific Committee, Conference on Wind energy and Wildlife impacts, Berlin, Germany, March 2015.
- Scientific Committee, Conference on Wind energy and Wildlife impacts, Stockholm, Sweden, February 2013.
- Workshop co-presenter at Birds & Wind Energy Specialist Group (BAWESG) Information sharing week, Bird specialist studies for proposed wind energy facilities in South Africa, Endangered Wildlife Trust, Darling, South Africa, 3-7 October 2011.
- Scientific Committee, Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 2-5 May 2011.
- Chair of Animal Damage Management Session, The Wildlife Society, Annual Meeting, Reno, Nevada, September 26, 2001.

- Chair of Technical Session: Human communities and ecosystem health: Comparing perspectives and making connection. Managing for Ecosystem Health, International Congress on Ecosystem Health, Sacramento, CA August 15-20, 1999.
- Student Awards Committee, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.
- Student Mentor, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

Printed Mass Media

Smallwood, K.S., D. Mooney, and M. McGuinness. 2003. We must stop the UCD biolab now. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2002. Spring Lake threatens Davis. Op-Ed to the Davis Enterprise.

Smallwood, K.S. Summer, 2001. Mitigation of habitation. The Flatlander, Davis, California.

Entrikan, R.K. and K.S. Smallwood. 2000. Measure O: Flawed law would lock in new taxes. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2000. Davis delegation lobbies Congress for Wildlife conservation. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 1998. Davis Visions. The Flatlander, Davis, California.

Smallwood, K.S. 1997. Last grab for Yolo's land and water. The Flatlander, Davis, California.

Smallwood, K.S. 1997. The Yolo County HCP. Op-Ed to the Davis Enterprise.

Radio/Television

PBS News Hour,

FOX News, Energy in America: Dead Birds Unintended Consequence of Wind Power Development, August 2011.

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Mountain lion attacks (with guest Professor Richard Coss). 23 April 2009;

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Wind farm Rio Vista Renewable Power. 4 September 2008;

KQED QUEST Episode #111. Bird collisions with wind turbines. 2007;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. December 27, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. May 3, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. February 8, 2001;

KDVS Speaking in Tongues (host Ron Glick & Shawn Smallwood), California Energy Crisis: 1 hour. Jan. 25, 2001;

KDVS Speaking in Tongues (host Ron Glick), Headwaters Forest HCP: 1 hour. 1998;

Davis Cable Channel (host Gerald Heffernon), Burrowing owls in Davis: half hour. June, 2000;

Davis Cable Channel (hosted by Davis League of Women Voters), Measure O debate: 1 hour. October, 2000;

KXTV 10, In Your Interest, The Endangered Species Act: half hour. 1997.

Reviews of Journal Papers (Scientific journals for whom I've provided peer review)

Journal	Journal
American Naturalist	Journal of Animal Ecology
Journal of Wildlife Management	Western North American Naturalist
Auk	Journal of Raptor Research
Biological Conservation	National Renewable Energy Lab reports
Canadian Journal of Zoology	Oikos
Ecosystem Health	The Prairie Naturalist
Environmental Conservation	Restoration Ecology
Environmental Management	Southwestern Naturalist
Functional Ecology	The Wildlife Society--Western Section Trans.
Journal of Zoology (London)	Proc. Int. Congress on Managing for Ecosystem Health
Journal of Applied Ecology	Transactions in GIS
Ecology	Tropical Ecology
Wildlife Society Bulletin	Peer J
Biological Control	The Condor

Committees

- Scientific Review Committee, Alameda County, Altamont Pass Wind Resource Area
- Ph.D. Thesis Committee, Steve Anderson, University of California, Davis
- MS Thesis Committee, Marcus Yee, California State University, Sacramento

Other Professional Activities or Products

Testified in Federal Court in Denver during 2005 over the fate of radio-nuclides in the soil at Rocky Flats Plant after exposure to burrowing animals. My clients won a judgment of \$553,000,000. I have also testified in many other cases of litigation under CEQA, NEPA, the Warren-Alquist Act, and other environmental laws. My clients won most of the cases for which I testified.

Testified before Environmental Review Tribunals in Ontario, Canada regarding proposed White Pines, Amherst Island, and Fairview Wind Energy projects.

Testified in Skamania County Hearing in 2009 on the potential impacts of zoning the County for development of wind farms and hazardous waste facilities.

Testified in deposition in 2007 in the case of O'Dell et al. vs. FPL Energy in Houston, Texas.

Testified in Klickitat County Hearing in 2006 on the potential impacts of the Windy Point Wind Farm.

Memberships in Professional Societies

The Wildlife Society
Raptor Research Foundation

Honors and Awards

Fulbright Research Fellowship to Indonesia, 1987
J.G. Boswell Full Academic Scholarship, 1981 college of choice
Certificate of Appreciation, The Wildlife Society—Western Section, 2000, 2001
Northern California Athletic Association Most Valuable Cross Country Runner, 1984
American Legion Award, Corcoran High School, 1981, and John Muir Junior High, 1977
CIF Section Champion, Cross Country in 1978
CIF Section Champion, Track & Field 2 mile run in 1981
National Junior Record, 20 kilometer run, 1982
National Age Group Record, 1500 meter run, 1978

Community Activities

District 64 Little League Umpire, 2003-2007
Dixon Little League Umpire, 2006-07
Davis Little League Chief Umpire and Board member, 2004-2005
Davis Little League Safety Officer, 2004-2005
Davis Little League Certified Umpire, 2002-2004
Davis Little League Scorekeeper, 2002
Davis Visioning Group member
Petitioner for Writ of Mandate under the California Environmental Quality Act against City of Woodland decision to approve the Spring Lake Specific Plan, 2002
Served on campaign committees for City Council candidates

Representative Clients/Funders

Law Offices of Stephan C. Volker	EDF Renewables
Blum Collins, LLP	National Renewable Energy Lab
Eric K. Gillespie Professional Corporation	Altamont Winds LLC
Law Offices of Berger & Montague	Salka Energy
Lozeau Drury LLP	Comstocks Business (magazine)
Law Offices of Roy Haber	BioResource Consultants
Law Offices of Edward MacDonald	Tierra Data
Law Office of John Gabrielli	Black and Veatch
Law Office of Bill Kopper	Terry Preston, Wildlife Ecology Research Center
Law Office of Donald B. Mooney	EcoStat, Inc.
Law Office of Veneruso & Moncharsh	US Navy
Law Office of Steven Thompson	US Department of Agriculture
Law Office of Brian Gaffney	US Forest Service
California Wildlife Federation	US Fish & Wildlife Service
Defenders of Wildlife	US Department of Justice
Sierra Club	California Energy Commission
National Endangered Species Network	California Office of the Attorney General
Spirit of the Sage Council	California Department of Fish & Wildlife
The Humane Society	California Department of Transportation
Hagens Berman LLP	California Department of Forestry
Environmental Protection Information Center	California Department of Food & Agriculture
Goldberg, Kamin & Garvin, Attorneys at Law	Ventura County Counsel
Californians for Renewable Energy (CARE)	County of Yolo
Seatuck Environmental Association	Tahoe Regional Planning Agency
Friends of the Columbia Gorge, Inc.	Sustainable Agriculture Research & Education Program
Save Our Scenic Area	Sacramento-Yolo Mosquito and Vector Control District
Alliance to Protect Nantucket Sound	East Bay Regional Park District
Friends of the Swainson's Hawk	County of Alameda
Alameda Creek Alliance	Don & LaNelle Silverstien
Center for Biological Diversity	Seventh Day Adventist Church
California Native Plant Society	Escuela de la Raza Unida
Endangered Wildlife Trust	Susan Pelican and Howard Beeman
and BirdLife South Africa	Residents Against Inconsistent Development, Inc.
AquAlliance	Bob Sarvey
Oregon Natural Desert Association	Mike Boyd
Save Our Sound	Hillcroft Neighborhood Fund
G3 Energy and Pattern Energy	Joint Labor Management Committee, Retail Food Industry
Emerald Farms	Lisa Rocca
Pacific Gas & Electric Co.	Kevin Jackson
Southern California Edison Co.	Dawn Stover and Jay Letto
Georgia-Pacific Timber Co.	Nancy Havassy
Northern Territories Inc.	Catherine Portman (for Brenda Cedarblade)
David Magney Environmental Consulting	Ventus Environmental Solutions, Inc.
Wildlife History Foundation	Panorama Environmental, Inc.
NextEra Energy Resources, LLC	Adams Broadwell Professional Corporation
Ogin, Inc.	

Representative special-status species experience

Common name	Species name	Description
Field experience		
California red-legged frog	<i>Rana aurora draytonii</i>	Protocol searches; Many detections
Foothill yellow-legged frog	<i>Rana boylei</i>	Presence surveys; Many detections
Western spadefoot	<i>Spea hammondi</i>	Presence surveys; Few detections
California tiger salamander	<i>Ambystoma californiense</i>	Protocol searches; Many detections
Coast range newt	<i>Taricha torosa torosa</i>	Searches and multiple detections
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	Detected in San Luis Obispo County
California horned lizard	<i>Phrynosoma coronatum frontale</i>	Searches; Many detections
Western pond turtle	<i>Clemmys marmorata</i>	Searches; Many detections
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Protocol searches; detections
Sumatran tiger	<i>Panthera tigris</i>	Track surveys in Sumatra
Mountain lion	<i>Puma concolor californicus</i>	Research and publications
Point Arena mountain beaver	<i>Aplodontia rufa nigra</i>	Remote camera operation
Giant kangaroo rat	<i>Dipodomys ingens</i>	Detected in Cholame Valley
San Joaquin kangaroo rat	<i>Dipodomys nitratoideus</i>	Monitoring & habitat restoration
Monterey dusky-footed woodrat	<i>Neotoma fuscipes luciana</i>	Non-target captures and mapping of dens
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	Habitat assessment, monitoring
Salinas harvest mouse	<i>Reithrodontomys megalotus distichlus</i>	Captures; habitat assessment
Bats		Thermal imaging surveys
California clapper rail	<i>Rallus longirostris</i>	Surveys and detections
Golden eagle	<i>Aquila chrysaetos</i>	Numerical & behavioral surveys
Swainson's hawk	<i>Buteo swainsoni</i>	Numerical & behavioral surveys
Northern harrier	<i>Circus cyaneus</i>	Numerical & behavioral surveys
White-tailed kite	<i>Elanus leucurus</i>	Numerical & behavioral surveys
Loggerhead shrike	<i>Lanius ludovicianus</i>	Large area surveys
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Detected in Monterey County
Willow flycatcher	<i>Empidonax traillii extimus</i>	Research at Sierra Nevada breeding sites
Burrowing owl	<i>Athene cunicularia hypuglia</i>	Numerical & behavioral surveys
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Monitored success of relocation and habitat restoration
Analytical		
Arroyo southwestern toad	<i>Bufo microscaphus californicus</i>	Research and report.
Giant garter snake	<i>Thamnophis gigas</i>	Research and publication
Northern goshawk	<i>Accipiter gentilis</i>	Research and publication
Northern spotted owl	<i>Strix occidentalis</i>	Research and reports
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	Expert testimony

Comment Date: 08-11-2023

From: Faith Spangenberg

Email Address: faith8994@gmail.com

Source: portal

Comment Summary: Do not approve the placement of the Muddy Creek Energy Project near my property.

Notice of Intent Exhibit: Exhibit F - Adjacent Property Owners

Page Number(s): 1-5 all pages

Council Standards:

Comment:

I would like to state that I do not want the Muddy Creek Energy Project near my property. It should not be using or placed on land designated or zoned for farmland. I believe it will impact my property value, wildlife and possibly my health.

Comment Date: 08-11-2023

From: Gary Olson

Email Address: partners5150@yahoo.com

Source: portal

Comment Summary: Linn County has created zoning ordinances to protect our valuable farmlands. This project ignores these ordinances and removes valuable farmland from production. To avoid scrutiny of County Government the applicant has chosen to seek approval from the State. Can this farmland be reclaimed after construction and the use of the project?

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Wildlife: The current study was for a limited time and ignore time periods of wildlife migration. Loss of farmland to urban expansion is because it is the easiest to develop. This project is seeking Cheap Land to develop and a current electrical substation makes this all more attractive. Fire Prevention: adequate fire protection has not been fully discussed. This project has been hidden from the residents of Linn County. The information meeting received little publicity and avoiding local scrutiny by seeking approval through the state. I must oppose the Muddy Creek project.

Comment Date: 08-11-2023

From: Jamie Tatum

Email Address: jamie.tatum@harrisburg.k12.or.us

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Jamie Tatum](#)

Sent: Friday, August 11, 2023 8:09 AM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject: Muddy Creek Energy Park

You don't often get email from jamie.tatum@harrisburg.k12.or.us. [Learn why this is important](#)

To Whom it May Concern,

As a property owner with property near the proposed Muddy Creek Energy Park site, I want it known that I am opposed to the construction of the proposed solar panel site as are the majority of land owners that I have heard from with neighboring properties.

Sincerely,
Jamie Tatum

Comment Date: 08-11-2023

From: Lynden Brown

Email Address: lynden12brown@gmail.com

Source: portal

Comment Summary: Two NO votes from the Brown household

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-11-2023

From: Nan VanSandt

Email Address: moonandstarsfarm@proton.me

Source: portal

Comment Summary: Against Muddy Creek Solar Power project

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I am adamantly opposed to the construction of this solar project on valuable farmland. Good soil to grow food for our citizens and provide habitat for birds/animals is much more valuable to our local citizens than a giant solar farm. This project is an example of covering paradise to put up what is basically a feedlot for an energy-hungry lifestyle. It is done by a large corporation that is not local and stands to profit from selling us energy. It is time we become locally self-sufficient and less-reliant on electricity, not just keep building more solar farms -that are a blight upon nature. It is short sighted. We need to need to PROTECT our land and soil, both for our selves and for the animals and birds in our area that depend on this area to live. It is time for us to learn to live within our means rather than taking over more and more of nature so that we can continue our current energy consumption habits. We CERTAINLY should not be using prime agricultural land/space for this habit.

Comment Date: 08-11-2023

From: Kathy Rogers

Email Address: motherduck2@gmail.com

Source: portal

Comment Summary: Opposed to the size and location of this proposed site

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

We are not opposed to developing solar facilities in the Willamette Valley, but the size and location of this proposed project is ill-advised. Removing such a huge number of acres from the landscape available for farming and wildlife habitat will be another loss to the valley's already badly decreased amount of seasonal wetlands. Thousands of migratory birds, geese and ducks and song birds rely on being able to stopover in these feeding and resting areas as they migrate in the Fall and late Spring. Many thousands of birds are killed annually by striking solar panels. It is also necessary habitat for local wildlife. Removing such a large parcel of EFU zoned farmland from production will have a negative effect on the economy of the area. Supporting businesses and workers will lose customers and employers. The suggestion that the land will still be agricultural by also raising sheep or bees, etc is arguable, particularly on the scale of this proposed project. Covering the fertile valley soil of productive farmland with an "industrial facility" of this size is in direct conflict with the zoning and planning goals enacted by the citizens of the state in the last 40 years. To start with such a large project is risky. Remember how we rushed into the nuclear age? Little is known in real life about how solar panel materials will deteriorate as they age and weather. Will they and/or their batteries contaminate the area in the 30-40 years of their lifetime? Taking this land out of production for 30-40 years and subjecting it to weed control and other chemicals, etc may well destroy its value as farmland. This kind of use is too new to know what the real long term consequences might be. It is foolhardy to build such a large project when little is known about what the problems might be. How can you mitigate the unknown? Will the loss of green, CO2 absorbing grass and other agricultural crops be offset by the "ecological" cost of creating and using solar panels? Locating such a facility at this latitude with our large number of cloudy, foggy, rainy days doesn't allow it to have optimum exposure to the sun. A farm family in the area who has a small solar array say they have to clean their panels monthly to get a decent return and, even then, they do not produce enough electricity to fulfill all their needs let alone enough to sell back to the power company. Ironically, the panel testing currently being done by the applicants is being done in a year when we are experiencing abnormal extremes of heat and drought! We and our farming neighbors are adamantly opposed to approving this siting request. This is farmland and there isn't going to be any more. David and Kathy Rogers 26366 Gap Rd Brownsville, OR 97327

Comment Date: 08-11-2023

From: Joel Geier

Email Address: clearwater@peak.org

Source: portal

Comment Summary: The proposed site for this project is known to be significant habitat for a bird listed as Threatened under the Endangered Species Act, namely the Streaked Horned Lark, which is also identified as a Conservation Strategy Species by the Oregon Dept. of Fish & Wildlife in the Oregon Conservation Strategy. Construction of a large solar facility in this location is incompatible with the habitat needs of this species and will result in a foreseeable impact on the population, in violation of the ESA.

Notice of Intent Exhibit:

Page Number(s):

Council Standards: OAR 345-022-0060 - Fish and Wildlife Habitat; OAR 345-022-0070 - Threatened and Endangered Species

Comment:

Thank you for considering my comments regarding the proposed Muddy Creek solar energy development on farmland in southwest Linn County. My comments here focus on EFSC general standards 345-022-0070 (Threatened and Endangered Species) and 345-022-0060 (Fish and Wildlife Habitat), particularly in regard to the Streaked horned lark, a distinctive subspecies of horned lark (*Eremophila alpestris strigata*) that is listed as Threatened under the federal Endangered Species Act (U.S. Fish and Wildlife Service, 2013), and is known to occur in the immediate vicinity of the site of the proposed project. The site lies entirely within the Southeast Willamette Streaked Horned Lark Recovery Zone which, as of 2017, was estimated to harbor more than 30% of the range-wide population (USFWS, 2019a). Roadside surveys of grassland birds in 1996 and 2008 also showed this to be a key area for the Streaked horned larks (ODFW, 2010; see also attached pages from this document). The USFWS listing decision and the subsequent species biological report (USFWS, 2019b) specifically identify grass-seed cultivation as a compatible practice for this species. From the latter document: "Grasslands, both rare native prairies and grass seed fields, are important habitats for streaked horned larks in the Willamette Valley; open areas within the grasslands are used for both breeding and wintering habitat." Sheep grazing, such as proposed to be conducted under and around the solar panels as part of this project, is not recognized as a compatible practice, due to reasons including the likelihood that grazing livestock will disturb and frequently trample nests for this ground-nesting bird. The species biological plan (USFWS, 2019b) further notes that "Horned larks need expansive areas of flat, open ground to establish breeding territories," and further states, "Streaked horned larks prefer areas that afford long sight lines ..." Extensive arrays of solar panels would disrupt the open nature of the landscape and disrupt the existing long sight lines, make the site unsuitable for larks as nesting habitat. Thus both the "agri" and the "voltaic" aspects of this proposed "agrivoltaic" project will predictably lead to loss of significant habitat and likely also direct mortality to this Threatened bird subspecies. This puts this project in direct conflict with EFSC's General Standard 345-022-0060 (Fish and Wildlife Habitat) and also the clear intent of 345-022-0070 (Threatened and Endangered Species). This federally listed subspecies certainly occurs on and in close vicinity to the site proposed for solar development. I have personally observed Streaked horned larks in multiple locations within 2 miles of the site, in the course of my professional

involvement in grassland bird monitoring as a contractor in southwest Linn County. One field within 1 mile of the site has had up to 12 pairs of larks during the current breeding season, per my professional observations. In past years, I have observed multiple pairs on a conservation easement that is directly adjacent to the site. I have also seen this species on fields that are part of the site, in the course of my own travel to and from the monitoring locations, and I know of additional credible reports by skilled observers, both amateur and professional. If horned larks were not detected by the Applicant's biological consultants during their surveys that reportedly took place within a brief period of a few months in the spring of 2023 (reportedly ending in May), that furthermore calls into question the thoroughness of those surveys both for horned larks, and for any other bird species that may be present. Independent surveys by knowledgeable specialists should be required, including surveys during later stages of the breeding season (June and July). References: Oregon Department of Fish and Wildlife. 2010. Declining and State Sensitive Bird Species Breeding in Willamette Valley Grasslands: 2008/09 Status Update. U.S. Fish and Wildlife Service. 2013. Endangered and Threatened Wildlife and Plants: Determination of endangered status for the Taylor's checkerspot butterfly and threatened status for the streaked horned lark; final rule. Federal Register 78(192):61452-61503. U.S. Fish and Wildlife Service. 2019a. Draft Recovery Plan for the Streaked Horned Lark (*Eremophila alpestris strigata*), August 2019. U.S. Fish and Wildlife Service. 2019a. Species Biological Report for the Streaked Horned Lark (*Eremophila alpestris strigata*), Version 1.0, August 2019.

Figure 4

Horned Lark Relative Abundance by Region
Based on Point Count Censusing in Willamette Valley Grasslands
May-June 1996

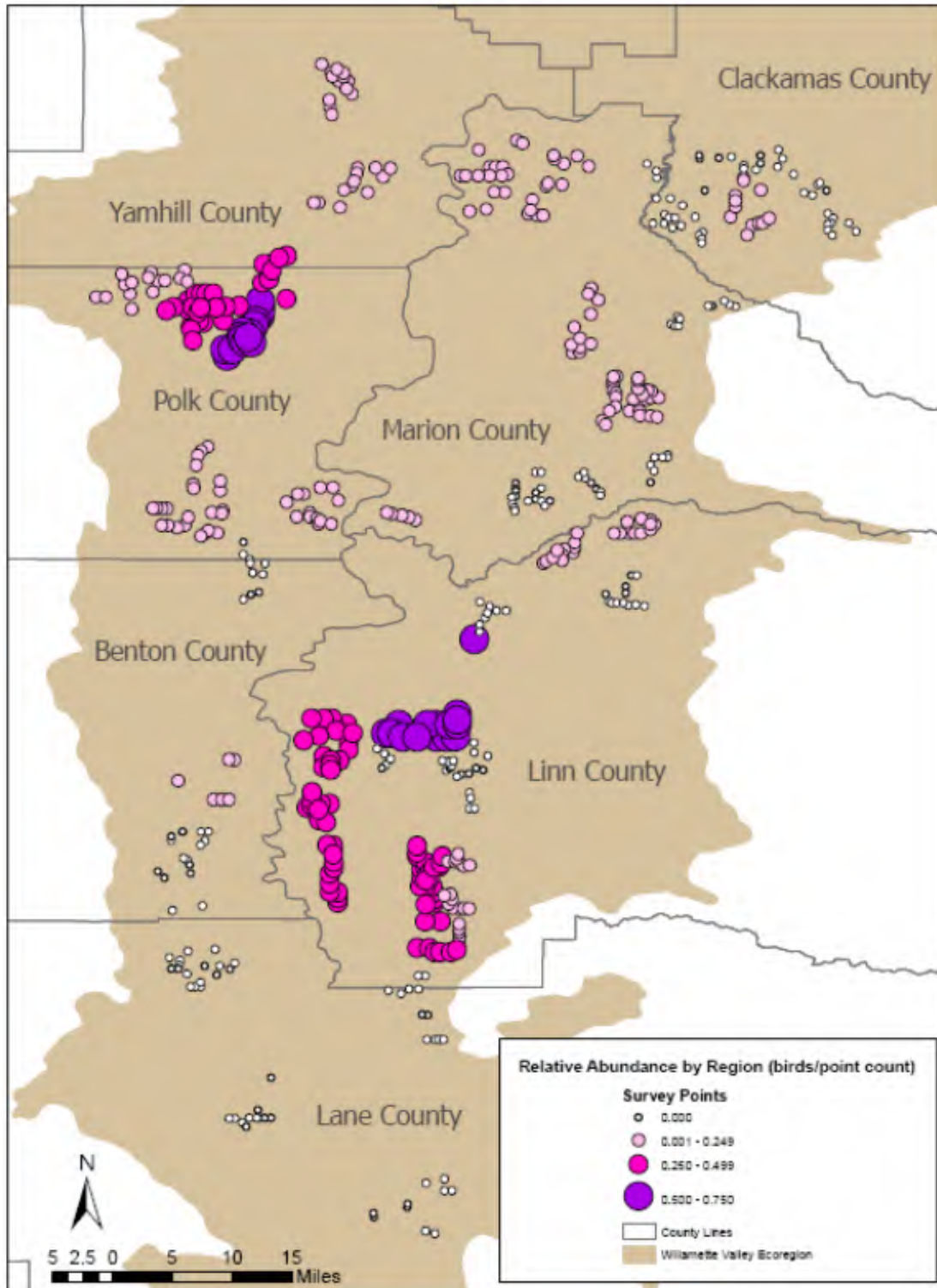
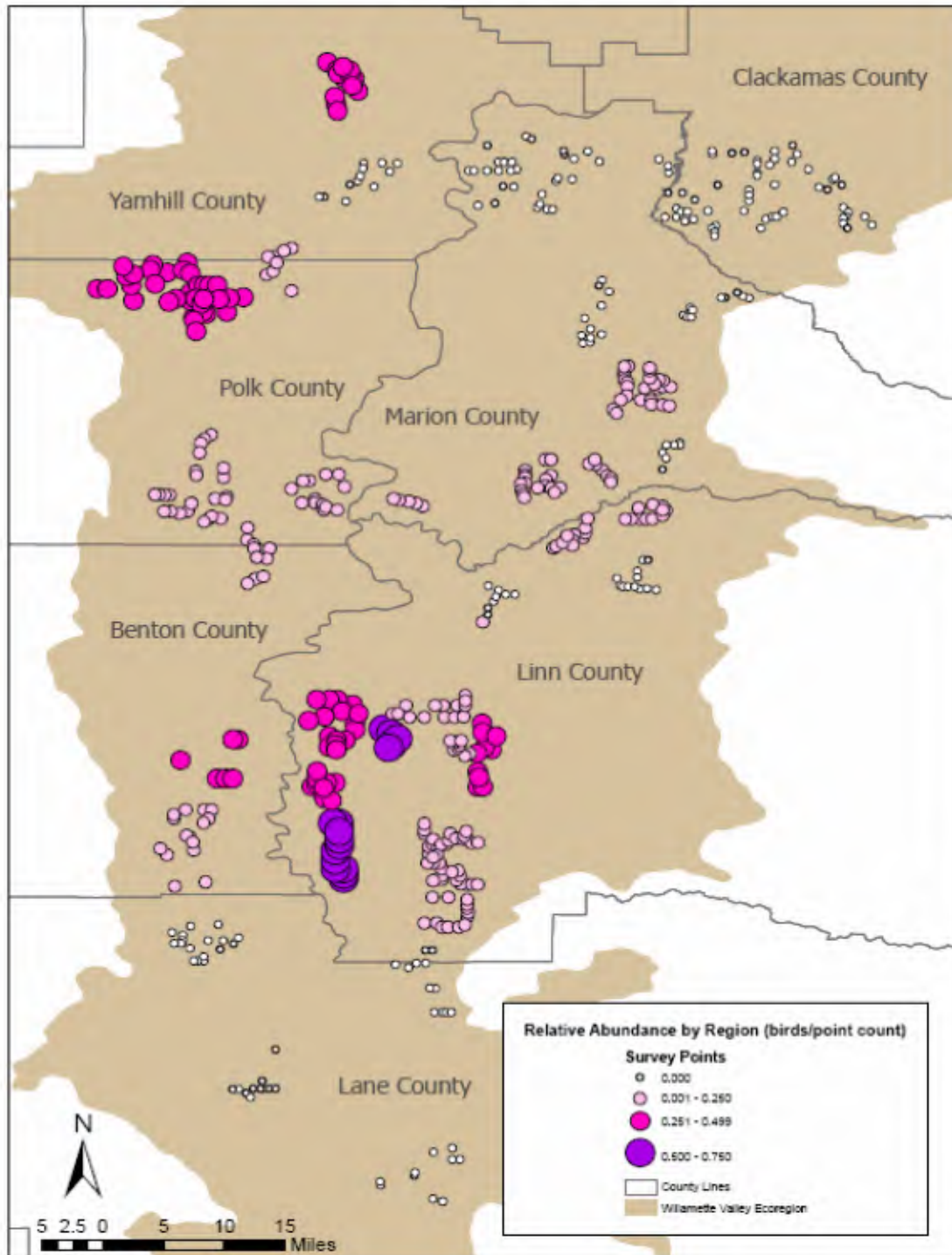


Figure 5

Horned Lark Relative Abundance by Region
Based on Point Count Censusing in Willamette Valley Grasslands
May-June 2008



Comment Date: 08-11-2023

From: Krystle Neuschwander

Email Address: KrysNeusch@yahoo.com

Source: portal

Comment Summary:

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

I have a few main oppositions to the proposed Muddy Creek Energy Park project. While I'm sure these concerns lie within reach of several legal loopholes, it is we the residents of this area that have to live within the vicinity of this very substantial park as well as live with the consequences of it's being allowed to be installed. My husband's family has farmed the property we live on for over a century now. It has been generation after generation of Neuschwanders that have worked the land and grown animals on it. There is a connection formed with the land, as well as a respect for the community surrounding this property that has formed through actually physically living here and working to make a living from it. Any decision made regarding this property is made not solely from the standpoint of profit, but also from the standpoint of if it will benefit the property and the future generations who will live on it. We see the wildlife come through year after year, speak with adjoining farms about particular hardships, and have a general knowledge of the community that is only obtained from actually LIVING here in this area. Through the meeting that was held at the Brownsville City Hall on July 25th regarding this project, it was revealed that the person(s) who are actually leasing the property for this major project actually don't reside in Oregon, but have been traced as far away as Kentucky. Not only would this project fail to compensate a resident of this community who actually lives, works and spends money here, but it has all the makings of a deal that is purely business with little to no regard for short-term and long-term affects on the neighbors surrounding the property. I have read of another solar farm that is a successful co-agricultural farm, but it is one where the farmer actually resides in that area and farms the land himself; this at least benefits the local economy. The owner of the property where the Muddy Creek Energy Park will reside was NOT at the meeting in person, but there were farmers who took time out of their harvest to come and not only learn about the project and its implications, but to voice their personal concerns. Another main area of concern is the local wildlife. There is an elk herd that we have watched grow in numbers over the past decade or so that travel across the land where the energy park is proposed to be built on. Elk can travel across farmland that is being used for grass seed, but this project will effectively block the elk from traversing across the 1500+ acres set to be fenced in. We also have an abundant waterfowl population. It is my understanding that, while solar panels don't kill birds outright, the panels are often mistaken by birds for bodies of water. When the birds go to light on this body of "water", the impact can injure and even kill the birds. Seeing as how there is seasonal flooding here and we see vast amount of waterfowl lighting even in our own fields, I believe there would be a definite cause for concern regarding this point. My last and final point is one in the way of a formal complaint to be taken into consideration. This project was new news to a vast amount of the locals whom it would concern. The proposal

was not overtly advertised and there were farmers crowding the city hall the evening of July 25th who had only heard of the meeting through word of mouth days before. The meeting was scheduled IN THE MIDDLE OF THE WEEK, IN THE MIDDLE OF HARVEST. It is a proposal to do with the use of farmland and the discussion surrounding it was made anything BUT convenient for the farmers whom this project does concern. My husband was frustrated because our information off the notice was that there was to be a meet and greet at the city hall from 5-6 pm with the actual presentation starting at 6. When my husband arrived shortly after 5:30, they had already started the presentation. If we are expected to operate within time constraints, I believe the same should be expected of the other party as well. This outlines a few of my concerns over the Muddy Creek Energy Park, at the least the few that have to do with the concerns listed on the information page.

Comment Date: 08-11-2023

From: Debbie Burns

Email Address: deb@bhlivestock.com

Source: portal

Comment Summary:

Notice of Intent Exhibit: Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s):

Council Standards:

Comment:

8-11-23 Letter of Concern-Muddy Creek Energy Project. Will any benefit outweigh the negative impact this project will have on our farmland, ecosystems and communities? We also do not know what the long-term effects are and what kind of legacy are we setting up for future residents of Linn County? The Qcells organization is based in Korea and has not considered how this project will impact wildlife, wetlands, native species or livestock in the area or surrounding areas. Property values in Linn County will be lowered-who would like to live in a home with a view of a solar panel "Farm"? In researching the impact of solar panels and grazing management on sheep, all the information supports the benefit to solar projects. In Linn County commercial sheep are often used to graze rye grass fields in the winter and spring. Will the Muddy Creek Project contract with local sheep producers? Or will contracts be given to producers that raise sheep specifically for these purposes? Outside flocks could pose a biosecurity risk to local producers. Most of the other solar projects are in drier climates unlike the very wet winter and spring seasons in the lower Willamette Valley. In spring when the grass is growing, and it is raining the sheep will create mud around and within the solar panels. Is that something Qcells has addressed. The summer months bring hot and dry weather, and our area has many fire concerns. Will our local fire departments (some of which are volunteer) have the resources available to deal with the potential risk of battery fires and the risks associated with lithium-based batteries. This project boasts that it will provide energy to 34,000 homes in the Willamette Valley but at what cost to our residents? This project brings more questions than answers and seems to have a huge negative impact with very little benefit. Debbie Burns Lebanon, Oregon

Comment Date: 08-11-2023

From: Dan Fenske

Email Address: dwfenske@gmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Dan Fenske](#)
Sent: Friday, August 11, 2023 1:48 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Muddy Creek Energy Park comment letter
Attachments: [Muddy Creek Energy Park \(Fenske Comments for NOI\).pdf](#)

You don't often get email from dwfenske@gmail.com. [Learn why this is important](#)

Re: Muddy Creek Energy Park, Notice of Intent, Public Comment Period

Dear Chase McVeigh-Walker,

Thank you for the opportunity to provide our comments and concerns during the public comment period of the Notice of Intent application process for the Muddy Creek Energy Park. We both attended the in-person meeting on 25 July 2023 at the Community Room, Brownsville City Hall, Brownsville, Oregon. Due to the large crowd, the meeting starting early, and the inability to hear what was being shared, we were not able to hear the full presentation or join in the public comments. We appreciate you taking our comments here in written form.

Please find them attached as a PDF document. Let us know if you have any questions or need any additional information from us.

Thank you,

James W. Fenske and Beverly Fenske

10 August 2023

Oregon Department of Energy
ATTN: 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

Re: Muddy Creek Energy Park, Notice of Intent, Public Comment Period

Dear Chase McVeigh-Walker,

Thank you for the opportunity to provide our comments and concerns during the public comment period of the Notice of Intent application process for the Muddy Creek Energy Park. We both attended the in-person meeting on 25 July 2023 at the Community Room, Brownsville City Hall, Brownsville, Oregon. Due to the large crowd, the meeting starting early, and the inability to hear what was being shared, we were not able to hear the full presentation or join in the public comments. We appreciate you taking our comments here in written form.

We would like to point out that the Notice of Intent (NOI) does not address all issues that are to be considered in the Draft Proposed Order (Exhibit A-DD on <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MCEP.aspx>). However, to protect our standing on multiple important issues that may be deciding factors in siting and permitting this facility, we bring them up here to make sure they are adequately considered, legally addressed for state and federal requirements, and for us to further comment and have standing on during the Draft Proposed Order, Proposed Order, and Contested Case Process.

1. Personal Interest, Financial Impact, Adverse Effects.

We purchased our property 53 years ago and built our house, outbuildings, and yard & gardens 50 years ago. Our house is within 1.0 linear road miles or ~ 0.75 air miles from the first intersection of the footprint of the proposed facilities, though our property is closer to the estimated 1,588-acre footprint and 1,100-acre micrositing of the proposed facilities. We are a retired couple in our 80s that have spent the past three decades of our retirement years counting on the value of our house and property to pay for our living costs and medical expenses for

our final years. The proposed project will decrease our property value via multiple pathways and have direct negative economic impact on us. [see more below]

2. The Willamette Valley and Linn County need a Comprehensive Solar Power Plan.

We request a comprehensive solar power plan for the Willamette Valley that includes the County Commissioners from each County along with state and federal agencies to consider strategic placement based on trade-offs. If solar power is to be a successful alternative energy source in Oregon, accepting solar projects on a case-by-case basis does not account for balancing rural economy, local and state land use, federally listed species, and strategic placement based on the multiple economic, social, cultural, and ecological trade-offs. [see more below]

3. Specific Environmental Impacts: Plant and Animal Species.

We have concerns over the environmental impact on multiple plants and animal species, including federally listed wildlife species, and request a habitat conservation plan for the federally listed streaked horned lark before commercial solar power development is allowed on habitat (specifically exclusive farm use habitat). Currently only one HCP exists in Oregon that is for the Port of Portland. [see more below]

4. Environmental Impact Concerns.

We have general environmental impact concerns over water yield, impact to biodiversity, visual effects, noise effects, health issues, and microclimate impacts. [see more below]

5. Land Use, Permitting, and Economic Impacts.

We have concerns over land use, permitting, legality, and the economic impact of the solar facility on Linn County. We believe that Linn County, and our local representatives, should have a voice in the impact of state decisions on the rural economy of a specific county. [see more below]

PERSONAL INTEREST, FINANCIAL IMPACT, ADVERSE EFFECTS

We purchased our property 53 years ago and built our house, outbuildings, and yard & gardens 50 years ago. Our house is within 1.0 linear road miles or ~ 0.75 air miles from the first intersection of the footprint of the proposed facilities, though our property is closer to the estimated 1,588-acre footprint and 1,100-acre microsite of the proposed facilities. We are a retired couple in our 80s that have spent decades counting on the value of our house and property to pay for our retirement and medical expenses for our

final years. The proposed project will decrease property value via multiple pathways and have direct negative economic impact on us that other exclusive farm use does not.

1. We have lived here for more than 50 years, and our home and property are our investment for our livelihood and retirement. The proposed facilities will decrease our property values and our ability to use our house and property as our retirement plan. Real or perceived, the impacts listed below among many others, will directly decrease the property value of our house and land among many others within the vicinity of the proposed project.
2. We drive by and visit the areas next to the proposed facility for bird watching, wildlife, and scenic views and will be directly hurt and negatively impacted by the facilities.
3. Specifically, we have used the fields around the proposed facility area for more than 30 years for flying and training falcons in the sport of falconry, for wildlife viewing, for inviting friends and colleagues to view the federally listed streaked horned lark, for observing nesting and foraging golden eagles, for observing winter roosting and foraging bald eagles that include more than 50-60 individuals, for observing wintering cackling goose and dusky goose among other migratory and listed conservation species of waterfowl, and for rural and scenic aesthetic values.
4. We question why the largest solar plant in Oregon needs to be placed in Linn County when the Commissioners expressed concern on the size and impact to the rural farming community and exclusive farm use area. We request that ODOE not support this project until there is a comprehensive solar plan for Linn County and the Willamette Valley.

WILLAMETTE VALLEY AND LINN COUNTY NEED A COMPREHENSIVE SOLAR POWER PLAN.

We request a comprehensive solar facility plan for the Willamette Valley that includes the County Commissioners from each County along with state and federal agencies to consider strategic placement based on trade-offs. If solar power is to be a successful alternative energy source in Oregon, accepting solar projects on a case-by-case basis does not account for balancing rural economy, local and state land use, federally listed species, and strategic placement based on the multiple economic, social, cultural, and ecological trade-offs.

1. Is ODOE planning to allow solar power development on a case by case basis in the Willamette Valley? If one of the largest solar power farms in the state requests to be sited here, will this impact future requests for site certifications? Is the process proposed to be one of a case-by-case basis, indifferent to the size of the solar facility? Should Linn County residents be prepared that tens of thousands of more acres of EFU could become solar facilities, and that process would be one of ODOE and/or Energy Facility Siting Council (EFSC) deciding? We request that there be a comprehensive solar facility plan for the Willamette Valley, allowing each County to include their own, so that trade-offs including strategic placement can be considered on the whole and not on individual property lot lines.
2. We do not believe that this site certification request can be reviewed and granted in isolation, as if water permits were being granted without first reviewing the flow of the river and other impacts already affecting fish, wildlife, plants, and ecological systems. The impact on federally listed wildlife species and species of conservation concern alone warrants a strategic planning process to decide where solar power facilities can be situated in and among the wetland and habitat types of the Willamette Valley.

SPECIFIC ENVIRONMENTAL IMPACTS: PLANT AND ANIMAL SPECIES

We have concerns over the environmental impact on multiple plants and animal species, including federally listed wildlife species, and request a habitat conservation plan for the federally listed streaked horned lark before commercial solar power development is allowed on habitat (specifically exclusive farm use habitat). Currently only one HCP exists in Oregon that is for the Port of Portland.

The following are specific concerns we would like addressed for the environmental impacts of the proposed Muddy Creek Energy Park that covers more than 1,580 acres of Exclusive Farm Use land in Linn County, Oregon that is currently used by ESA listed species, migratory birds, Bald and Golden Eagles, and migratory waterfowl. The NOI does not address these, and we therefore cannot comment in more detail as these issues are to be considered during the Draft Proposed Order. However, to protect our standing on these important issues that may be deciding factors in siting and permitting this facility, we bring them up here to make sure they are adequately considered, legally addressed for state and federal requirements, and for us to further comment and have standing on during the Draft Proposed Order, Proposed Order, and Contested Case Process.

1. Endangered Species Act (ESA)

- What has the EFSC or the permittee done to assure compliance with all federally listed plant and animal species, including the streaked horned lark?
- We request that the USFWS create a Habitat Conservation Plan for the streaked horned lark for Oregon or the Willamette Valley that addressed this federally listed species before allowing development of more than 1,000 acres of habitat where the species has been observed, and adjacent to land and habitat being restored specifically for the species by the USFWS, and adjacent to land that is being restored for migratory waterfowl, streaked horned lark, among other terrestrial vertebrate species of conservation concern for the USFWs and ODFW.
- We would like to see the assurances that this proposed project and potentially thousands of more acres of proposed solar facility projects be allowed only after accounting for the habitat needs of all federally and state listed plant and animal species, including but not limited to, the streaked horned lark.
- We have concerns of the impact of this proposed facility on federally listed species protected under the ESA.

2. Bald and Golden Eagle Protection Act

- What has the EFSC or the permittee done to assure compliance with the Bald and Golden Eagle Protection Act given that multiple nests of both species are nearby?
- We have concerns of the impact of this proposed facility on nesting, foraging, dispersing, roosting, and communally feeding Bald and Golden Eagles.

3. Migratory Bird Treaty Act (MBTA)

- What has the EFSC or the permittee done to assure compliance with the MBTA, and specifically the large numbers of migratory waterfowl (tens of thousands) that currently use the fields, and are continually attracted to the area given the large amount of private wetlands within the neighboring fields?
- Specifically, how has the EFSC or the permittee addressed the research on the environmental impacts including avian monitoring and avian mortality resulting from utility-scale solar energy (USSE) development based on current impacts from existing USSE facilities?

- We have concerns of the impact of this proposed facility on nesting, foraging, dispersing, roosting, and migrating migratory bird species protected under the MBTA.

4. State Listed Threatened, Endangered, and Sensitive Plant and Animal Species

- What has the EFSC or the permittee done to assure compliance with State Listed Species, including Sensitive and Sensitive-Critical species?
- The NOI does not address this, but we have concerns of the impact of this proposed facility on state listed species of plants and animals.

5. Pacific Flyway Council (USFWS) and State Species Management of Migratory Waterfowl

- What has the EFSC or the permittee done to assure compliance with Pacific Flyway Council and ODFW for waterfowl species that will be impacted, including but not limited to the Cackling Goose and Dusky Canada Goose where both species almost exclusively winter in the Willamette Valley?
- We have concerns of the impact of this proposed facility on nesting, foraging, dispersing, roosting, and migrating waterfowl.

6. Comprehensive Plan that addresses Plant and Animal Species

- We request a comprehensive solar facility plan for Linn County and the Willamette Valley that addresses these issues.

OVERALL ENVIRONMENTAL IMPACTS:

We have general environmental impact concerns over water yield, impact to biodiversity, visual effects, noise effects, health issues, and microclimate impacts.

In addition to the above lists of concerns specific to wildlife, we have the following concerns on environmental impacts given the large size of the proposed 1,588 acre Solar Energy Park in Exclusive Farm Use land in Linn County, Oregon that is near waterways, wetlands, housing, farming, rural agricultural area, among others:

1. Water Yield: interception, consumption, altered flow patterns

- What is the expected water use of the proposed facilities? Does the proposal include wet cooling systems? What water use and permits are currently in place? Are any water permits being applied for or recently approved for this facility?

- The NOI does not address this, but we have concerns of the impact of this proposed facility on water yield, interception, consumption, and altered flow patterns, including but not limited to, their impact on soil, plants, animals, and ecosystem processes for neighboring land, nearby wetlands, and designated streaked horned lark habitat.

2. Impacts on Biodiversity

- While impacts on biodiversity were found to be negligible for small scale solar power, research shows that large scale solar energy infrastructures may disrupt migration, create habitat loss, and threaten biodiversity of the ecosystem.
- Given the concern of ESA listed species, MBTA compliance, and migratory waterfowl, how is the EFSC evaluating this impact?
- The NOI does not address this, but we have concerns of the impact of this proposed facility on biodiversity, including migration and habitat fragmentation.

3. Visual Effects

- The NOI does not address this, but we have concerns of the impact of this proposed facility on visual effects. The sheer footprint and number of solar panels has a negative impact on plants and animals in addition to decreased visual aesthetics. Research has shown that this decreases property value for surrounding land, including homes, farmland, and acreage. We have concerns that the proposed facility will decrease our property value, our ability to live peacefully in our home and land of more than 50 years, and that the state, county, and agencies must address these to the point of assuring no financial loss to us in permitting such a large facility.

4. Noise Effect

- The NOI does not address this, but we have concerns of the impact of this proposed facility on noise effects. The sheer footprint and number of solar panels has a negative impact through noise effects on plants and animals in addition to the citizens living in the area. Research has shown that this decreases property value for surrounding land, including homes, farmland, and acreage. We have concerns that the proposed facility will decrease our property value, our ability to live peacefully in our home and land of more than 50 years, and that the state, county, and agencies must

address these to the point of assuring no financial loss to us in permitting such a large facility.

5. Health Issues

- The NOI does not address this, but we have concerns of the impact of this proposed facility on human health, including but not limited to Electromagnetic Radiation (EMR), fire risks, environmental contaminants, among many others. The sheer footprint and number of solar panels poses a threat and direct harm to citizens living in the area. Research has shown that this decreases property value for surrounding land, including homes, farmland, and acreage. We have concerns that the proposed facility will decrease our property value, our ability to live peacefully in our home and land of more than 50 years, and that the state, county, and agencies must address these to the point of assuring no health risk and no financial loss to us if you are to permit such a large facility.

6. Microclimate impacts

- The NOI does not address this, but we have concerns of the impact of this proposed facility on microsite impacts, including but not limited to, microsite impact on soil, plants, animals, and ecosystem processes given the amount of water capture and flow, different habitat types, and streaked horned lark habitat in the area.

LAND USE, PERMITTING, LEGALITY, and ECONOMIC IMPACT:

We have concerns over land use, permitting, legality, and the economic impact of the solar facility on Linn County. We believe that Linn County, and our local representatives, should have a voice in the impact of state decisions on the rural economy of a specific county.

1. Land Use

- Given that solar energy requires the largest land-use when compared to wind, biomass, and other green energy facilities, what is the plan for Oregon and Linn County to address Muddy Creek Energy Park as an initial large facility to be placed in the county after being denied a permit at the county level for a much smaller footprint? Will all Oregon and Linn County EFU now be available for solar energy facilities?
- While one can debate the use of agricultural areas to grow grass seed, in the case of the Willamette Valley, that more closely mimics the converted wetlands than solar energy facilities. The millions of migratory birds, the local nesting birds, and movement of wildlife will be altered by this large

footprint of solar energy in relation to seasonal flooding of grass fields and water impoundment for use by migratory waterfowl.

2. Is the Power Company applying for or has it received a Temporary Use Permit from Linn County for the 1,588 acres to be used as a solar park with associated facilities that are not EFU related within the Muddy Creek Energy Park footprint? Given this shifted from a county to a state process, what does that do for county citizens that were engaging with our Commissioners and Representatives to find a solution at the County level? Are we having our County process removed and super ceded by this State process?
3. How is the proposed facility in compliance with the current land zoned for EFU? Given that the proposed facility will negatively impact the value of the farmland, homes, and property in the surrounding area, are there other considerations that the State of Oregon must consider besides siting requirements to allow such a large facility to be permitted?
4. Other farm uses that are currently in compliance with EFU do not negatively impact property values for those within site (visual effects, noise effects, health issues), and nearby properties. How can a proposed solar park of this size be in compliance with EFU while having an economic impact on neighboring lands, nearby residences, and nearby wetlands and farm use areas? Grazing sheep under and around panels to meet compliance does not inherently mean that building a solar facility is in compliance with EFU.

Thank you for your consideration of these comments, and the recognition that the allowance of permitting and full application that include ODOE and other regulatory agencies such as USFWS and ODFW, among others, and that due to the complex land use, listed species, species of conservation concern, rural economy, among others, that a comprehensive solar power plan for the Willamette Valley and Linn County is needed before any such solar power project should be approved.

Sincerely,

/s/
James W. Fenske and
34260 Priceboro Drive
Harrisburg, Oregon 97446
dwfenske@gmail.com
541-517-2605

/s/
Beverly Fenske

Comment Date: 08-11-2023

From: Yvonne Scott

Email Address: photography.artist.scott@outlook.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Yvonne Scott](#)

Sent: Friday, August 11, 2023 2:26 PM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject: Public Comments NOI Muddy Creek Energy Park

Attachments: [Muddy creek rejection letter .pdf](#)

[Muddy creek rejection letter .pages](#)

You don't often get email from photography.artist.scott@outlook.com. [Learn why this is important](#)

Please see attached letter regarding rejection of site location to Muddy Creek Energy Park,

Sincerely,

Yvonne Scott and Mt. Tom community friends.

FROM THE DESK OF

YVONNE SCOTT

August 11, 2023

Att:Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St. NE., Salem, OR 97301
RE:Yvonne Scott 33864 Mt Tom Dr. Harrisburg, Or 97446
Page 1 of 3

Dear Chase, Mc Veigh-Walker,

This letter is in regards to the notice of intent placed for an energy facility by the name of Muddy Creek Energy Park located in Linn county Harrisburg, rural Oregon USA

Attached, you will find names of 47 individual homeowners, including a large grass seed farmer and small community farmers directly impacted with the current site choice.

The historic scenic highway location also would effect an historical land marker called Hayworth saddle including pioneer lands with possible archeological finds that could be disturbed during construction and disturbance of the land.

There are many family's on this list that our generational families who have helped create this historic area. We also have started a informal group with signatures of others currently residing with in Linn and Lane county. All feel this project would be adverse to the site location for many reasons.

The complete list today of actual signatures in hand with our 45 individuals now total 83 signatures rejecting this site choice and proposal Solar project.

The meeting of standards needing to be met for this type of project and any mitigations to move forward would be irreversible to the rural EFU land, wetlands, endangered species, fish, birds, wildlife movement, toxic leaching especially the destruction of Muddy Creek irrigation projects for water use and flows that connect with federal waterways under 5 miles to the willamette river in Harrisburg Oregon that is already a red flag to the EPA.

Please note the following concerns we wish your applicant from South Korea to address.

- Water ways, Muddy Creek, Pierce Creek, Wetlands, FEMA flood plains and the Willamette River Harrisburg Oregon.
- Cascade fault zone and mitigations.

- Ecosystem and federal bans on filling wetlands.
- Fire risk mitigation in rural Federal grant location high fire risk area
- Weed control during fire season if no use of animals to reduce weeds.
- Lights from construction and reflections to birds during migration patterns and reflections to public highways, residence during construction build out and final uses.
- Loss of Scenic highway and Historic views of Hayworth saddle and rural producing farmlands and nature corridors.
- Cement, aluminum and battery contamination mitigation to land.
- Elk migration patterns disrupted and the movement within the projected high fencing. Escape routes and wildlife resources for emergency care.
- Noise to the site during construction and cleaning of panels with water from farm valley water source.
- Use of wells on or near the Mc Kenzie and Muddy Creeks Irrigation Projects 4 home owners with in a few miles of project in the last few weeks have lost their water wells.
- Loss of High Value Farmland and foreign leases or purchase taking up rare level farming land for development under new green energy exceptions to statewide Planning goal 14.
- Public released information on all land leases and buys within the muddy creek project and Applicants up and coming proposed related supporting facilities including but not limited to these property holders Midnight Sun INC IV, DC Jones Enterprise's, Crabtree Revocable trust, Estergaurd Properties LLC, Malpass Land INC, Rowland Land Company, Langdon and Sons INC ET AIO, Hong Kong Metro Realty Inc. and any conflicts of interest regarding this project and proposed related supporting Facilities.
- Solar water contamination studies
- Mitigation plans of blending into the scenic byways.
- Homeland security implications to a new power source for protection ageist foreign enemies and domestic including mitigation plans to secure against attacks.
- Public notice when Linn county and local governments are contacted on land approval changes to and surrounding lots near and effecting waterways leading to federal waters and HVFL including EFU.
- All signatures from home owners available on request.
- Friends of Mt. Tom signature collection is ongoing.

-

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Sincerely yours,

Yvonne Scott

List of Home and Land owners with signatures on paper rejecting site selection for Muddy Creek Energy Parks NOI June 27th, 2023

Directly effected for sound, loss of wildlife enjoyment, site access, views, Constuction noise road damage, diminished rural land enjoyment and reduced property values.

47 Owners

Shannon Orem, Yvonne Scott, Judy Peters, Casey Hough, Greg McGowan, Chelsea Fain, Lori Mc Gowan, Dermot Rush, Tim Cardiff, Brenda Draper, Ron Cunningham, Matthew Fricke, Katharine Fricke, Randy Foster, Seth Scott, Jody Draper, Peggy S Ridings, Joshua Fain, Linda Gilman, Daniel Bell, Amy Miller, Donna Newman, Scott Newman, Russ Hayworth, Eric Hill, Jeanne Mc Kibben, Bobby Jo Murray, Brady Murray, Andrew Greubel, Katrina Hart, Jerry Mc Kibben, Victoria Hollenbeck, Michael Butchko, Arlene Butchko, Ivo Kuzela, Cindy Linsenbardt, Daniel Linsenbardt, Peyta Pratt, Shayne Tracy, Mike Tracy, Susan Cade, Tom Cade, Vicki Bell.

Comment Date: 08-11-2023

From: Shelly Boshart Davis

Email Address: rep.shellyboshartdavis@oregonlegislature.gov

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Rep BoshartDavis](#)
Sent: Friday, August 11, 2023 2:45 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Cc: [Rep BoshartDavis](#)
Subject: Comments on Muddy Creek Energy Plan
Attachments: [SBD ODOE Letter - Muddy Creek Energy Plan_Aug 2023.pdf](#)

You don't often get email from rep.shellyboshartdavis@oregonlegislature.gov. [Learn why this is important](#)

Chase,

Please see attached comments on the Muddy Creek Energy proposed facility. Thank you for your conversation and answering questions thus far, and I look forward to working with you moving forward.

Best,
Shelly



Shelly Boshart Davis

Oregon House of Representatives
House District 15
(O) (503) 986-1415
900 Court Street, Office 389 | Salem OR, 97301
www.oregonlegislature.gov/boshartdavis

Please note that all emails sent to and from this email address are shared among Representative Boshart Davis and her staff, and may be subject to disclosure under Oregon public records laws.



HOUSE OF REPRESENTATIVES

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301

August 11, 2023

Mr. McVeigh-Walker,

As the state representative for many parts of Linn County, I write concerned about the proposed Muddy Creek Energy Plan.

When I attended the July 25th public hearing in Brownsville, the room was packed with Linn County residents with similar concerns as mine. The overwhelming majority of those spoke against the proposal and the adverse impacts the project might have on our community.

Rather than go through the land use process in Linn County, the applicant has chosen to have this project evaluated by the Energy Facility Siting Council. While allowed by state law, I am concerned that this bypasses vital local input. Our Linn County Commissioners have a beat on the community, and this choice certainly shows the applicant's choices in not understanding or caring about the public they are choosing to build their site on.

I am very concerned about the precedent this siting, if successful, would set for Oregon's agricultural lands. Research being conducted by Oregon State University acknowledges that these agrivoltaic facilities are 'experimental.'¹ The research, in part, is being done on a 5-acre plot near Aurora. The site in question for the Muddy Creek facility is more than 1,500 acres.

We must ensure that the benefits of this project outweigh the costs. As of the July 25 meeting, the applicants confirmed that they have yet to complete the analysis of valuing this farmland, which includes a complex process of tract-by-tract soil analysis and yield potential.

In order to be approved, the proposed facility must undergo a thorough review and meet the Energy Facility Siting Council's siting standards to receive a site certificate. In general, the standards ask three fundamental questions:

1. Does the applicant have the appropriate abilities to build this energy facility?
2. Is the site suitable?
3. Would the facility have adverse impacts on the environment and the community?

¹ Kale Williams, OSU professor believes combining solar energy and agriculture is the path to a sustainable future, <https://www.kgw.com/article/tech/science/climate-change/osu-study-solar-panels-agriculture-agrivoltaics/283-462ce8ff-a32d-47ee-9eb3-b73b3e1ec7a5>



HOUSE OF REPRESENTATIVES

I question if the site is suitable. The land is zoned as exclusive farm use. According to the previously mentioned research being conducted by Oregon State, agrivoltaic projects have a benefit to agriculture in so far as the shade provided by solar panels increases agricultural productivity. If the land is already highly productive, is there any evidence that the presence of solar panels will increase agricultural productivity? The entire agrivoltaic project concept seems more suitable to less productive farm ground.

I also question the project's impact on the environment and community. Nearly all, if not all, of the neighbors surrounding this proposed site are opposed to this project. What metric beyond local public opposition does the Council utilize to establish a project that has adverse impacts on the immediate community? At the July 25th meeting, a neighbor asked what the state would do about the immediate devaluation of his property. I do not see the state ready to provide any remedy for him or countless other neighbors asking the same question.

In addition, I question the environmental impacts of solar projects like these. Evidence suggests solar panels have negative consequences for surrounding soils, including decreased microbial activity and water-holding capacity.² In addition, one local resident asked about wildlife and the problem with the fencing needed for this proposed facility.

Lastly, the public meeting couldn't have been held at a worse time or place. The outcry from the community was apparent as the room didn't hold enough people and ended up not following the proposed agenda; it started early as there were so many people in the room, and was held in the middle of harvest. While I understand there is a timeline, the fact that the applicants nor ODOE didn't know this basic element of those impacted simply goes to question how the state can make the best decisions for this community.

I respectfully request you give significant weight to local input before the Council and not approve this project.

Sincerely,

A handwritten signature in blue ink that reads "Shelly Boshart Davis".

Shelly Boshart Davis
Oregon House of Representatives
District 15

² Maria Cristina Moscatelli, Rosita Marabottini, Luisa Massaccesi, Sara Marinari, Soil properties changes after seven years of ground mounted photovoltaic panels in Central Italy coastal area, Geoderma Regional, Volume 29, 2022, e00500, ISSN 2352-0094, <https://doi.org/10.1016/j.geodrs.2022.e00500>.
(<https://www.sciencedirect.com/science/article/pii/S2352009422000207>)

Comment Date: 08-11-2023

From: Kim Buzzard

Email Address: buzzardkim@gmail.com

Source: portal

Comment Summary: See Attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

From: [Kim Buzzard](#)
Sent: Friday, August 11, 2023 3:04 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Comments Opposing Muddy Creek Energy Park
Attachments: [Comments - Google Docs.pdf](#)

You don't often get email from buzzardkim@gmail.com. [Learn why this is important](#)

Hello Chase,

Please see attached comments related to the Muddy Creek Energy Park.

Thank you so much for making sure our comments are heard and taken very seriously. We VERY MUCH oppose this project!

Have a great weekend.

Kimberley and Scott Buzzard

23137 Gap Rd

Harrisburg, OR

97446

Opposition to Muddy Creek Energy Park
Aug. 11, 2023

Thank you so much for taking the time to read these comments as well as everyone else's comments. We, Scott and Kimberley Buzzard, take this project very seriously and we are counting on our government officials to step up, use common sense and protect the precious land, resources and lives that this project threatens to destroy and disrupt.

Exhibit I - Land Use (OAR 345-020-0011) This land is HIGH VALUE EXCLUSIVE FARM USE land and should not be used for a complex such as this. There should be no exceptions to this! All neighboring citizens must abide by this and it is unfair to permit an exception. Find a location where the soil is not high value so as not to waste this precious soil/farmland that is currently and has been in production for many, many years. Neighbors in the area of the proposed project are relying on the protection of the EFU lands to preserve the way of life nearby.

Exhibit J - Environmental Impacts (OAR 345-020-0011)

- Surface and Groundwater - possible damage to groundwater/runoff if soil is deeply disturbed as well as if spray is overly applied to control noxious weeds (when sheep can't graze).
- Wildlife - The natural patterns of wildlife would be disrupted and disturbed during the construction and for the remainder of the 40+ years of this industrial and commercial type project. We observe many animals in the proposed habitats throughout the year.
- Sensitive, Threatened, and Endangered Species - Golden Eagles winter in the area and are present in the farm fields nearby. The Pearl Shell Mussel could suffer from the drastic change in use of the EFU land and become even more at risk. The Streaked Horned Lark is also present in the area and relies upon this land to survive.
- Large Elk herd frequently crosses GAP Rd. as well as Priceboro Rd. which is exactly the location of this proposed project. This would be a loss of feed for the elk as well as loss of habitat. This would run the elk away or possibly drive them east towards I-5! Hazard! Leave the elk and other mammals alone!
- Wildfire Risk - As you know the recent Aug. 4th wildfire set destroyed 300+ acres off of Priceboro Rd. The forestry firefighter

from Sweet Home, OR in charge of this area himself said, this is NOT where you want a fire to start. The terrain, timber, and many homes and structures nearby make it difficult to fight fires in this area.

- Fire Protection - There has been no communication between Qcells and our local Harrisburg Fire Department about this proposed project. This would be the department responsible for this area and they were completely unaware. This just proves that there is not a care about the local community, neighbors or systems.

Exhibit R - Scenic Aesthetic Value - My husband and I reside at 23137 Gap Rd. This project would be a major loss for us as we look directly out to the valley (west and south) and this entire project would be in our majestic view. This is where we chose our home site based on the zoning of surrounding lands. This home site has been carefully planned for more than 40 years as I grew up on the Kampfer Ranch property as the daughter of Arnold and Jamie Kampfer and dreamed of a home on the very hill where I now reside with my family. My husband and I have worked our entire 25 years of marriage to arrive at this destination and carry on the life that my grandfather had dreamed of in 1943 when he purchased this property. My grandfather's, mother's and father's dream of providing a place for our family to reside has been brought to reality by our hard work. We have moved several times and have built up equity to be able to afford a home and a barn on the hill to the east of the proposed project along Gap Rd. We know that home values are partly based on LOCATION, LOCATION, LOCATION. Ask any realtor in the area! Gap Rd is a sought after place to live. This would devastate not only our dream of living in a rural setting, but many other neighbors here on Gap Rd. Our property value and our neighbor's values will go down as a result of a solar complex. Please do not permit this project to be a constant reminder that our officials did not protect and value our precious, aesthetically pleasing Willamette Valley EFU!

Exhibit X - Noise - We are concerned with extreme construction noise of this project during construction as well as after construction. Increased noise would be caused by the construction itself and the traffic associated with the increase in activity.

HEALTH Risks and Experimental Project - It is unknown what the human health risks are with a project of this magnitude and duration. I do not wish to risk what this project could possibly do to my family's health. In the event of a fire, what

fumes/chemicals could be released into our environment that could have serious, negative long term health effects on the community members and animals.

Finally, if you were to make a list of the pros and cons of a project like this, the cons side of the list is long. This is an extreme liability to the State of Oregon and Linn County. Use common sense and do not permit a project like this where SO MANY legitimate concerns exist! These are real concerns that are not exaggerated. Like I said in the public meeting on July 25th, 2023 who would choose to have this project in their view? Not a single person in the packed room raised their hand to volunteer to submit themselves personally to a project like this in their neighborhood. Please listen to the citizens and take note of the long list of problems!

Thank you so much for your consideration in this serious matter.
Sincerely,

Scott and Kimberley Buzzard

Comment Date: 08-11-2023

From: Devin Kesner

Email Address: devin@friends.org

Source: portal

Comment Summary: Comments attached.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Comments attached.



By electronic mail

August 11, 2023

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
(971) 600-5323
chase.mcveigh-walker@energy.oregon.gov

Re: Muddy Creek Energy Park Notice of Intent to File an Application for a Site Certificate

On behalf of 1000 Friends of Oregon and Friends of Linn County (FOLC), please accept the following statement for the record in the proceedings regarding the Muddy Creek Energy Park's Notice of Intent to File an Application for a Site Certificate (NOI). Please include 1000 Friends of Oregon and Friends of Linn County in any subsequent notice related to proceedings in this matter and any notice of decision.

1000 Friends and FOLC support well-sited solar energy projects and recognize the need for more renewable energy production capacity. However, we have serious concerns that the subject property is not an appropriate location for this type of facility.

This project will likely result in the permanent conversion of farmland to industrial use with minimal energy generation. Farmland should not be viewed simply as a cheap, easy site for solar installations. This is working land providing social, ecological, and economic benefits; it is not just open space for energy siting. There are other locations that could facilitate solar generation without requiring conversion of farmland and cessation of active farm operations.

The Department should consider whether this is an appropriate location for a solar facility considering the permanent impact it will have to nearly 1600 acres of actively farmed land. Below are some specific considerations related to our concerns.

1. Cultivated crops and high value farmland should be excluded from the facility.

The Department should consider excluding higher quality soils and certain farming operations from the project to minimize impacts to agriculture. OAR 345-022-0022; OAR 660-033-0130(38). The project may not be able to demonstrate that its impacts are acceptable without excluding these lands. OAR 345-022-0022; ORS 469.504(2)(c).

According to the applicant, there are 289 acres of cultivated crops (18.2% of total area) within the subject property. NOI at 29. These cultivated crop areas are not compatible with the



proposed dual use with sheep grazing and are indicative of higher quality soils than the remainder of the subject area.

Additionally, although a soils analysis is not yet available, review of NRCS soil maps demonstrate that some areas of the subject property (particularly in the west) are high value farmlands. The applicant and Department should not treat the subject property as a monolith and should instead assess whether the impacts of converting these higher value soils to industrial use is unacceptable under the applicable criteria.

2. The problem of a 35-year lease with permanent impacts to farmland.

The applicant must address the long-term impacts of its 35-year lease. *E.g.* OAR 660-015-0000(3); OAR 345-022-0000; OAR 660-033-0130(38). The project has a lease period of 35 years but will have permanent impacts to the underlying farmland, undermining the ability to return the land to farming after the lease period. 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[.]”).

The impacts to the agricultural capability of the land are highly relevant to evaluating the proposal and whether a Goal 3 exception is appropriate for this use and location. Linn County Land Development Code (LC) 921.874(A)(1), (2); ORS 469.504(2)(c). The following is a non-exclusive list of permanent impacts that must be addressed by the applicant.

Concrete foundations.

Each solar tracker will be mounted to the ground with steel posts. The NOI indicates that “[i]n some soil conditions, concrete backfill is required for each post. For the purposes of the ASC, the Applicant will assume that posts will use concrete foundations, but site-specific conditions will determine whether concrete will be required for construction.” NOI at 6. Additionally, concrete foundations will be used for other project infrastructure such as the battery energy storage system and collector substation. NOI at 10.

The application must evaluate the long-term impacts of installing hundreds of concrete foundations across arable land. A landscape full of closely spaced concrete foundations will dramatically alter the ability for the subject property to ever be farmed again. Removing the foundations will be expensive, destructive, and will have no guarantee of returning soils to their previous capability.

Service roads.



The application must delineate, and evaluate the impacts of, the full scope of roads to be constructed on the property. The NOI indicates that:

New service roads will be constructed within the Facility site boundary to provide access to Facility infrastructure. Newly constructed service roads will be graded and graveled as needed to meet load requirements for equipment. Service roads are anticipated to be approximately 20 feet wide and will be constructed to facilitate access within the Facility site boundary for construction and maintenance purposes.

NOI at 9. Installation of roads will have deleterious effects on the ability to farm the land after the lease term, impacting the soils and continuity of the landscape. Gravel is extremely challenging to remove and extremely harmful for soils and farming practices.

Buried cables.

The project will require underground electrical cables buried 3 feet or deeper across a significant portion of the project area. NOI at 7. This will cause deep soil disturbance that would take many years to recover and will impact the future ability of the land to be farmed. The applicant must address the long-term impacts of these cables and whether and how they will be removed at the close of the project.

Soil disturbance from construction and installation.

The construction and installation of the project will create major soil disturbance. The report *Solar Leasing: A Guide for Agricultural Landowners in the Pacific Northwest* discusses the long-term impacts of these activities:

A primary concern is soil impacts. The initial construction phase is intensive and requires substantial soil disturbance. For farmers who have adopted no- or low-till practices, the construction of a solar array will disturb the carefully nurtured soil health. For farmers who do till the solar array, construction requires digging depths greater than one would till for at least some parts of the leased acreage.

In addition, intensive construction activities could disrupt subsurface drainage systems and could render subsurface drainage tiles inaccessible in the future. (Kirk Hall). As discussed later, some buried infrastructure may remain underground after the solar lease ends, forever altering the subsurface environment.



...

Surface soils will also be disturbed. Damage to and loss of the topsoil is a serious concern, as is erosion due to land alterations. The heavy equipment used during the construction phase will cause soil compaction.

[Double ditching would] ensure that topsoil is segregated from subsoils and replaced in the proper order so that each soil layer is returned to its appropriate depth. (Kuen, 9; Brown, 10). While double ditching will mitigate the damage to the soils, keep in mind that there is no way to guarantee the same soil health the land had at the beginning of the project.

...

Despite remediation, continued soil deficiencies may be after the expired solar lease term. One study found that a revegetated solar farm site had significantly lower total carbon (38%) and nitrogen (50%) levels than a similarly vegetated, previously undisturbed grassland. (Choi et al.). This study also found that soil moisture at the site, which had seven years to rehabilitate since the removal of the solar array, was still unevenly distributed.¹

These long-term impacts to soils and farming capacity must be addressed by the applicant and integral to the Department's consideration of the siting proposal.

Need for strong remediation and restoration plan and assurance of funding.

The above impacts demonstrate a need for a strong evaluation and assurance of remediation and restoration at the conclusion of the project. OAR 345-022-0050. It is highly questionable whether the site can ever be "restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility." OAR 345-022-0050(1); LC 921.874(A)(1).

This will also be an integral part of the Goal 3 exception requirement that "[t]he 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

¹ American Farmland Trust *et al.*, *Solar Leasing: A Guide for Agricultural Landowners in the Pacific Northwest* 44–45 (2022), <https://farmlandinfo.org/wp-content/uploads/sites/2/2022/11/AFT-PNW-solar-leasing-guide.pdf>.



with rules of the council applicable to the siting of the proposed facility.” ORS 469.504(2)(c); OAR 345--022-0030(4)(c)(B). The application should include a detailed study of how its proposed activities will impact the ability to farm the land after the lease term, and address how those impacts will be remediated or avoided, if possible.

The applicant must include a detailed remediation plan in its application and must demonstrate its ability both practically and financially to restore the site to a useful, non-hazardous condition. OAR 345-022-0010(1).

3. Feasibility of sheep grazing.

The applicant must clarify the role of the proposed dual use nature of this project. There are many open questions regarding this aspect of the proposal that are integral to evaluating the Department’s siting criteria.

Although the NOI does not explicitly state an intent for a dual use operation, the inefficiency of the acreage-to-generation capacity ratio is indicative of this intent. The 199 MW generation capacity across 1588 acres represents a generation capacity of 8 acres per MW, when current technology can achieve closer to 5 acres per MW. To the extent that this inefficiency is related to accommodating sheep grazing, it is even more important that the applicant demonstrate the feasibility of such an operation and a commitment to continuing dual use across the full lease period. Otherwise, the proposal will sacrifice more agricultural land than needed for an inefficient operation.

The full application must address the feasibility of a dual use project and its impacts and not just utilize the concept for public relations. ORS 469.501(1)(a), (d). Without proof of feasibility, the applicant should not be permitted to rely on the dual use concept when assessing agricultural impacts or other relevant criteria. Additionally, the Department should be clear about what role, if any, the dual use nature of the proposal impacts their evaluation and conclusions about the proposal. The Department should also address how it would ensure continuation of any dual use component of the application for the project’s full lifetime.

While the applicant has referenced an OSU study evaluating feasibility of dual-use sheep and solar operations in public meetings, there are significant differences between the study and the proposed application. The study involved approximately 6 acres (compared to the project’s 1588 acres).² The soil types of the study property (Woodburn silt loam, Amity silt loam, and

² Alyssa C. Andrew et al., *Herbage Yield, Lamb Growth and Foraging Behavior in Agrivoltaic Production System* (2021),



Bashaw silty clay) also may vary from those of the subject property.³ The soils in the subject property are known to not be conducive to sheep grazing because of their heavy clay soils and moisture retention, dangerous conditions for sheep. In short, the feasibility of a dual-use sheep and solar operation at this scale and in this location is unproven.

Given the difficulty of demonstrating the feasibility of the dual use component of the project, the applicant must also address what it will do if sheep grazing is not successful. Sheep grazing would be a form of vegetation management, and without it the applicant would likely need to spray herbicides and/or mow to manage vegetation around its infrastructure. Chemicals and intensive mowing can cause erosion and degrade soil quality for future farm use. The applicant should be required to include a vegetation management plan and address potential impacts of spraying herbicides across the project area.

3. Impacts to wildlife.

The applicant should be required to address the impact that enclosing three square miles of crop land with seven foot high fencing will have on wildlife habitat and migration. OAR 345-022-0060. NOI at 10. The applicant should also be required to address the impacts of siting solar arrays across 1600 continuous acres will have on wildlife habitat and migration. LC 903.500(B), (C); 903.510(3); 904.110(C); 921.874(A)(4).

Additionally, the study area boundary for fish and wildlife habitat is only 0.5 miles from the facility site boundary. A half-mile consideration does not realistically encapsulate wildlife migration and movement throughout the area. For example, hundreds of thousands of waterfowl migrate through the area in ranges that would not be captured by a half-mile study area radius.

Conclusion

The applicant should address the above issues and areas of concern in its full application. These issues may ultimately warrant denial of the application by the Department or amendment of the proposal by the applicant.

https://www.frontiersin.org/articles/10.3389/fsufs.2021.659175/full?utm_source=F-NTF&utm_medium=EMLX&utm_campaign=PRD_FEOPS_20170000_ARTICLE.

³ *Id.*



Sincerely,

A handwritten signature in black ink that reads "Devin Kesner".

Devin Kesner
Associate Staff Attorney
1000 Friends of Oregon
PO Box 40367
Portland, OR 97240
(971) 420-0922
devin@friends.org

A handwritten signature in black ink that reads "Paul Harcombe".

Paul Harcombe
President
Friends of Linn County
30680 Horseshoe Dr. SW
Albany, OR 97321
friendsoflinncounty@msn.com

1000 Friends of Oregon is a non-profit organization founded by Governor Tom McCall shortly after the Legislature passed Senate Bill 100, which created the land use planning rules that shape Oregon's communities. Since its founding in 1975, 1000 Friends has served Oregon by defending Oregon's land use system—a system of rules that creates livable communities, protects family farms and forestlands, and conserves the natural resources and scenic areas that make Oregon such an extraordinary place to live. 1000 Friends accomplishes this mission by monitoring local and statewide land use issues, enforcing state land use laws, and working with state agencies and the Legislature to uphold the integrity of the land use system.

Friends of Linn County is a group of citizens that came together shortly after SB 100 was implemented in the 1970s, and has been fighting ever since to protect farm, forest and wildlife resources in Linn County. We are an independent non-profit organization. Our mission is to preserve, protect, and enhance the livability and economic viability of our farms, forests, and communities through responsible land use planning.

Comment Date: 08-11-2023

From: Chad Higgins

Email Address: Chad.higgins@oregonstate.edu

Source: portal

Comment Summary: I am a researcher and professor at Oregon State University and study Agrivoltaic systems. I am commenting on the agrivoltaic aspects of this project as it pertains to my research findings. My data have shown that sheep grazing under solar panels can benefit from the structural protection the solar panels provide and the increased spring and early summer forage production. These research findings are measured from a site in Benton county with similar soil types and non-irrigated pastures.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

Research by my group and others shows that most crops experience more sunlight than they can use. In response, they pump water to maintain physiological conditions. Solar panels can harvest the solar excess while reducing stress on the plants and retaining soil moisture. Conversely, evaporation from plants cools panels thus contributing to modest gains in power production and increased panel lifetime. We have shown these benefits specifically for pasture mixes in the Willamette Valley Oregon. Further, we have shown that the changes in the plant productivity translate to increases in heads per acre that land can support as a result of and from agrivoltaic systems. My research has shown that solar and agriculture can co-exist so long as the solar system is specifically designed to do so. There must be a clear set of design considerations for the solar system that allow land managers to access and work the land. There must be contracts or agreements in place with growers who will continue the agricultural traditions and use of the site. Mechanisms should be in place to ensure that these agreements are upheld and the land is not taken out of production. The biggest concern I have for the research have done is that a project is justified and permitted based on it being a dual use project (to be in line with EFU exceptions), only to have that dual use aspect abandoned. I started this research to ensure landowners and farmers who work that land had additional sources of income to sustain their livelihoods. I implore the commission to ensure that there are mechanisms in place to ensure that the land remains under agricultural production throughout the lifetime of the project. At the public meeting, there was some concern that sheep grazing was not 'farming enough'. I disagree with this sentiment and hold a stance that managing livestock is indeed a farm use. Further, I heard concerns that the 'sheep might not work out' and while it is true that none of us can predict the future with 100% accuracy, I do have almost a decade of evidence of successful sheep grazing under solar on a similar soil within the Willamette Valley. there are also numerous projects around the country that use this type of agrisolar configuration. For example see: American Solar Grazing Association. My recommendation to EFSEC and the community if this project is to go forward with agrivoltaics as a main component: 1) ensure that the solar system is designed to accommodate the needs of the farmers, land managers, and shepherds who will maintain the agricultural legacy of the site 2) ensure that there are farmers, land managers and shepherds with local experience contracted to perform the agricultural aspects. 3) have a

system or other checks in place to ensure that the land does indeed remain in production throughout the lifetime of the project.

Comment Date: 08-11-2023

From: Nick Giannettino

Email Address: ngiannettino@gmail.com

Source: portal

Comment Summary: We should not allow any solar facilities to be located on valuable farmland. Farmland is a limited resource and there are many alternate locations for these facilities. They have long-term irreversible and irretrievable resource implications. See the following comments for examples. Do not approve this or any other solar project on valuable and limited Willamette Valley farmland.

Notice of Intent Exhibit:

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Chemical contamination

63,946 views | May 23, 2018, 12:28pm

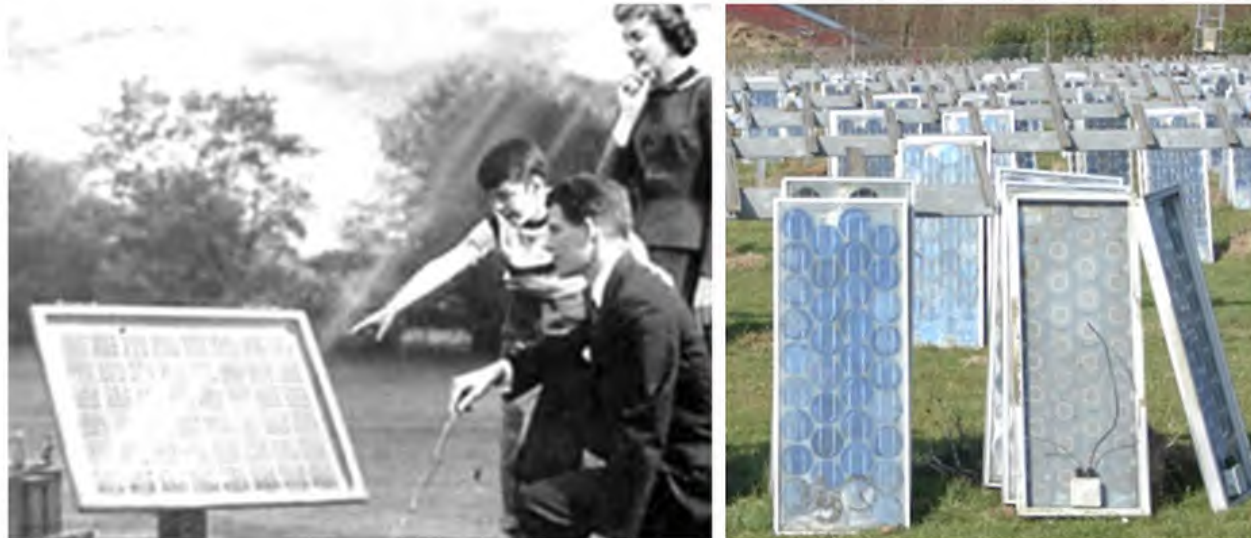
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Michael Shellenberger Contributor ⓘ

Energy

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Bell Labs, 1954. Solar Panel Waste, 2014 BELL LABS & PV CYCLE

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Governments of poor and developing nations are often not equipped to deal with an influx of toxic solar waste, experts say. German researchers at the Stuttgart Institute for Photovoltaics **warned** that poor and developing nations are at higher risk of suffering the consequences.



Maharashtra, India, 2014 DIPAK SHEELARE

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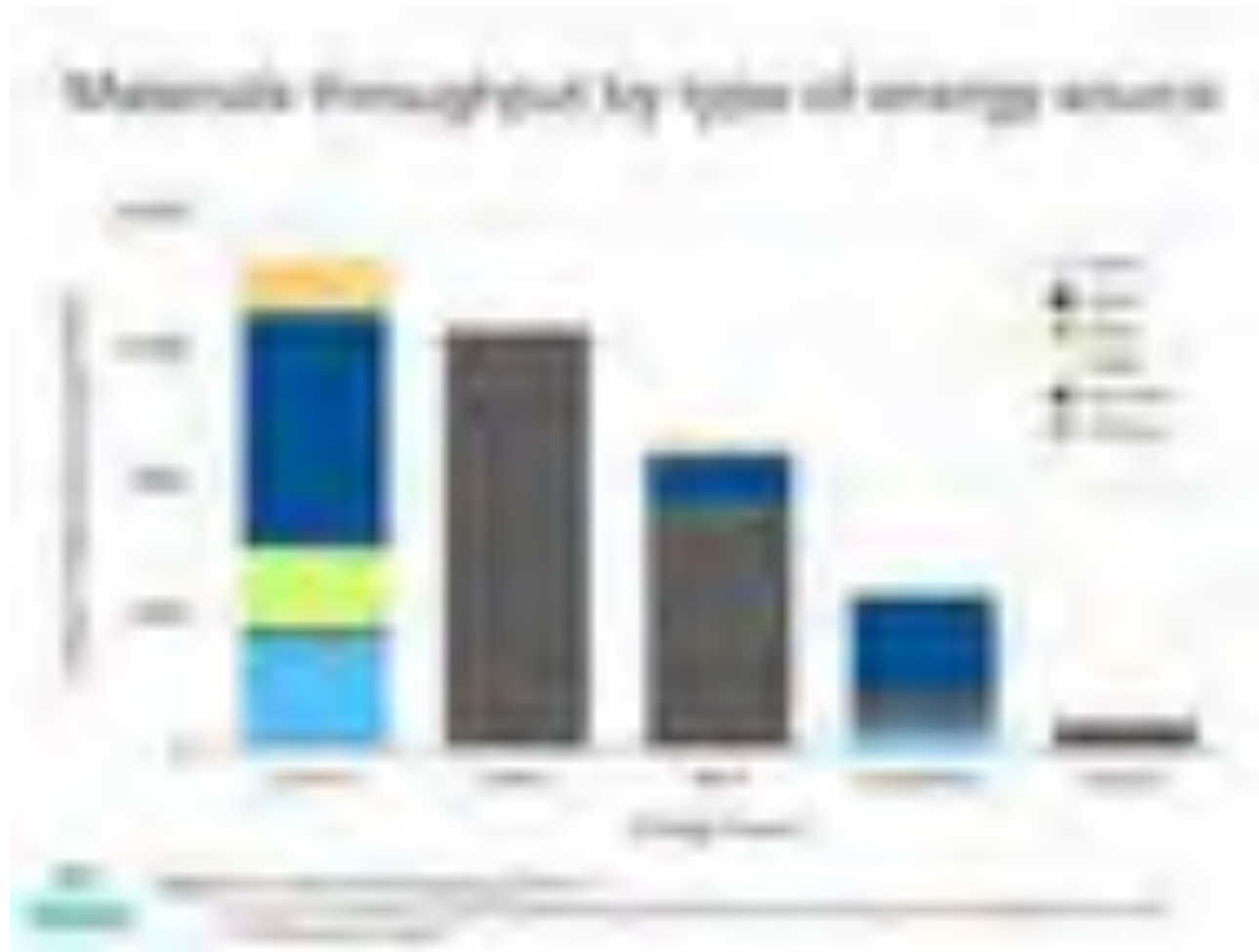
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Unlike other forms of imported e-waste, used solar panels can enter nations legally before eventually entering e-waste streams. [As the United Nation Environment Program notes](#), “loopholes in the current Waste Electrical and Electronic Equipment (WEEE) Directives allow the export of e-waste from developed to developing countries (70% of the collected WEEE ends up in unreported and largely unknown destinations).”

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Perhaps the biggest problem with solar panel waste is that there is so much of it, and that's not going to change any time soon, for a basic physical reason: [sunlight is dilute and diffuse](#) and thus require large collectors to capture and convert the sun's rays into electricity. Those large surface areas, in turn, require an order of magnitude more in materials — whether today's toxic combination of glass, heavy metals, and rare earth elements, or some new material in the future — than other energy sources.



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All of that waste creates a large quantity of material to track, which in turn requires requires coordinated, overlapping, and different responses at the international, national, state, and local levels.

The local level is where action to dispose of electronic and toxic waste takes place, often under state mandates. In the past, differing state laws have motivated the U.S. Congress to put in place national regulations. Industry often prefers to

comply with a single national standard rather than multiple different state standards. And as the problem of the secondary market for solar shows, ultimately there needs to be some kind of international regulation.

The first step is a fee on solar panel purchases to make sure that the cost of safely removing, recycling or storing solar panel waste is internalized into the price of solar panels and not externalized onto future taxpayers. An obvious solution would be to impose a new fee on solar panels that would go into a federal disposal and decommissioning fund. The funds would then, in the future, be dispensed to state and local governments to pay for the removal and recycling or long-term storage of solar panel waste. The advantage of this fund over extended producer responsibility is that it would insure that solar panels are safely decommissioned, recycled, or stored over the long-term, even after solar manufacturers go bankrupt.

Second, the federal government should encourage citizen enforcement of laws to decommission, store, or recycle solar panels so that they do not end up in landfills. Currently, citizens have the right to file lawsuits against government agencies and corporations to force them to abide by various environmental laws, including ones that protect the public from toxic waste. Solar should be no different. Given the decentralized nature of solar energy production, and lack of technical expertise at the local level, it is especially important that the whole society be involved in protecting itself from exposure to dangerous toxins.

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electronic waste, namely smartphones like the iPhone, have in many cases replaced things like stereo systems, GPS devices, and alarm clocks and thus reduced their contribution to the e-waste stream. And no other electronics industry makes being “clean” its main selling point.

Wise solar industry leaders can learn from the past and be proactive in seeking stricter regulation in accordance with growing scientific evidence that solar panels pose a risk of toxic chemical contamination. “If waste issues are not preemptively addressed,” [warns Mulvaney](#), “the industry risks repeating the disastrous environmental mistakes of the electronics industry.”

If the industry responds with foresight, Mulvaney notes, it could end up sparking clean innovation including “developing PV modules without hazardous inputs and recycled rare metals.” And that's something everyone can get powered up about.

I am a Time Magazine “Hero of the Environment,” Green Book Award Winner, and President of Environmental Progress, a research and policy organization. My writings have appeared in The New York Times, Washington Post and Wall Street Journal, Scientific American, Nature Energy,... **MORE**

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Comment Date: 08-11-2023

From: Nick Giannettino

Email Address: ngiannettino@gmail.com

Source: portal

Comment Summary: Toxic chemicals in solar

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

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chemicals in solar panels and effects on farmland

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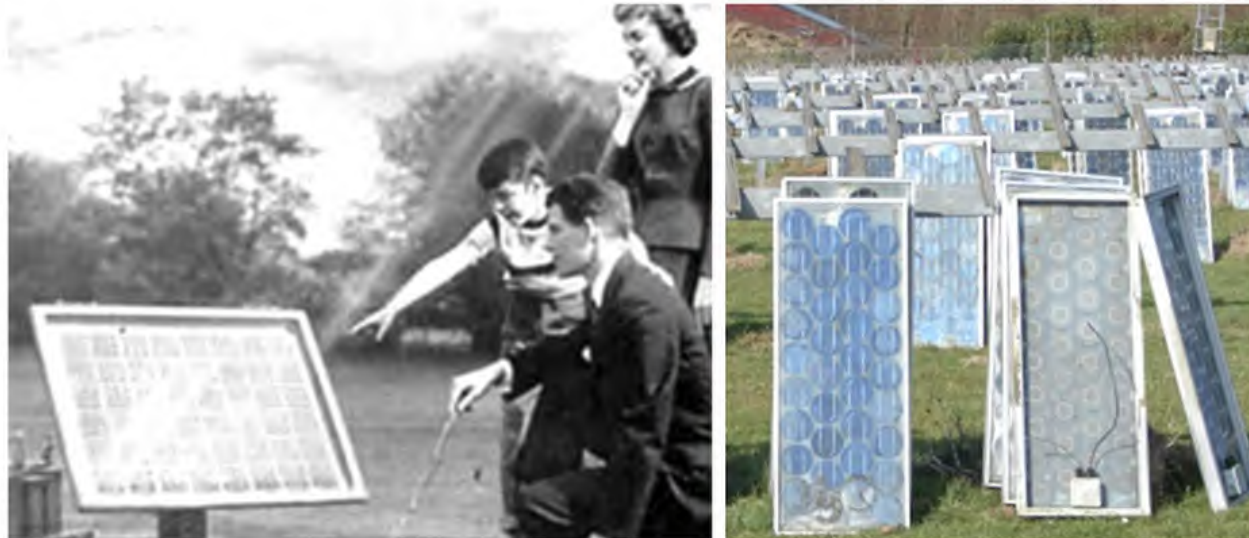
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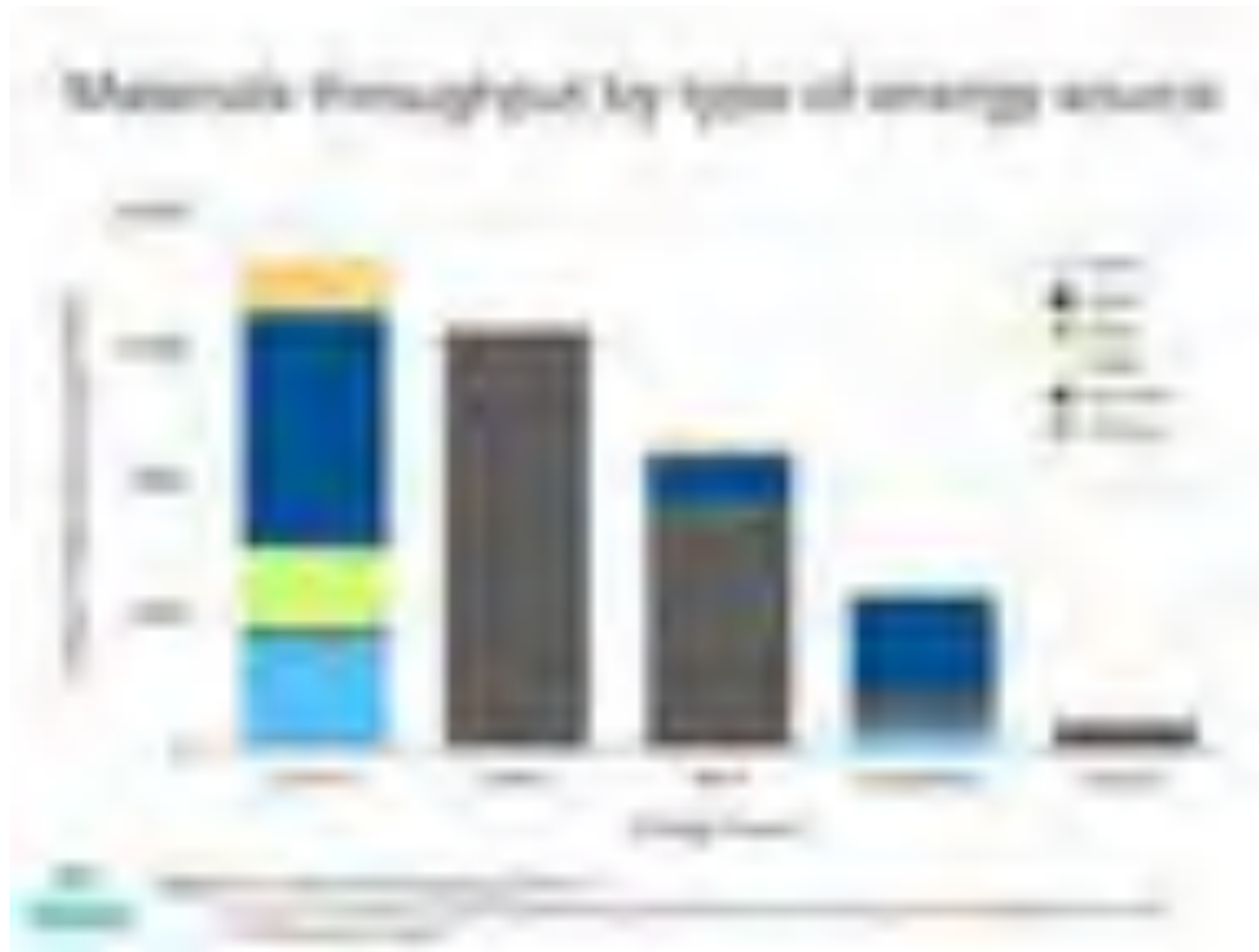
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None of this will come quickly, or easily, and some solar industry executives will resist internalizing the cost of safely storing, or recycling, solar panel waste, perhaps for understandable reasons. They will rightly note that there are other kinds of electronic waste in the world. But it is notable that some new forms of

electronic waste, namely smartphones like the iPhone, have in many cases replaced things like stereo systems, GPS devices, and alarm clocks and thus reduced their contribution to the e-waste stream. And no other electronics industry makes being “clean” its main selling point.

Wise solar industry leaders can learn from the past and be proactive in seeking stricter regulation in accordance with growing scientific evidence that solar panels pose a risk of toxic chemical contamination. “If waste issues are not preemptively addressed,” [warns Mulvaney](#), “the industry risks repeating the disastrous environmental mistakes of the electronics industry.”

If the industry responds with foresight, Mulvaney notes, it could end up sparking clean innovation including “developing PV modules without hazardous inputs and recycled rare metals.” And that's something everyone can get powered up about.

I am a Time Magazine “Hero of the Environment,” Green Book Award Winner, and President of Environmental Progress, a research and policy organization. My writings have appeared in The New York Times, Washington Post and Wall Street Journal, Scientific American, Nature Energy,... **MORE**

[Michael Shellenberger](#), President, Environmental Progress. Time Magazine “Hero of the Environment.”

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Comment Date: 08-11-2023

From: Nick Giannettino

Email Address: ngiannettino@gmail.com

Source: portal

Comment Summary: Chemical issues and farmland

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

soil and environmental concerns Note: I just heard today that this is the last day for comments so please consider that in reviewing this information. Thanks.

SCIENCE ENERGY ENVIRONMENT

More solar panels mean more waste and there's no easy solution

It's going to be a major problem by 2050

By [Angela Chen](#) | [@chengela](#) | Oct 25, 2018, 10:38am EDT



Solar panels might be [the energy source of the future](#), but they also create a problem without an easy solution: what do we do with millions of panels when they stop working?

In November 2016, the Environment Ministry of Japan [warned that](#) the country will produce 800,000 tons of solar waste by 2040, and it can't yet handle those volumes. That same year, the International Renewable Energy Agency [estimated that there were already 250,000 metric tons of solar panel waste](#) worldwide and that this number would grow to 78 million by 2050. "That's an amazing amount of growth," says [Mary Hutzler](#), a senior fellow at the Institute for Energy Research. "It's going to be a major problem."

Usually, panels are warrantied for 25 to 30 years and can last even longer. But as the solar industry has grown, the market has been flooded with cheaply made Chinese panels that can break down in as few as five years, according to [Solar Power World](#) editor-in-chief Kelly Pickerel.

To understand the challenges of solar waste, it's helpful to understand how the panels are built. There are different types of solar panels, but most of them contain aluminum, glass, silver, and an elastic material called ethylene-vinyl acetate. The problem is that they can also contain more dangerous and sometimes cancer-causing, materials such as lead, chromium, and cadmium. Functional panels are sealed off with glass and are very safe. But when the glass breaks or the panels are damaged, those substances can leak.

This risk is especially high with poorly made solar panels installed in areas that experience extreme weather, like hurricanes and hail. Winds and rain can break the glass, allowing chemicals to leach into the soil and then into the water system, according to Hutzler. Pickerel points out that though [solar power helped Puerto Rico recover after Hurricane Maria](#), there were a couple areas on the island where panels were damaged. "In those situations, we have to make sure that we collect the damaged panels," she says.

RECYCLING ISN'T ECONOMICALLY VIABLE RIGHT NOW FOR SOLAR PANELS

To be clear, damaged solar panels leaching toxic materials isn't an enormous risk, given how much solar panels help address the [near-term dangers of global warming](#) and how many *other* dangers are present during hurricanes. But it's

one we need to keep in mind since climate change experts suggest that these [extreme weather events are here to stay](#).

Solar panels are just one part of the problem of old electronics, which is now [the fastest-growing category of waste](#). China [once accepted about 70 percent of the world's e-waste](#), but it started [refusing to take recycling](#) a couple of years ago. Since then, Western countries have started shipping their waste to Southeast Asian countries, [but it's not a long-term solution](#). For example, companies sometimes sell old (but not dead) panels to other countries that want them for cheap, but, again, that just moves the waste around.

While it's far from the only industry struggling to dispose of old devices, there's an extra challenge with solar panels: recycling isn't economically viable right now. Solar panels do contain some valuable materials, including silver and copper, but [not as much as cellphones and other gadgets](#). And they definitely don't contain enough to make up for the high costs of safely breaking down a panel into its constituent parts. As a result, [the Electric Power Research Institute has suggested](#) that storing old panels long-term, like in a landfill, might be the most practical option until the recycling situation is figured out. Similarly, Pickerel adds that people sometimes collect damaged panels and put them in shipping containers so they're all at least in one area.

Still, the Solar Energy Industries Association, the major industry group, is working with recycling centers in hopes of addressing this problem early, according to Justin Baca, SEIA's vice president of markets and research. Two years ago, SEIA established a national recycling program, reaching out to US-based recyclers to vet their processes and make deals.

Right now, they're working with five recycling centers. "The volumes are really low right now, which is both a blessing and a curse," says Baca. "It's a blessing in that it's good not to have a lot of waste. But not having a lot of waste means traditional recyclers aren't very interested, since it only becomes economical to do at certain waste volumes." At the same time, he adds, that makes it difficult to know what recycling costs could be in the future. If the volume goes up, maybe it will be worth it to recycling companies.

Pickerel says that this is a problem that will need a legislative solution. "I don't think different materials is going to do anything," she says. "Things are changing where we're using no frames, and that makes it even harder to recycle because there's no aluminum [in the frames to reuse]." A policy change, she thinks, will really make a difference.

There are signs that policies are changing. Hutzler mentions that one solution energy policymakers are considering is adding a fee onto the cost of the solar panels that would make it easier for them to be removed and recycled.

Washington state is taking an even more proactive approach: last year, it [passed legislation](#) that requires solar panel manufacturers to have a recycling plan for their products. In June, Europe [opened its first solar panel recycling plant](#). These are all small steps in the right direction, but we still need a comprehensive plan in place before the panels shut down. It's all well and good to be excited about a promising technology, but we still need to think about what happens after.

Comment Date: 08-11-2023

From: Jeffrey Dickerson

Email Address: howdytex74@g-mail.com

Source: portal

Comment Summary: I'm against the Muddy Creek solar project, off of Priceboro Rd.

Notice of Intent Exhibit: Exhibit C - Proposed Facility Location

Page Number(s):

Council Standards:

Comment:

Comment Date: 08-16-2023

From: R Foster

Email Address: tweet37@juno.com

Source: portal

Comment Summary: See attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment

2023-05-19 MCEP NOI Notice of Intent
Muddy Creek Energy Park

Dear ODOE Sighting Council,

I object to this energy park and would like to see alternative locations proposed by the applicant and considered by ODESCouncil, as the proposed energy park will remove prime Willamette Valley silt loam flood plain soils from crop production, and violates several State of Oregon land use Goals which conserve Agricultural EFU zone and preserve Agricultural jobs over time.

This is some of the best soil in Oregon, and it should not be locked into soil compacting sheep grazing and concrete anchored massive solar panel array equipment for forty years.

Where else could this park be located that is not EFU zone?

For x months out of the year this area is cloudy.

How does this factor into this plan and if it is sunnier on the east side of Oregon where cattle graze in wide open spaces, with expansive areas of pure rabbit and sage brush grow, in poor soil with more sunlight hours per day, and less rain. Should building this facility in eastern Oregon near a power substation be considered instead of losing 1588 acres of high quality economically valuable, prime, best in Oregon silt loam Willamette/Mckenzie River flood plain/glacier flood deposited soils?

Economically over forty years, loss in production from these acres may be significant.

The applicant may not have to involve the public in his planning and seeking of permits from State of Oregon and US Government. Linn County will not have a Public Hearing for the Conditional Use Permit(CUP) and Comprehensive Plan Amendment. The public then, have no way to participate in this process, but to comment to ODOE Sighting Council.

What are the plans from this company to deal with fire? Will this company pay to train fire fighters to deal with solar farm solar panel fires and lithium ion or other technology battery storage silo fires?

Does Linn County have the correct fire fighting equipment and safety equipment specific to this technology, to deal with fire at this facility? Who will purchase fire fighting equipment and train responding fire stations to how to fight industrial photovoltaic and battery bank silo fire? Will the utility rate payers have to foot the bill for this type of fire fighting planning for future management and operation of this site by two people?

Does the applicant have to provide literature review to show how photovoltaic farm operates if Oregon State University has been researching this type of combined industrial/ag land use?

Will this applicant be able to expand in the near future after developing 1588 acres, without applying to Linn County Planning or ODOE Sighting Council? What will stop this applicant from expanding in the near future into more EFU Zone? Should the siting council place restriction or a moratorium on this applicant to not be able to expand in two years out over another 1588 acres of flood plain or EFU zone?

How is the site going to be closed, what is the plan for recycling tons of solar panels if there is no place in the U.S. that is recycling solar panels? Will these panels get replaced in two or three years with new technology and rate payers will foot the bill for upgrading solar and battery technology?

Where will x tons of solar panels go when this person upgrades in two or three years, to Coffin Butte Regional Land Fill in Benton County, Adair Oregon to be buried to leech out chemicals into area water tables, wells and Soap Creek and the Willamette River?

How is the applicant proposing to deal with the equipment that is placed on 1588 acres when he has to upgrade it all to make more money for his LLC? Does he get to just dump tons of electronics into our landfills, every three years?

Oregon Dept of Fish and Wildlife questions:

If a 7 foot buried fence is built around 1588 acres, migratory species may have trouble moving from Coburg Hills the valley floor to graze, find water, breed, and undertake normal seasonal movements. Elk and Black Tail Deer

may be forced to use more dangerous roadway areas to get around 1588 acres of fencing which equates to x miles of fence.

Mammals will be restricted from the development and the applicant may be planning to use poison bait, cyanide and other poisons to deal with voles, ground squirrel, gopher and rats. This large area without predators will result in a lot of poison being set out by this LLC, to control mice, rats, vole, ground squirrel, badger, gopher and others inside 1588 acre fenced in area.

Normal Migratory bird species may also use the solar panel area currently to graze in fields during the spring, and late summer and fall. Migratory birds could mistake solar array equipment, as a water body and slam into these glazed panels and die.

The applicant should provide evidence of this happening in other establish solar array farms. The Willamette Valley is so converted for what it was originally, tall grass wetland flood plain prairie, that more development on the valley floor will impact migratory bird species further, causing loss of habitat the bird currently have to adapt to over the past 100 years since occupation by white settlers, in this EFU zone.

The loss of x number of birds over time from this energy facility may be quite a large number of migratory bird species, every year. Total this up over 40 years and this comes to extremely large number of migratory birds having died because of misinterpreting this massive solar array as a water bodies.

The volume of dead birds killed at solar farms is documented. The applicant should provide data from established solar farms to show the negatively impact migratory and local bird populations over time.

Will some or all of the 1588 acres flood? Has the area flooded in the past and this needs to be documented if it will flood.

Local Jobs:

The applicant shared that the number of jobs to run this solar power plant is two. This means x number of jobs have been lost in Linn County from

farming EFU land here. Loss of EFU to Industrial Park will lead to lost jobs for local Linn County residents.

Emergency Management:

How does this applicant propose to connect to the public when they want to contact him in case of emergency at his facility? Will someone have to call Korea in the event of an emergency, if his two employee's are unable to assist in resolving emergencies at this solar farm site?

Pollution:

Will the solar panels create glare for area residents to deal with? Will reflective glare become a problem for area residents who live above this facility on Coburg Hills? Will glare be a problem for airplanes coming and going into Eugene Airport?

How noisy are the motor drives which turn the massive panels to follow the sun? In a wind storm will the panels make noise and bother area residents? Will the panels make noise when they do not get maintained often?

Will the perimeter road around 1588 acres site have over head LED lighting to pollute the area night sky and impact wildlife in this area? If so, possibly the Conditional Use Permit(CUP) should look at how much light pollution will occur and help the applicant to reduce light pollution over this large area inside existing EFU zone.

Utility Rate Charges:

Will the cost for power increase, and taxes increase because of this development? Will power rates increase each time this applicant upgrades his batteries, and solar panel technology. Will there be no limit to cost increase to the public from this company charging rate payers to develop and run this energy park.

Economic Analysis:

An Economic Analysis should be part of the applicants required materials for site certification, so that decision makers can see how the public will be continuously charged over time for this development, and future expansions

of the Muddy Creek Solar Park. Will energy from this park be unaffordable?

Can this LLC sell 100 percent of energy generated to California at higher return on investment? If so then the ODES Council should see this in an Economic Analysis document.

Economically over forty years, loss in Agricultural commodity production in total, from these rich Willamette Valley floor soil acres may be a significant figure. Ag commodity loss will be a huge hit to area landowners and their next generation of families who could have been farming these acres and farming additional solar farm expansions this LLC undertakes to feed into this power substation.

What is the financial loss to area landowners from this development over forty years?

Will property value drop around this land use zone change because of the zone change and loss of prime Willamette Valley Silt Loam Flood Plain soils to sheep grazing, irrigation and planting grass?

On site Wetland prairie mitigation:

Can this site be used to establish endangered plant species, or provide new habitat for Streaked Horned Lark to find and use gravel, tufted hair grass and other native grass prairie flood plain topography that this site could contain?

Habitat for other species could be added to this site, from owl boxes, osprey nest platforms and bat boxes. Other nesting birds may use the solar panel construction to nest in, and these nests will have to be removed every year.

Planting native hedge rows to reduce wind, and soil erosion and provide habitat for insects, birds, amphibians, reptiles. Hedge row plantings here would be a creative way for this applicant to shield his Industrial Development in center of the Willamette Valley to reduce a massive eye sore, if this is part of Conditional Use Permit from Linn County Planning.

Wetlands could be created, as vernal pool low elevation dips and rises, to collect rain water in the open expanses of this site. Vernal Pool habitat in the Willamette Valley is possibly non existent currently but in a few conservation easements owned by Greenbelt Land Trust. Willamette Valley Wetland mitigation banks possibly do not have any vernal pool ecology established

within them. Re established Willamette Valley Vernal Pool habitat may work well inside this solar farm area and go hand in hand with Streaked Horned Lark and Meadow Lark use, if established, Lark species may show up here and use this site.

The applicant may be able to consider using some open areas for vernal pool restoration, instead of wetland mitigation off site at local Linn or Benton County area, wetland mitigation bank. Streaked Horned Lark habitat also could be created and used as mitigation credit for the loss of EFU zone economic value over forty years, as the Streaked Horned Lark is a listed species, and has not been found to use this area, possibly due to 100 % ground cover by annual rye grass, that limits Streaked Horned Lark use of these fields to sprayed/denuded of all life, fence line areas.

Cultural resource:

I hope the applicant pays to have cultural survey work done if he will lazer level, 1588 acres of Willamette valley flood plain agricultural production fields.

Thanks, R.Foster 980 SE Mason PL Corvallis, Oregon 97333

Comment Date: 08-16-2023

From: Sharell Tracy

Email Address: sharell@uwol.net

Source: portal

Comment Summary: See attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment

From: sharell@uwol.net
Sent: Friday, August 11, 2023 5:00 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: Muddy Creek Energy Park

You don't often get email from sharell@uwol.net. [Learn why this is important](#)

To Whom It May Concern,

There are numerous reasons why I oppose this solar park, but the one I am most incensed about is that it's a foreign company coming into Oregon to use our farmland for a commercial plant. It is not zoned commercial and it is in our rural community. We have about 6 months of clear sky, and about 6 hours during those 6 months that solar can be caught. It is not OK to destroy our farmland and our community for this "experiment".

Sharell Tracy,
33584 Mt Tom Drive
Harrisburg, Oregon

Comment Date: 08-16-2023

From: Simone Streeter

Email Address: simonestreeter@icloud.com

Source: portal

Comment Summary: See attachment

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment

From: [Energy Siting * ODOE](#)

Sent: Monday, August 14, 2023 2:42 PM

To: [Simone Streeter](#); [Energy Siting * ODOE](#)

Cc: [MCVEIGH-WALKER Chase * ODOE](#)

Subject:

RE: Muddy Creek Energy Park Public Comment

Hello Mr. Streeter,

Thank you for submitting your comment regarding the proposed Muddy Creek Energy Park. Your comment has been noted and will be added to the record for this project.

Regards,

Wally Adams
Operations and Policy Analyst
550 Capitol St. NE | Salem, OR 97301
M: 971-273-9778
P (In Oregon): 800-221-8035

-----Original Message-----

From: Simone Streeter <simonestreeter@icloud.com>

Sent: Thursday, August 10, 2023 5:58 PM

To: Energy Siting * ODOE <energy.siting@oregon.gov>

Subject: Muddy Creek Energy Park Public Comment

[You don't often get email from simonestreeter@icloud.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Hello,

I am an Oregon voter writing to comment on the siting request for the solar farm called Muddy Creek Energy Park. I am a resident of Lane County, and frequently do business in Linn County.

I vehemently oppose the siting of this project anywhere in the Willamette Valley, and most especially on productive farmland and sensitive wetlands. My main concern is the taking from our farmlands, and our future food supply. Farming for food, e.g. wheat and cereal crops and orchard crops, has increased in recent years, over the former emphasis on grass seed growing. This is a very positive development for our future food security, a subject that is on the minds of most Americans these days.

The gain in energy generation is not nearly enough to warrant this loss, as the quoted 30,000 homes is not at all an impressive number. The fact that it is considered 'sustainable' energy is

moot, as it has been well shown, and common sense will indeed indicate, that solar and wind are nowhere near technologically ready to supplant our traditional sources of energy, such as hydroelectric. The manufacture of solar panels, which need near constant replacement, is highly detrimental to the environment, as well.

Oregon deserves strong leadership in preserving our beautiful land and ensuring food security for our people. If we are that concerned about energy, the state can implement conservation measures to encourage citizens to conserve, as those have nearly disappeared since they were first introduced in the 70s. Until then, we are not in a state of need dire enough warrant the desecration of prime farmland.

Thank you,

Simone Streeter
844 Mill St. Apt 19
Springfield, OR 97477

Comment Date: 08-16-2023

From: David Stone

Email Address: dns@efn.org

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.

From: [SLOAN Kathleen * ODOE](#)

Sent: Tuesday, August 15, 2023 9:22 AM

To: dns@efn.org

Cc: [ADAMS Walter * ODOE](#); [MCVEIGH-WALKER Chase * ODOE](#)

Subject:

Fw: New Public Comment submitted for project :
Obsidian Solar - AMD1

Categories: Tracked To Dynamics 365

Hello Mr. Stone,

We did receive your comment via the comment portal, however, your comment mentions Brownsville which would imply you meant to comment on the Notice of Intent for Muddy Creek Solar, not Obsidian Solar Center, request for Amendment 1. For this reason I am forwarding your comment to the siting analyst for the Muddy Creek project (Chase McVeigh-Walker), so he has it and also so it can be posted to the correct project in the siting docket.

Thank you,

Kathleen Sloan

From: ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Sent: Saturday, August 12, 2023 9:36 AM

To: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Subject: New Public Comment submitted for project : Obsidian Solar - AMD1

Organization:

Submitted by: David Stone

Email: dns@efn.org

Zip Code: 97477

Siting Project Phase: AMD-A

Comment Summary:

This is a comment on the proposed solar energy project near Brownsville.

Projects like this are needed to meet Oregon's clean energy goals. This innovative project will provide clean energy while supporting agricultural use (sheep grazing).

Please join the effort to deal with climate change and approve this project.

Thank you.

Please Click on the following link to view the full [Comment Details](#)

Comment Date: 08-16-2023

From: Floyd and Betty Jo Smith

Email Address: walter.adams@energy.oregon.gov

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.



Ms. Betty Jo Smith
4560 Kestrel Ln. SE
Albany, OR 97322

Tried to Email this and it wouldn't go thru

9:16 PM

Cancel

Muddy Creek Energy Park

Bcc: Gmail

Subject: Muddy Creek Energy Park

We have many reasons to voice a No on this scheme ...project. That has been Thrown at us.

We spent many days, many meetings, testifying for OUR EFU zoning and now to have an experiment of this size presented to us is unwarranted.

I would like to mention, our Valley does not have 350 days of sunshine, like some other States have, so why do this experiment on our EFU property.

The BIG fire at Bickleton, WA. Was caused by a Wind Turbine starting a Fire as it dropped to the ground, spreading to wheat fields, burning buildings 5 thousands growing to 30 thousands area.

It was also mentioned fence out the Elk as to not damage the Solar panels. Well this doesn't work, check with Eastern Oregon Ranchers.

This experiment isn't needed as we have plenty coal to generate our electricity to supply our needs for Years to come.

PLEASE take my concerns with great consideration.

Sincerely Floyd and Betty Jo Smith

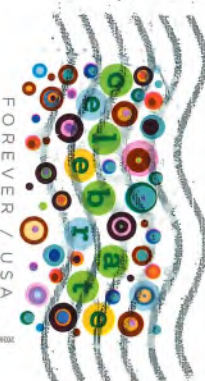
8 Generations Farming in Valley



MRS. BETTY SMITH
4560 Kestrel Ln. S.E.
Albany, OR 97322

PORTLAND OR 972

11 AUG 2023 PM 5 L



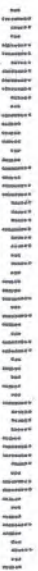
RECEIVED

AUG 14 REC'D

DEPARTMENT OF ENERGY

Oregon Dept of Energy
att. Chase McVeigh - Junior sitting analyst
550 Capitol St. NE
Salem, OR 97301

97301-374259



Comment Date: 08-16-2023

From: Kermit Logan

Email Address: klogan48@yahoo.com

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.

From: [ADAMS Walter * ODOE](#)

Sent: Monday, August 14, 2023 7:28 AM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject:

FW: New ORESA Comment submission - G.L.C.C

Hi Chase,

This comment came in at 6:40 p.m. through the ORESA comment portal. The text is as follows:

I am totally against this proposed park . From the environmental problems to the aesthetics of looking out my front room windows to see a complete eye sore. Keep Muddy Creek Muddy Creek and deny the request. Kermit Logan

Let me know how you would like to handle it. Thanks,



Wally Adams

Operations and Policy

Analyst

550 Capitol St. NE |

Salem, OR 97301

M: 971-273-9778

P (In Oregon): 800-221-8035



Stay connected!

From: ODOE ITService * ODOE <ODOE.ITSERVICE@energy.oregon.gov>

Sent: Friday, August 11, 2023 6:40 PM

To: ADAMS Walter * ODOE <Walter.ADAMS@energy.oregon.gov>; SADHIR Ruchi * ODOE <Ruchi.SADHIR@energy.oregon.gov>

Subject: New ORESA Comment submission - G.L.C.C

Business Contact

KERMIT LOGAN

Email

klogan48@yahoo.com

[Click here to access record](#)

Comment Date: 08-16-2023

From: Terry Hamilton

Email Address: thamfam4@yahoo.com

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.

From: [Terry Hamilton](#)

Sent: Sunday, August 13, 2023 7:53 AM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject: Muddy creek solar project

You don't often get email from thamfam4@yahoo.com. [Learn why this is important](#)

This letter is for Muddy Creek Solar Project.

Thank you
Terry Hamilton

8/10/2023

From Terry Hamilton

This is for the proposed Muddy Creek Solar Project.

This project is wrong in too many ways. First being the land that is slated to be used. Class 1 farm ground is in short supply and this will take it out of production forever. Not just the 30 year time frame. When it comes time to remove it the funds will not be there because of the higher expense to remove it and there's no place to put the dead panels. Just look around the country at all of the dead solar farms that have no place to recycle them or store them. The money was to be held for their removal but also it's not enough or it was put to other projects. Companies went out of business; States had no funds for removal and the land owners gave up the land.

Secondly, this type of project has millions of acres of land in a more suitable area in Oregon deserts where the lower quality land and more sunny days will provide more energy than the Willamette Valley. It still leaves the forever problem with solar farms.

Third, Elk and Deer that migrate across the I-5 freeway will be forced into a compact area that will surely cause wrecks with cars, truck and semi's. There will surely be fatalities because of the number of animals crossing. I know this is true because I lived on both sides of the freeway and have seen the elk and deer herds on both sides. I have seen the dead animals on the road and the vehicles that hit them all smashed up. These animals cross looking for food, escaping people and predators.

Fourth, There are many other low quality land masses in the area that could be used. I know of at lease 500 acres of ground that won't grow Timber or crops. I own 200 acres of it myself. These properties are hard to see from other homes but can easily be seen from the I-5 freeway.

Fifth, Pollution from the solar farm can produce 300 times the radio active dust per kilowatt more than a nuclear plant. A recent study published in 2022 explains that in great detail. Visual pollution from the homes in the area that the reflection from the glass will cause. Hundreds of homes will be

affected and property values will fall because of the lack of desirability to look at the solar farm. This will cause monetary values of many families causing default on home loans because of the drop in value.

This project should be stopped in this area and other land should be considered. Solar farms are not in our or Americas best interest because of the inherited eco pollution it causes. I know there is a great Green movement but it is at too high of price. Only people looking for a feather in their cap will try to push this through just so the green movement will pat them on the back and say good job even though the negative out weighs the positive as it has in too many communities.

Comment Date: 08-17-2023

From: Donald Wirth

Email Address: seed@saddlebutte.com

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.

From: [BENNER Janine * ODOE](#)
Sent: Thursday, August 17, 2023 7:08 AM
To: [CORNETT Todd * ODOE](#); [MCVEIGH-WALKER Chase * ODOE](#)
Subject: FW: Solar
Attachments: [Solar farm no.docx](#)

FYI

From: Don Wirth <seed@saddlebutte.com>
Sent: Wednesday, August 16, 2023 7:49 AM
To: BENNER Janine * ODOE <janine.benner@energy.oregon.gov>
Cc: KALEZ Jennifer * ODOE <jennifer.kalez@energy.oregon.gov>; Paul, Alex <APaul@co.linn.or.us>
Subject: Solar

You don't often get email from seed@saddlebutte.com. [Learn why this is important](#)

Please see the comments attached. Don

--

Don Wirth

"You can't think your way into a new way of living - you have to live your way into a new way of thinking"

 [+1 541.979.4688](tel:+15419794688) (Primary)

 [+1 541.928.0102](tel:+15419280102) (Secondary)

 PO Box 50, Shedd, OR 97377-0050

 31144 Wirth Rd, Tangent, OR 97389-9768



Solar Farm Near Harrisburg

I want to the department of energy for showing that Oregon Land Use regs mean nothing. We can now do as we please with our land thanks to you.

I understand the lease is for 40 years. Will the land be put back to its current condition?

How much heat comes off the black solar panels?

Isn't this latitude questionable to how effective solar energy is?

How much energy does it take to make, transport, and install the panels?

We know that alternative energy must be subsidized to be profitable. So, the project will be subsidized by the US citizens and the profits will end up in a foreign country. What a way to support ourselves.

Because of the above times, I strongly oppose the solar farm!

Donald Wirth

31226 Wirth Rd

Tangent, Or

97389

541-979-4688

Comment Date: 08-17-2023

From: Yvonne Scott

Email Address: walter.adams@energy.oregon.gov

Source: portal

Comment Summary: See attachment. Comment received after comment deadline.

Notice of Intent Exhibit:

Page Number(s):

Council Standards:

Comment:

See attachment. Comment received after comment deadline.

FROM THE DESK OF

YVONNE SCOTT

August 11, 2023

Att:Chase McVeigh-Walker
Oregon Department of Energy
550 Capitol St. NE., Salem, OR 97301
RE:Yvonne Scott 33864 Mt Tom Dr. Harrisburg, Or 97446
Page 1 of 3

Dear Chase, Mc Veigh-Walker,

This letter is in regards to the notice of intent placed for an energy facility by the name of Muddy Creek Energy Park located in Linn county Harrisburg, rural Oregon USA

Attached, you will find names of 47 individual homeowners, including a large grass seed farmer and small community farmers directly impacted with the current site choice.

The historic scenic highway location also would effect an historical land marker called Hayworth saddle including pioneer lands with possible archeological finds that could be disturbed during construction and disturbance of the land.

There are many family's on this list that our generational families who have helped create this historic area. We also have started a informal group with signatures of others currently residing with in Linn and Lane county. All feel this project would be adverse to the site location for many reasons.

The complete list today of actual signatures in hand with our 45 individuals now total 83 signatures rejecting this site choice and proposal Solar project.

The meeting of standards needing to be met for this type of project and any mitigations to move forward would be irreversible to the rural EFU land, wetlands, endangered species, fish, birds, wildlife movement, toxic leaching especially the destruction of Muddy Creek irrigation projects for water use and flows that connect with federal waterways under 5 miles to the willamette river in Harrisburg Oregon that is already a red flag to the EPA.

Please note the following concerns we wish your applicant from South Korea to address.

- Water ways, Muddy Creek, Pierce Creek, Wetlands, FEMA flood plains and the Willamette River Harrisburg Oregon.
- Cascade fault zone and mitigations.

•
•
Sincerely yours,

Yvonne Scott

A handwritten signature in black ink, appearing to be 'Yvonne Scott', written over the printed name.

List of Home and Land owners with signatures on paper rejecting site selection for Muddy Creek Energy Parks NOI June 27th, 2023

Directly effected for sound, loss of wildlife enjoyment, site access, views, Constuction noise road damage, diminished rural land enjoyment and reduced property values.

47 Owners

Shannon Orem, Yvonne Scott, Judy Peters, Casey Hough, Greg McGowan, Chelsea Fain, Lori Mc Gowan, Dermot Rush, Tim Cardiff, Brenda Draper, Ron Cunningham, Matthew Fricke, Katharine Fricke, Randy Foster, Seth Scott, Jody Draper, Peggy S Ridings, Joshua Fain, Linda Gilman, Daniel Bell, Amy Miller, Donna Newman, Scott Newman, Russ Hayworth, Eric Hill, Jeanne Mc Kibben, Bobby Jo Murray, Brady Murray, Andrew Greubel, Katrina Hart, Jerry Mc Kibben, Victoria Hollenbeck, Michael Butchko, Arlene Butchko, Ivo Kuzela, Cindy Linsenbardt, Daniel Linsenbardt, Peyta Pratt, Shayne Tracy, Mike Tracy, Susan Cade, Tom Cade, Vicki Bell.

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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does not cover certain items. For details regarding claims exclusions see the

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AUG 11, 2023

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PRIORITY
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FROM:

Vivonne Scott
33804 MT Tom Dr
Harrisburg, PA 97446

BC 8/12

NA State Mail

TO:

Oregon Department
of Energy
ATT: Chase McHugh-Walker
550 Capital St
Salem OR 97301

Label 228, March 2016

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From: [STEPHENS Cathryn E](#)
Sent: Friday, August 18, 2023 10:00 AM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject:

FW: Muddy Creek Energy Park Notice of Intent -
Request for Review/Comments

You don't often get email from cstephens@eugene-or.gov. [Learn why this is important](#)

Hi Chase,

See the response below from the FAA Seattle ADO. EUG does not have any objections to this development.

Cathryn

Cathryn Stephens, A.A.E.
Airport Director
28855 Lockheed Drive
Eugene, Oregon 97402
541-682-5430
www.flyEUG.com

Team EUG is committed to creating a welcoming and safe community for everyone and a place where every person can experience a sense of belonging. We value and promote diversity, equity, and inclusion while actively working to ensure our actions reflect these core principles.

From: Merrill, Adam W (FAA) <Adam.W.Merrill@faa.gov>
Sent: Thursday, August 17, 2023 11:37 AM
To: STEPHENS Cathryn E <CStephens@eugene-or.gov>
Cc: House, Timothy A (FAA) <Timothy.A.House@faa.gov>; Glassey, Kathryn E (FAA) <Kathryn.E.Glassey@faa.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

[EXTERNAL 

Hi Cathryn –

The ADO has reviewed the NOI and we don't have any concerns about the project. The site is located approximately 10 miles from the airport, and also wouldn't have any structures tall enough to penetrate any Part 77 airspace areas. I doubt that ATO has any concerns about the project, but if they do, they will be replying to you directly.

Were you planning on reaching out to the OR DOE siting analyst yourself, or should I email them directly? Either way is fine with me.

-Adam

Adam Merrill

Environmental Protection Specialist (Oregon)
Federal Aviation Administration
Seattle Airports District Office
2200 S. 216th Street
Des Moines, WA 98198
(206) 231-4107
adam.w.merrill@faa.gov

From: Glassey, Kathryn E (FAA) <Kathryn.E.Glassey@faa.gov>
Sent: Tuesday, July 11, 2023 7:43 AM
To: STEPHENS Cathryn E <CStephens@eugene-or.gov>
Cc: Merrill, Adam W (FAA) <Adam.W.Merrill@faa.gov>; House, Timothy A (FAA) <Timothy.A.House@faa.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Thank you, Cathryn. I am also looping in our OR EPS and Planner in case they would like to review and have any concerns.

Kate Glassey | Project Manager

Federal Aviation Administration
Seattle Airports District Office
FAA Northwest Mountain Region Airports Division
(206)-231-4245
SEA-634

From: STEPHENS Cathryn E <CStephens@eugene-or.gov>
Sent: Tuesday, July 11, 2023 6:58 AM
To: Cowley, Curt (FAA) <Curt.Cowley@faa.gov>; Glassey, Kathryn E (FAA) <Kathryn.E.Glassey@faa.gov>; Barnett, Tyler (FAA) <tyler.barnett@faa.gov>; Whitted, Leslie (FAA) <Leslie.Whitted@faa.gov>
Cc: HARTJE Tammie L <THartje@eugene-or.gov>
Subject: FW: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Passing on this information on a planned solar farm northeast of EUG in case you have any concerns.

Cathryn Stephens, A.A.E.
Airport Director
28855 Lockheed Drive
Eugene, Oregon 97402
541-682-5430

www.flyEUG.com

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From: RODRIGUES Matt J <MRodrigues@eugene-or.gov>
Sent: Monday, July 10, 2023 8:32 AM
To: PENN Ian T <ipenn@eugene-or.gov>; BRAUD Denny <DBraud@eugene-or.gov>; STEPHENS Cathryn E <CStephens@eugene-or.gov>
Subject: FW: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good morning, all.

Cathryn, sharing with you in case there are any concerns from an APT perspective.

Denny, sharing this with you in case we would have any comments from a PDD perspective, although I am not sure what they would be.

Ian, sharing with you as an FYI, given the size of the solar project proposed.

Thank you,
Matt Rodrigues, P.E. (he/him)
Assistant City Manager
City of Eugene
Ph: 541-682-6877
mrodrigues@eugene-or.gov

From: MEDARY Sarah J <SMedary@eugene-or.gov>
Sent: Monday, July 10, 2023 7:22 AM
To: RODRIGUES Matt J <MRodrigues@eugene-or.gov>
Subject: Fw: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Hey Matt,

I'm not really sure who should be checking this out.

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, July 7, 2023 9:49 AM
To: BLEAKNEY Leann <bleakney@nwcouncil.org>; jason.cane@state.or.us <jason.cane@state.or.us>; david.mills@state.or.us <david.mills@state.or.us>; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; JOHNSON James * ODA <James.JOHNSON@oda.oregon.gov>; Brandon.PIKE@aviation.state.or.us <Brandon.PIKE@aviation.state.or.us>; SVELUND Greg * DEQ <svelund.greg@deq.state.or.us>; KENNEDY Mike * DEQ <Mike.KENNEDY@deq.oregon.gov>; CRUSE Martha * DEQ

<Martha.CRUSE@deg.oregon.gov>; THOMPSON Jeremy L * ODFW
<Jeremy.L.THOMPSON@odfw.oregon.gov>; STACK Joseph P * ODFW
<Joseph.P.STACK@odfw.oregon.gov>; STACK Joseph P * ODFW
<Joseph.P.Stack@coho2.dfw.state.or.us>; TOKARCZYK John A * ODF
<john.a.tokarczyk@oregon.gov>; MCCLAUGHRY Jason * DGMI <jason.mcclaughry@oregon.gov>;
STEBBINS Lauren * DSL <Lauren.Stebbins@DSL.Oregon.gov>; STEVENSON Chris * DSL
<Chris.STEVENSON@dsl.oregon.gov>; MULDOON Matt * PUC <matt.muldoon@state.or.us>;
RASHID Yassir * PUC <Yassir.RASHID@puc.oregon.gov>; BJORK Mary F * WRD
<mary.f.bjork@state.or.us>; admin@ci.brownsville.or.us <admin@ci.brownsville.or.us>;
admin@HalseyOr.gov <admin@HalseyOr.gov>; jknoppe@ci.junction-city.or.us
<jknoppe@ci.junction-city.or.us>; MEDARY Sarah J <SMedary@eugene-or.gov>;
meldridge@ci.harrisburg.or.us <meldridge@ci.harrisburg.or.us>; WILLIAMS Amy K * ODOT
<amy.k.williams@odot.state.or.us>; HOUSE David J <David.J.HOUSE@odot.oregon.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

You don't often get email from chase.mcveigh-walker@energy.oregon.gov. [Learn why this is important](#)
[EXTERNAL 

Good morning All,

In the email I sent out yesterday afternoon, I incorrectly represented when the upcoming Public Information meeting will be held. The meeting will be held later this month on July 25, 2023 (*not in 2024*).

Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

From: MCVEIGH-WALKER Chase * ODOE
Sent: Thursday, July 6, 2023 4:03 PM
To: BLEAKNEY Leann <lbleakney@nwcouncil.org>; jason.cane@state.or.us;
david.mills@state.or.us; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; JOHNSON
James * ODA <James.JOHNSON@oda.oregon.gov>; Brandon.PIKE@aviation.state.or.us;
svelund.greg@deg.state.or.us; KENNEDY Mike * DEQ <Mike.KENNEDY@deg.oregon.gov>; CRUSE
Martha * DEQ <Martha.CRUSE@deg.oregon.gov>; THOMPSON Jeremy L * ODFW

<Jeremy.L.THOMPSON@odfw.oregon.gov>; STACK Joseph P * ODFW
<Joseph.P.STACK@odfw.oregon.gov>; Joseph.P.Stack@coho2.dfw.state.or.us;
john.a.tokarczyk@oregon.gov; jason.mcclaughry@oregon.gov; STEBBINS Lauren * DSL
<Lauren.Stebbins@DSL.Oregon.gov>; STEVENSON Chris * DSL
<Chris.STEVENSON@dsl.oregon.gov>; matt.muldoon@state.or.us; RASHID Yassir PUC
<Yassir.RASHID@puc.oregon.gov>; mary.f.bjork@state.or.us; admin@ci.brownsville.or.us;
admin@HalseyOr.gov; jknope@ci.junction-city.or.us; smedary@eugene-or.gov;
meldridge@ci.harrisburg.or.us; amy.k.williams@odot.state.or.us; HOUSE David J
<David.J.HOUSE@odot.oregon.gov>
Cc: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; ESTERSON Sarah * ODOE
<Sarah.ESTERSON@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon,

On May 19, 2023, the Oregon Department of Energy received a Notice of Intent (NOI) for the Muddy Creek Energy Park. The proposed solar photovoltaic (PV) generation facility would have a nominal generating capacity of 199 megawatts, be located in Linn County, and includes a Site Boundary of approximately 1,588 acres (2.5 sq. miles) of private land zoned for Exclusive Farm Use.

Attached, please find a memo requesting that your agency or jurisdiction provide comments on the Notice of Intent by **August 25, 2023**. The memo also provides more information about the proposed facility and the Energy Facility Siting Council's review process and information on cost reimbursement. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

We will be hosting an informational meeting on the NOI on July 25, 2024 at 5:00 (additional information is provided in the attached memo). Please do not hesitate to contact me with any questions.

Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

Attachment 3: Reviewing Agency, SAG, and Tribal Government Comments

From: [CRUSE Martha * DEQ](#)

Sent: Tuesday, July 11, 2023 11:15 AM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Subject:

RE: Muddy Creek Energy Park Notice of Intent -
Request for Review/Comments

Good morning Chase,

It is still morning? Too bad there isn't more time in the day!

I have just some basic comments for this project, since it looks like there isn't a full plan set:

A 1200-C Construction Stormwater Permit may be required for this site. As a part of the 1200-C Permit, an Erosion and Sediment Control Plan (ESCP) that meets the minimum requirements of the 1200-C permit and is site specific must be developed. See Section A.4.3-4 of the permit for site descriptions for each required construction phase. Here is a link to the DEQ 1200-C permit page

<https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Construction.aspx>

Refer to the ESCP Narrative Forms that contains the 42 Standard notes as well as other information that is required when applying for the 1200-C permit. Per the Erosion and Sediment Control Plan Parts I through III narrative form, ESCP Part I and Part II Narrative Information need to be added to the ESCP drawings. This includes information about the Certified Visual Monitoring Inspector, Narrative site description, whether a Natural Buffer Zone exists or engineered soils will be used, and related information.

You must also clearly demonstrate on your plans, compliance with Appendix B and the Natural Buffer Zone (NBZ) requirement. Please view appendix B at this link [1200-C Appendix B](#)

A site specific and complete Erosion and Sediment Control Plan, all applicable permit fees, and ODOE issues site certificate must be submitted using the Your DEQ Online (YDO) system. The Erosion and Sediment Control Plan must be complete and ready for construction to be approved. A permit will not be issued without an approved Erosion and Sediment Control Plan.

For more information regarding YDO, including manuals for registering for a YDO account and submitting permit applications, please see this link: [Department of Environmental Quality : How to Enter Submittals in Your DEQ Online : Online Services : State of Oregon](#)

Thank you for giving us the opportunity to comment! Hope your week is going well

Sincerely,



Martha Cruse (Pronouns: she, her, hers)
Stormwater Quality Inspector, Eastern Region
Oregon Department of Environmental Quality
803 Main St.
Klamath Falls, OR 97601
Work Cell: (503) 926-1430
martha.cruse@deq.oregon.gov

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Thursday, July 6, 2023 4:03 PM
To: BLEAKNEY Leann <lbleakney@nwcouncil.org>; jason.cane@state.or.us;
david.mills@state.or.us; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; JOHNSON
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RASHID Yassir * PUC <Yassir.RASHID@puc.oregon.gov>; BJORK Mary F * WRD
<mary.f.bjork@state.or.us>; admin@ci.brownsville.or.us; admin@HalseyOr.gov;
jknoppe@ci.junction-city.or.us; smedary@eugene-or.gov; meldridge@ci.harrisburg.or.us;
WILLIAMS Amy K * ODOT <amy.k.williams@odot.state.or.us>; HOUSE David J
<David.J.HOUSE@odot.oregon.gov>
Cc: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; ESTERSON Sarah * ODOE
<Sarah.ESTERSON@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

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Attached, please find a memo requesting that your agency or jurisdiction provide comments on the Notice of Intent by **August 25, 2023**. The memo also provides more information about the proposed facility and the Energy Facility Siting Council's review process and information on cost

reimbursement. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

We will be hosting an informational meeting on the NOI on July 25, 2024 at 5:00 (additional information is provided in the attached memo). Please do not hesitate to contact me with any questions.

Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

From: [SVELUND Greg * DEQ](#)
Sent: Friday, July 28, 2023 9:28 AM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject:

RE: Muddy Creek Energy Park Notice of Intent -
Request for Review/Comments

Thanks Chase.

The proposed project likely requires a 1200-C stormwater construction permit and perhaps an industrial stormwater permit post construction. I can be the initial contact for permitting. I don't believe there are any other required permits, though some solar projects have pursued general wastewater permits for their wash water. DEQ can permit this activity but it's not a requirement at the moment. So likely just the 1200-C stormwater permit, which is required before any site development work or grading can occur on the site. Let me know if you want more info.

Greg Svelund
DEQ Regional Solutions Center Liaison
Oregon Department of Environmental Quality

Mobile: 541-647-4194
svelund.greg@deq.state.or.us

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Thursday, July 6, 2023 4:03 PM
To: BLEAKNEY Leann <lbleakney@nwcouncil.org>; jason.cane@state.or.us;
david.mills@state.or.us; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; JOHNSON
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RASHID Yassir * PUC <Yassir.RASHID@puc.oregon.gov>; BJORK Mary F * WRD
<mary.f.bjork@state.or.us>; admin@ci.brownsville.or.us; admin@HalseyOr.gov;
jknope@ci.junction-city.or.us; smedary@eugene-or.gov; meldridge@ci.harrisburg.or.us;
WILLIAMS Amy K * ODOT <amy.k.williams@odot.state.or.us>; HOUSE David J
<David.J.HOUSE@odot.oregon.gov>
Cc: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; ESTERSON Sarah * ODOE
<Sarah.ESTERSON@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
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Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

From: [CLEARANCE ORSHPO * OPRD](#)
Sent: Friday, July 28, 2023 7:36 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject:

RE: Muddy Creek Energy Park Notice of Intent -
Request for Review/Comments

Follow Up Flag: Follow up
Flag Status: Flagged

**THIS E-MAIL CONFIRMS RECEIPT OF AN ELECTRONIC SUBMISSION FOR AN HISTORIC
RESOURCE/106 REVIEW
.....THIS E-MAIL DOES NOT REPRESENT CONCLUSION OF THE REVIEW/106
CONSULTATION.....**

We received a clearance submission on your above referenced project.

The assigned SHPO Case Number is 23-0983 . Refer to this case number on all future
correspondence.

This case has been placed in the appropriate Review Staff queue.

The SHPO receipt date is the initial date this complete submittal was received 7/7/2023.

Do not respond to this email.

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Thursday, July 6, 2023 4:15 PM
To: CLEARANCE ORSHPO * OPRD <orshpo.clearance@oregon.gov>; GABRIEL Jessica * OPRD
<Jessica.Gabriel@opr.oregon.gov>; GROVER MaryBeth * OPRD
<MaryBeth.GROVER@opr.oregon.gov>; POULEY John * OPRD <John.POULEY@opr.oregon.gov>
Cc: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; ESTERSON Sarah * ODOE
<Sarah.ESTERSON@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon Mary-Beth,

On May 19, 2023, the Oregon Department of Energy received a Notice of Intent (NOI) for the Muddy Creek Energy Park. The proposed solar photovoltaic (PV) generation facility would have a nominal generating capacity of 199 megawatts, be located in Linn County, and includes a Site Boundary of approximately 1,588 acres (2.5 sq. miles) of private land zoned for Exclusive Farm Use.

Attached, please find the SHPO cover letter, and a Reviewing Agency memo requesting SHPO review of the Notice of Intent. We are seeking SHPO input on the analysis areas for cultural,

historic or archeological resources and any recommendations on investigation methods, and are requesting comments be provided by **August 25, 2023**. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

We will be hosting an informational meeting on the NOI on July 25, 2023 at 5:00 (additional information is provided in the attached memo). Please do not hesitate to contact me with any questions.

Regards,
-Chase



Chase McVeigh-Walker

Senior Siting Analyst

550 Capitol St. NE | Salem, OR 97301

P: 971-600-5323

P (In Oregon): 800-221-8035



Stay connected!

From: [CORNETT Todd * ODOE](#)

Sent: Wednesday, August 2, 2023 3:00 PM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Cc: [ESTERSON Sarah * ODOE](#)

Subject:

FW: Muddy Creek Energy Park Notice of Intent

FYI

From: Chris Bailey <Chris.Bailey@grandronde.org>

Sent: Wednesday, August 2, 2023 2:58 PM

To: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>

Subject: RE: Muddy Creek Energy Park Notice of Intent

You don't often get email from chris.bailey@grandronde.org. [Learn why this is important](#)

Greeting Todd,

The Historic Preservation Office of the Confederated Tribes of Grand Ronde Community of Oregon recommend that a cultural resource inventory be undertaken prior to the project activities, and that said study includes subsurface testing. We request that an Inadvertent Discovery Plan (IDP) be in place, and if archaeological and/or cultural resources are discovered during the project, that we be contacted immediately by phone. If you have any questions, please feel free to contact me.

Thank you,

Chris

Christopher Bailey

Cultural Protection Specialist

Historic Preservation Office

Confederated Tribes of the Grand Ronde Community of Oregon

chris.bailey@grandronde.org

503-879-1675

From: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>

Sent: Friday, July 7, 2023 1:49 PM

To: Cheryle Kennedy <Cheryle.Kennedy@grandronde.org>

Cc: THPO <THPO@grandronde.org>; David Harrelson <David.Harrelson@grandronde.org>; Colby

Drake <Colby.Drake@grandronde.org>; Stacia Martin <Stacia.Martin@grandronde.org>; THPO

<THPO@grandronde.org>; TribalCouncil <TribalCouncil@grandronde.org>; ESTERSON Sarah *

ODOE <Sarah.ESTERSON@energy.oregon.gov>; MCVEIGH-WALKER Chase * ODOE

<Chase.MCVEIGH-WALKER@energy.oregon.gov>

Subject: Muddy Creek Energy Park Notice of Intent

** This message has originated from an **External Source**. Please use proper judgment and caution when opening attachments, clicking links, or responding to this email. **

Chair Kennedy,

I am sending you the attached letter on behalf of Marcy Grail, Chair of the Energy Facility Siting Council. As stated in the letter, we have received a Notice of Intent to apply for an application for site certificate for a 199 MW solar PV project on 1,588 acres (approximately 2.5 sq miles) in unincorporated Linn County. If you or your staff have any questions, please do not hesitate to contact me.



Todd Cornett

Assistant Director for
Siting
550 Capitol St. NE | Salem,
OR 97301

P: 503-378-8328

P (In Oregon): 800-221-
8035

todd.cornett@energy.oregon.gov



Stay connected!



LINN COUNTY PLANNING AND BUILDING DEPARTMENT

Steve Wills, Director

Room 114, Linn County Courthouse
PO Box 100, Albany, Oregon 97321
Phone 541-967-3816 Fax 541-926-2060
<http://www.linncountyor.gov/planningbuilding>

August 10, 2023

Oregon Department of Energy
Attn: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
Via email: chase.mcveigh-walker@energy.oregon.gov

RE: Muddy Creek Energy Park Project – Response to Notice of Intent

Dear Mr. McVeigh-Walker:

This letter is provided in response to the Notice of Intent to File an Application for Site Certification (NOI), dated May 19, 2023, for a prospective project by Muddy Creek Energy Park LLC., a wholly owned subsidiary of Hanwha Q CELLS USE Corp. for a 199-megawatt solar photovoltaic power generation facility on approximately 1,588 acres of private land located within Linn County.

According to the NOI, this project qualifies as an energy facility, thereby making it eligible for review and approval by the Oregon Energy Facility Siting Council (EFSC). In accordance with ORS 469.350 and OAR 345-015-0120, the Oregon Department of Energy has requested the following information from Linn County:

1. The name, address, and telephone number of the contact person assigned to review the application for your jurisdiction.

Linn County Planning & Building Department
c/o Alyssa Boles, Planning Manager
300 SW 4th Street, Room 114
Albany, OR 97321
(541) 967-3816, ext. 2360
aboles@co.linn.or.us

2. A list of local ordinances and land use regulations that might apply to the construction or operation of the proposed facility, and a description of any information needed for determining compliance.

Applicable Linn County ordinances include the following:

Linn County Comprehensive Plan
Linn County Land Development Code
Linn County Specialty Code
Linn County Floodplain Management Code
Linn County Transportation System Plan

Linn County Code Enforcement Code
Linn County Right-of-Way Regulation Code
Linn County Community Wildfire Protection Plan
Linn County Multi-Jurisdictional Natural Hazard Mitigation Plan.

A detailed list is attached and is also accessible on the County's website. Links are included with this letter.

3. A list of any local permits that might apply to construction or operation of the proposed facility and a description of any information needed for reviewing a permit application.

Plan Text Amendment for an Exception to Statewide Planning Goal 3
Conditional Use Permit
Site Plan Review
Commercial Building Permit
Commercial Electrical Permit
Floodplain Development Permit
Grading Permit
Stormwater and Erosion Control Permit
Commercial Access Permits

4. Recommendations regarding the size and location of analysis areas for impacts to sensitive resources, including resources inventoried in your comprehensive plan.

Based on adopted Comprehensive Plan maps, Linn County recommends the following size and location of specific analysis areas:

Due to the predominant presence of state and nationally identified and inventoried wetlands and hydric soils within and adjacent to the project area, Linn County recommends the study area for Surface and Groundwater Quality be increased to five miles.

Due to the proximity of the project to other actively farmed agricultural land, rural residential exception areas, and the number of non-resource dwellings located within the area, Linn County recommends the study area for Land Use impacts be increased to five miles.

Due to the Priceboro Fire that occurred in August 2023, located adjacent to the project site, Linn County recommends the study area for Wildfire Risk be increased to five miles.

Due to the proximity of the project to Muddy Creek, an inventoried sensitive fish habitat and which acts as a slough of the Willamette River, and due to the location being proposed adjacent to inventoried peripheral and sensitive big game habitat areas, Linn County recommends the study area for Wildlife and Wildlife Habitat be increased to five miles.

In Figure 3 (Analysis Area Boundaries), the analysis area includes the cities of Brownsville, Harrisburg, and Halsey. Linn County recommends the Public Services study area be expanded to include the cities of Lebanon and Sweet Home. Lebanon and Sweet Home offer more services such as food, dining, hotel and RV camping and will likely be impacted. The project is located in a remote, rural area and based on the location of the project adjacent to Interstate 5, additional cities along the Interstate 5 corridor will most likely be impacted. Some of those impacts may be positive, for example, additional commerce for grocery and lodging businesses. Some of the impacts can potentially have negative impacts, for example temporary construction workers occupying non-permitted camping areas which presents public health and fire and safety concerns.

Based on adopted Comprehensive Plan maps, the proposed size and analysis areas identified for Historic, Cultural, and Archaeological Resources, Threatened and Endangered Species,

Recreational Opportunities, Scenic Resources, and Protected Areas appear to be sufficient given Linn County's current understanding of the project.

5. A list of studies that your jurisdiction recommends be conducted to identify impacts of the proposed facility and mitigation measures.

Based on adopted Linn County ordinances, policies and plans, Linn County requests the following studies, analysis, and information:

- Wildlife and habitat studies, including but not limited to an ESEE analysis
- Analysis of current noxious and invasive weeds and a mitigation plan
- Erosion control and soil compaction plan
- Site decommissioning plan for retiring the facility, including information regarding bonding or other security and restoration of the property.
- Information regarding the panel and battery life expectancies, recycling of batteries and the disposition and disposal of the components of the arrays upon failure or end of project
- Traffic Impact Analysis
- Review of impacts to floodplain and other hazards
- Wetland impact study, wetland delineation and possible wetland mitigation measures
- Cultural resource analysis of the lands
- Wildfire risk assessment
- Assessment of socioeconomic impacts to the area
- Analysis to determine appropriate setbacks from federal highways, County roads, and adjoining properties
- Analysis of the visual impacts of a large array of panels and impacts of the array to adjacent properties and roadways

In addition to the information above, Linn County suggests that the Oregon Department of Energy require coordination between the applicant and Lane County to ensure conflicts between the project and impacted resources identified within the study areas located in Lane County, as well as other impacted resources within the study area that may be identified within the Lane County Comprehensive Plan are avoided.

Thank you in advance for your consideration of these comments.

Sincerely,

/s/ Alyssa Boles

Alyssa Boles, Planning Manager
Linn County Planning & Building Department

cc (via email):

Linn County Board of Commissioners
Darrin Lane, Linn County Administrative Officer
Alex Paul, Linn County Communications Officers
Steve Wills, Planning & Building Department Director
Lane County Board of Commissioners
Amber Bell, Lane County Planning Director

Linn County - Applicable Plans, Ordinances, Policies

Linn County Comprehensive Plan (LCCP)

Citizen Involvement Policies
General Land Use Policies
Agricultural Lands Policies
Natural Resource Policies
Economic Policies
Housing Policies
Public Facilities and Services Policies
Energy Policies
Transportation Policies

<http://www.linncountyor.gov/planningbuilding/page/title-9-subtitle-1-comprehensive-plan>

Linn County Land Development Code (LCC)

LCC Chapter 920 – General Provisions
LCC Chapter 921 – Administration of the Land Development Code
LCC Chapter 927 – Zoning District Establishment Code
LCC Chapter 928 – Rural Resource Zone Code
LCC Chapter 933 – Conditions, Requirements, and Decision Criteria Code
LCC Chapter 934 – Development Standards Code, Including Table 2 (Parking Table & Diagram)

<http://www.linncountyor.gov/attorney/page/title-9-subtitle-2-land-development-code>

Linn County Code Enforcement Code

http://www.linncountyor.gov/sites/default/files/fileattachments/county_attorney/page/2480/lcc_240_-_enforcement_code.pdf

Linn County Right of Way Regulation Code

http://www.linncountyor.gov/sites/default/files/fileattachments/county_attorney/page/2483/lcc_690_-_right-of-way_regs.pdf

Linn County Specialty Code

http://www.linncountyor.gov/sites/default/files/fileattachments/county_attorney/page/2485/lcc_810_-_specialty_codes.pdf

Linn County Floodplain Management Code

http://www.linncountyor.gov/sites/default/files/fileattachments/county_attorney/page/2485/lcc_870_-_floodplain_management.pdf

Linn County Transportation System Plan (TSP)

<http://www.linncountyor.gov/planningbuilding/page/transportation-system-plan-2018>

Linn County Multi-Jurisdictional Natural Hazard Mitigation Plan

<http://www.linncountyor.gov/planningbuilding/page/natural-hazard-mitigation-plan>

Linn County Community Wildfire Protection Plan

<http://www.linncountyor.gov/planningbuilding/page/community-wildfire-protection-plan>

Oregon Revised Statutes and Oregon Administrative Rules

ORS 215.243 Agricultural Lands Policy

ORS 215.446 Renewable energy facility; application; standards; notices.

ORS 215.283 Uses permitted in exclusive farm use zones in nonmarginal lands counties; rules.

ORS 215.296 standards for approval of certain uses in EFU Zones

http://www.oregonlegislature.gov/bills_laws/ors/ors215.html

OAR 660-033-0130(38) Standards for solar facilities.

<http://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=280453>

OAR 660-004 Exception Process for Goal 3 Exception

<http://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3054>

From: [Nyquist, Roger](#)

Sent: Friday, August 11, 2023 4:55 PM

To: [MCVEIGH-WALKER Chase * ODOE](#)

Cc: [Paul, Alex](#); [Wills, Steve](#); [Boles, Alyssa](#); [Sprenger, Sherrie](#); [TUCKER Will](#); [Lane, Darrin](#)

Subject: Linn County - Response to Notice of Intent - Muddy Creek Energy Creek Project

Attachments: [doc02155620230811165233.pdf](#)

You don't often get email from rnyquist@co.linn.or.us. [Learn why this is important](#)

Attached is my Response to the Notice of Intent, I submit this document as comments for the record.

Regards,

Roger Nyquist

LINN COUNTY BOARD OF COMMISSIONERS



WILL TUCKER
Commissioner

SHERRIE SPRENGER
Commissioner

ROGER NYQUIST
Commissioner

Linn County Courthouse
P.O. Box 100, Albany, Oregon 97321
(541) 967-3825 FAX: (541) 926-8228

DARRIN L. LANE
Administrative Officer

August 11, 2023

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
Via email: chase.mcveigh-walker@energy.oregon.gov

RE: Muddy Creek Energy Park Project – Response to Notice of Intent

Dear Mr. McVeigh-Walker:

I write to you today in opposition to the Muddy Creek Energy Park Project. The application itself, on the high value farm land that it's proposed to be located on, if approved, will make a mockery of Oregon's Statewide Land Use System.

The property in question is zoned Exclusive Farm Use. A "solar farm" is not listed as farming activity by the Oregon Department of Agriculture.

Linn County is the "Grass Seed Capital of the World". We estimate agriculture to be about a 12% contribution to our total local economy. If you set the precedent of approving this application on high value farm land, it would seem you would be obligated to approve all solar farm applications with disregard to the positive impact of agriculture to Linn County.

Lastly, I suspect there are a whole bunch of property owners who have signed solar farm leases who have no idea how bad the property tax implications could be for them. At the very least, as a State Agency, you owe it to the taxpayers involved to make sure they are fully informed of the consequences. For example, I doubt people know that for property tax purposes the EFU Zoning will be rescinded on their property and that they could owe 10 years in back taxes.

Thank you for your consideration in this matter.

Sincerely,

Roger Nyquist, Chair

c: Steve Wills, Planning and Building Department Director

From: [Leland, Courtney](#)
Sent: Wednesday, September 27, 2023 8:53 AM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Cc: [Wills, Steve](#)
Subject: Muddy Creek Energy Park Project - Response to Notice of Intent
Attachments: [doc02339520230927084520.pdf](#)

You don't often get email from cleland@co.linn.or.us. [Learn why this is important](#)

Please see the attached letter from Commissioner Sherrie Sprenger in regard to the Muddy Creek Energy Park Project.

Thank you,

Courtney Leland
Linn County Board of Commissioners
Phone: 541-967-3825
Fax: 541-926-8228
www.co.linn.or.us





LINN COUNTY BOARD OF COMMISSIONERS

WILL TUCKER
Commissioner

SHERRIE SPRENGER
Commissioner

ROGER NYQUIST
Commissioner

Linn County Courthouse
P.O. Box 100, Albany, Oregon 97321
(541) 967-3825 FAX: (541) 926-8228

DARRIN L. LANE
Administrative Officer

August 11, 2023

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
Via email: chase.mcveigh-walker@energy.oregon.gov

RE: Muddy Creek Energy Park Project – Response to Notice of Intent

Dear Mr. McVeigh-Walker:

I write today to express my opposition to the Muddy Creek Energy Park Project. The application itself, on the high value farm land that it's proposed to be located on, if approved, will completely circumvent the intent of Oregon's land use laws and will disregard the value that agriculture has in our County and State.

The property in question is zoned Exclusive Farm Use. A "solar farm" is not listed as farming activity by the Oregon Department of Agriculture even if it hosts an experiment where sheep will graze. This is high value farm land.

If you set the precedent of approving this application on high value farm land, it would seem you would be obligated to approve all solar farm applications with disregard to the positive impact of agriculture to EFU land and, in part, the land that grows our food.

As a County Commissioner, I'm very disappointed that the State, yet again, has cut out local control and gone around the County government.

Thank you for your consideration in this matter.

Sincerely,

Sherrie Sprenger, Commissioner

c: Steve Wills, Planning and Building Department Director

From: [KLEBS Heather * DSL](#)
Sent: Thursday, August 24, 2023 11:22 AM
To: ['brian.tran@gcells.com'](mailto:brian.tran@gcells.com); ['jessica.taylor@tetrattech.com'](mailto:jessica.taylor@tetrattech.com); [MCVEIGH-WALKER Chase * ODOE](#)
Cc: [MCALLISTER Lynne * DSL](#)
Subject: WD2023-0366 Muddy Creek Energy Park Report Assignment

We received the electronically submitted 439-page wetland delineation report on 08/22/2023 for the **Muddy Creek Energy Park Project** in Linn County that was submitted to the Department for review and approval. The report has been assigned to Lynne McAllister (503-986-5300 lynne.mcallister@dsl.oregon.gov) for review. The DSL file number is **WD2023-0366**

This appears to be an EFSC project; review hours will be billed to the Oregon Department of Energy in lieu of the standard review fee.

We are experiencing unusually high volume, and response times may be delayed. Our staff will contact you as soon as possible. We appreciate your patience. In the interim, you can access the Department of State Lands: Statewide Wetlands Inventory: Waterways & Wetlands: State of Oregon here <https://www.oregon.gov/dsl/WW/Pages/SWI.aspx> . The SWI is a screening tool to help identify approximate locations of wetlands and waterways. You may check the review status of a delineation report at the following web site: <https://lands.dsl.state.or.us/index.cfm?fuseaction=Wetlands.SelectCounty>

Oregon's Removal-Fill Law ([ORS 196.795-990](#)) requires people who plan to remove or fill material in wetlands or waterways to obtain a permit from the Department of State Lands (DSL). A federal permit from the US Army Corps of Engineers (COE) may also be required. Further information can be obtained at: DSL <http://www.oregon.gov/dsl/WW/Pages/Permits.aspx>
COE <http://www.nwp.usace.army.mil/Missions/Regulatory/>

Heather Klebs

(she/her/hers)

Support Services

Oregon Department of State Lands

775 Summer St NE, Ste 100

Salem, OR 97301-1279

971.707.2998 (cell) • 503.378.4844 (fax)

heather.klebs@dsl.oregon.gov • <http://www.oregon.gov/DSL>

I work a hybrid schedule. I am typically in the office Tuesdays and Wednesdays and remote Mondays, Thursdays, and Fridays.

*****CONFIDENTIALITY NOTICE******

This e-mail may contain information that is privileged, confidential, or otherwise exempt from disclosure under applicable law. If you are not the addressee or it appears from the context or otherwise that you have received this e-mail in error, please advise me immediately by reply e-mail, keep the contents confidential, and immediately delete the message and any attachments from your system.

From: [MCALLISTER Lynne * DSL](#)
Sent: Friday, August 25, 2023 10:18 AM
To: [MCVEIGH-WALKER Chase * ODOE](#); [REDON Charles * DSL](#)
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Hi Chase,

Lauren Stebbins forwarded your original email to me, and I've been meaning to look through the NOI so I could respond, even though Charles will probably cover everything in his response. Unlike the Corps, DSL staff handles the wetland delineation review and approval separately, so I will be your contact for the wetland delineation review and any guidance you may need prior to conducting the delineation.

In the materials you sent, I found the map of the project area but not specific legal locations, so my GIS assessment is based on a rough estimate of the project area location and extent. The general area contains some streams that are likely to be jurisdictional, as well as several wetlands mapped by the National Wetlands Inventory (NWI) and extensive hydric soils mapped by the NRCS, which signal that wetlands could be present in the agricultural fields, potentially more extensive than what the NWI maps (the NWI does not map many farmed wetlands). Since solar panels are not an exempt farming practice, I advise a wetland delineation, which is part of a complete permit application.

Because the area is dominated by managed agriculture, I strongly suggest that the delineation be conducted in late winter/early spring of 2024.

Thank you.
Lynne

Lynne McAllister
Jurisdiction Coordinator, Midwest Region
Oregon Department of State Lands
Aquatic Resource Management Program
775 Summer Street NE, Ste. 100

Salem, OR 97301
503-986-5300
503-378-4844 (Fax)
www.oregonstatelands.us

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, August 18, 2023 3:28 PM
To: REDON Charles * DSL <Charles.REDON@dsl.oregon.gov>; MCALLISTER Lynne * DSL <Lynne.MCALLISTER@dsl.oregon.gov>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon Charles and Lynne,

Charles, thank you for taking the time on Wednesday to talk with Sarah and me about the Muddy Creek Energy Park NOI. Also, thank you for introducing me to the DSL Regional Staffing Map...and informing me that Lynne would be the appropriate Jurisdictional Coordinator contact for this proposed facility (and not Chris Stevenson....whom I originally included in my NOI review request).

On July 6, 2023, I sent a mem to reviewing agencies an email (and an attached memo) requesting comments on the Notice of Intent. I have attached the July 6, 2023 Reviewing Agency Memo to this email, just to make sure you both have received it. In the memo, I requested comments be provided by August 25, 2023...but as discussed during the call, more time can be provided if needed (just let me know). The memo also provides more information about the proposed facility and the Energy Facility Siting Council's review process and information on cost reimbursement. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

Please do not hesitate to contact me with any questions.

Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

From: [MCALLISTER Lynne * DSL](#)
Sent: Friday, August 25, 2023 10:26 AM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Cc: [REDON Charles * DSL](#)
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Chase,

I just read the message below in which you state that a delineation has already been submitted—I hadn't yet read that email before sending my last email!

I will review the delineation within approximately 90 days and will be in touch with the primary contact after my initial review if I need additional information for concurrence.

Thanks again.
Lynne

Lynne McAllister
Jurisdiction Coordinator, Midwest Region
Oregon Department of State Lands
Aquatic Resource Management Program
775 Summer Street NE, Ste. 100
Salem, OR 97301
503-986-5300
503-378-4844 (Fax)
www.oregonstatelands.us

From: REDON Charles * DSL <Charles.REDON@dsl.oregon.gov>
Sent: Friday, August 25, 2023 8:36 AM
To: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Cc: MCALLISTER Lynne * DSL <Lynne.MCALLISTER@dsl.oregon.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Thank you.

Charles Redon, Aquatic Resource Coordinator
Oregon Department of State Lands
Phone (503) 302-6045
www.oregon.gov/DSL

775 Summer St. NE, Suite 100
Salem, OR 97301

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, August 25, 2023 8:22 AM
To: REDON Charles * DSL <Charles.REDON@dsl.oregon.gov>
Cc: MCALLISTER Lynne * DSL <Lynne.MCALLISTER@dsl.oregon.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good morning Charles,

Extending the requested review/comment timeframe is no problem. If you plan to comment on the record at this stage of our process, receiving your comments within the next two-ish weeks would be preferable. (Im sure you're aware) Yesterday, we received email confirmation from Heather KLEBS that a wetland delineation report was submitted for the Muddy Creek Energy Park, with a DSL file # of WD2023-0366.

Regards,
-Chase

From: REDON Charles * DSL <Charles.REDON@dsl.oregon.gov>
Sent: Friday, August 25, 2023 8:10 AM
To: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Cc: MCALLISTER Lynne * DSL <Lynne.MCALLISTER@dsl.oregon.gov>
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good morning Chase,

You mentioned the possibility of extending the time for agency review. Is it workable for me to have one more week to do the review? Permits and enforcement calls are coming through continuously right now.

Thank you,
Charles

Charles Redon, Aquatic Resource Coordinator
Oregon Department of State Lands
Phone (503) 302-6045
www.oregon.gov/DSL

775 Summer St. NE, Suite 100
Salem, OR 97301

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, August 18, 2023 3:28 PM
To: REDON Charles * DSL <Charles.REDON@dsl.oregon.gov>; MCALLISTER Lynne * DSL <Lynne.MCALLISTER@dsl.oregon.gov>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon Charles and Lynne,

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On July 6, 2023, I sent a mem to reviewing agencies an email (and an attached memo) requesting comments on the Notice of Intent. I have attached the July 6, 2023 Reviewing Agency Memo to this email, just to make sure you both have received it. In the memo, I requested comments be provided by August 25, 2023...but as discussed during the call, more time can be provided if needed (just let me know). The memo also provides more information about the proposed facility and the Energy Facility Siting Council's review process and information on cost reimbursement. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

Please do not hesitate to contact me with any questions.

Regards,
-Chase



Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301
P: 971-600-5323
P (In Oregon): 800-221-8035



Stay connected!

Muddy Creek Energy Park NOI: DSL Comments 09/18/2023

In accordance with ORS 469.350 and OAR 345-015-0120, the Department(ODOE) requests the following information from your agency:

1) The name, address and telephone number of the contact person at your agency assigned to review the application.

Charles Redon, Aquatic Resource Coordinator

Oregon Department of State Lands

Phone (503) 302-6045

www.oregon.gov/DSL

775 Summer St. NE, Suite 100

Salem, OR 97301

2) Comments on aspects of the proposed facility that are within the scope of your agency's regulatory or advisory responsibilities.

Any material placed, removed or altered in wetlands or waterways may be within the regulatory scope of DSL and Oregon's Removal-Fill Law.

3) A list of statutes, administrative rules and local government ordinances administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for determining compliance.

Primarily: **ORS 196** and **OAR 141-085, OAR 141-090**; possibly depending on project details: OAR's 141-089, 141-093, 141-100, 141-102, 141-120

4) A list of any permits administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for reviewing a permit application.

DSL will require a completed "Joint Permit Application" form with attachments, and a preliminary Wetland Delineation in order to provide conditions to ODOE for the equivalent conditions of a Removal-Fill Individual Permit.

5) Recommendations regarding the size and location of analysis areas (see below for more information).

As long as the site boundary includes all areas where project components will occur (generation, transmission, roads, fencing, temporary storage, ground surface alteration, etc.) then it is sufficient for DSL purposes.

6) A list of studies that should be conducted to identify potential impacts of the proposed facility and mitigation measures.

A wetlands and waters delineation report and maps, concurred by DSL, is required before permit equivalent conditions can be provided. Any impacts to wetlands will require an Oregon Rapid Wetland Assessment Protocol (ORWAP) Functions and Values Assessment. Any impacts to regulated wadable,

non-tidal streams will require an Stream Functional Assessment Method (SFAM) Functions and Values Assessment.

From: [STACK Joseph P * ODFW](#)
Sent: Tuesday, August 22, 2023 3:51 PM
To: [MCVEIGH-WALKER Chase * ODOE](#); [THOMPSON Jeremy L * ODFW](#)
Subject: RE: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments
Attachments: [ODFW_FINAL_comments_NOI_Muddy Creek.docx](#)

Chase,

Please accept the following comments on the Notice of Intent (NOI) for the Muddy Creek Energy Park. We look forward to working with you and the applicant.

Cheers,
Joe

Joe Stack

Regional Habitat Biologist
Oregon Dept of Fish and Wildlife
South Willamette Watershed District
Office: 541-757-5301/ Cell: 541-650-2840

From: MCVEIGH-WALKER Chase * ODOE <Chase.MCVEIGH-WALKER@energy.oregon.gov>
Sent: Friday, August 18, 2023 3:35 PM
To: THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; STACK Joseph P * ODFW <Joseph.P.STACK@odfw.oregon.gov>
Subject: FW: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon Jeremy and Joe,

Last month, I sent reviewing agencies a request for review/comments on the Notice of Intent (NOI) for the Muddy Creek Energy Park. The proposed facility would be a solar photovoltaic (PV) generation facility in Linn County, south of Brownsville. I wanted to reach out and see if the two of you had any questions, comments, concerns about the NOI...and wanted to check and see if you would be available for a call next week?

I am available next Tuesday (8/22) from 1:00pm-4:00pm, as well as next Wednesday (8/23) from 8:00am-10:00am and anytime after 12noon. Are the two of you available for 30 min sometime within any of those windows next week? If not, please feel free to provide alternate times/days that would work for you....and I'll do my best to accommodate.

Regards,
-Chase

From: MCVEIGH-WALKER Chase * ODOE
Sent: Thursday, July 6, 2023 4:03 PM
To: BLEAKNEY Leann <bleakney@nwcouncil.org>; jason.cane@state.or.us;
david.mills@state.or.us; BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>; JOHNSON
James * ODA <James.JOHNSON@oda.oregon.gov>; Brandon.PIKE@aviation.state.or.us;
svlund.greg@deg.state.or.us; KENNEDY Mike * DEQ <Mike.KENNEDY@deg.oregon.gov>; CRUSE
Martha * DEQ <Martha.CRUSE@deg.oregon.gov>; THOMPSON Jeremy L * ODFW
<Jeremy.L.THOMPSON@odfw.oregon.gov>; STACK Joseph P * ODFW
<Joseph.P.STACK@odfw.oregon.gov>; Joseph.P.Stack@coho2.dfw.state.or.us;
john.a.tokarczyk@oregon.gov; jason.mcclaughry@oregon.gov; STEBBINS Lauren * DSL
<Lauren.Stebbins@DSL.Oregon.gov>; STEVENSON Chris * DSL
<Chris.STEVENSON@dsl.oregon.gov>; matt.muldoon@state.or.us; RASHID Yassir PUC
<Yassir.RASHID@puc.oregon.gov>; mary.f.bjork@state.or.us; admin@ci.brownsville.or.us;
admin@HalseyOr.gov; jknope@ci.junction-city.or.us; smedary@eugene-or.gov;
meldridge@ci.harrisburg.or.us; amy.k.williams@odot.state.or.us; HOUSE David J
<David.J.HOUSE@odot.oregon.gov>
Cc: CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; ESTERSON Sarah * ODOE
<Sarah.ESTERSON@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
Subject: Muddy Creek Energy Park Notice of Intent - Request for Review/Comments

Good afternoon,

On May 19, 2023, the Oregon Department of Energy received a Notice of Intent (NOI) for the Muddy Creek Energy Park. The proposed solar photovoltaic (PV) generation facility would have a nominal generating capacity of 199 megawatts, be located in Linn County, and includes a Site Boundary of approximately 1,588 acres (2.5 sq. miles) of private land zoned for Exclusive Farm Use.

Attached, please find a memo requesting that your agency or jurisdiction provide comments on the Notice of Intent by **August 25, 2023**. The memo also provides more information about the proposed facility and the Energy Facility Siting Council's review process and information on cost reimbursement. Information on the NOI and the facility are available [online](#) on the Muddy Creek Energy Park project page.

We will be hosting an informational meeting on the NOI on July 25, 2024 at 5:00 (additional information is provided in the attached memo). Please do not hesitate to contact me with any questions.

Regards,
-Chase

Chase McVeigh-Walker
Senior Siting Analyst
550 Capitol St. NE | Salem, OR 97301



P: 971-600-5323

P (In Oregon): 800-221-8035



Stay connected!



Oregon

Tina Kotek, Governor

Department of Fish and Wildlife

Habitat Division

4034 Fairview Industrial Dr SE

Salem, OR 97302

Phone: 503-947-6000

Fax: 503-947-6330

www.dfw.state.or.us

August 22, 2023

Oregon Department of Energy
ATTN: Chase McVeigh-Walker, Senior Siting Analyst
550 Capitol St. NE
Salem, OR 97301

RE: Request for comments on the Notice of Intent submitted by Muddy Creek Energy Park LLC

Dear Chase:

Oregon Department of Energy (ODOE) has requested comments from the Oregon Department of Fish and Wildlife (ODFW) on the Notice of Intent (NOI) to apply for a Site Certificate for the Muddy Creek Energy Park that is proposed to generate 199 megawatts (MW) from a site located on approximately 1588 acres of private land zoned for Exclusive Farm Use (EFU) in Linn County, Oregon. This Letter contains: (1) ODFW contact information for the project; and (2) ODFW's comments on the NOI.

A. Contacts

I will be the main contact person for ODFW for the Energy Facility Siting Council (EFSC) permitting process and my contact information is: Joe Stack, 7118 NE Vandenberg Ave. Corvallis, OR 97330. My phone number is (541) 757-5301. Joseph.p.stack@odfw.oregon.gov. ODFW requests that as applicable, all correspondence for this project be conveyed electronically.

B. Oregon Revised Statutes (ORS), applicable rules and policies

Please find below a listing of the most applicable statutes, administrative rules and policies administered by ODFW that would pertain to the siting of this proposed facility. ODFW will review and make recommendations for the proposed project based on the following applicable statutes and rules.

- ORS 496.012 Wildlife Policy
- ORS 506.036 Protection and Propagation of Fish
- ORS 506.109 Food Fish Management Policy

- ORS 496.171 through 496.192 Threatened and Endangered Wildlife and Fish Species. A listing of State and Federal threatened, endangered and candidate species can be found on ODFW's website at: http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp
- ORS 498.301 through 498.346 Screening and By-pass devices for Water Diversions or Obstructions
- ORS 509.580 through 509.910 Fish Passage; Fishways: Screening Devices- a listing of requirements under ODFW's Fish Passage Program can be found on ODFW's website at <http://www.dfw.state.or.us/fish/passage/>

Oregon Administrative Rules (OAR)

- OAR Chapter 635, Division 100 provides authority for adoption of the State sensitive species list and the Wildlife Diversity Plan and contains the State list of threatened and endangered wildlife and fish species. A current list of State sensitive species can be found on ODFW's website at: http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL_by_category.pdf
- OAR Chapter 635, Division 415 (ODFW's Fish and Wildlife Mitigation Policy found on ODFW's website at: http://www.dfw.state.or.us/lands/mitigation_policy.asp describes six habitat categories and establishes mitigation goals and standards for each wildlife habitat ranging from Category 1 (irreplaceable, essential, limited) to Category 6 (non-habitat)
- The Policy goal for Category 1 habitat is no loss of either habitat quantity or quality via avoidance of impacts through development alternatives, or an ODFW recommendation of denial of the proposed development action if impacts cannot be avoided. Categories 2-4 are essential or important but not irreplaceable habitats. Category 5 habitat is not essential or important habitat, but has a high restoration potential. The application for a site certificate must identify the appropriate habitat category for all affected areas of the proposed project on mapping; provide basis for each habitat category selection; and provide an appropriate mitigation plan; all subject to ODOE and ODFW review and comment. ODOE has adopted this rule into OAR 345-022-0060 as an energy facility siting standard for Applicants to meet in order to obtain a site certificate.
- ODFW also provides technical review and recommendations on compliance with Oregon EFSC rules, particularly OAR 345-02100010(1) (p) and (q) and 345-22-040, 060 and 070.
- OAR Chapter 660, Division 23 provides procedures and requirements for complying with goal 5, specifically related to riparian corridors, wetlands, and wildlife habitat.

C. Comments on the NOI

General Comments

State and federally listed fish and wildlife species will utilize habitat within the general footprint of the proposed solar park for at least a portion of their lifecycle. Additionally, there are multiple other at-risk Strategy Species and Habitats present as identified in the Oregon Conservation Strategy (OCS, www.oregonconservationstrategy.org/) with documented presence and/or modeled habitat in the vicinity of the proposed project. The Oregon Conservation Strategy provides a context for balancing Oregon's conservation and development priorities by outlining goals and identifying actions that conserve and restore Oregon's species, habitats, and ecosystems. ODFW requests that the applicant thoroughly considers how the proposed construction and long-term operation of the project may impact those species that utilize this habitat.

Specific data are lacking on how identified species within the project vicinity utilize the habitats present within the proposed boundary. ODFW recommends that a minimum of two years of preconstruction monitoring be performed. Protocols should follow current best available science to help determine presence, location, and use (foraging, hiding, breeding, roosting, etc.). In addition, monitoring during construction activities may be needed to assess species presence. This information will assist the applicant with planning appropriate avoidance, minimization, and mitigation measures.

ODFW recommends the applicant initiate mitigation planning early within the permitting effort. For construction and project impacts that cannot be avoided, ODFW will readily work with the applicant to identify minimization opportunities and potential mitigation options to offset those impacts that will occur outside of avoidance and minimization measures.

Specific Comments

Delineated wetlands occur within the boundaries of the Muddy Creek Energy Park, ODFW identifies wetlands as a Strategy Habitat throughout the Willamette Valley. Functioning wetlands provide important habitat for migrating and breeding shorebirds, waterbirds, waterfowl, songbirds, mammals, amphibians, and reptiles. It is estimated that approximately 2% of historic wetlands within the Willamette Valley exist today, most of which continue to be fragmented by habitat loss. Avoidance and appropriate setbacks during construction activities and for project infrastructure is important to maintain the function of this imperiled habitat.

ODFW maintains guidelines for buffering along fish bearing streams. Streams classified as having fish presence should be provided at minimum a 50ft riparian setback from the ordinary high-water mark. Flowing Water and Riparian Habitats, another Strategy Habitat within the site boundaries, have been impacted by past human practices which have restricted the natural ability of the streams to meander, limiting the quality and availability of these habitats, as well as affecting floodplain function. ODFW encourages the applicant to provide larger buffers where feasible to reduce impacts to amphibians and turtles that will utilize riparian areas as travel

corridors and for cover and breeding sites. ODFW requests that all streams be classified by utilizing the statewide modeled fish presence layer, which can be found at:
<https://geo.maps.arcgis.com/apps/webappviewer/index.html?id=dde877f74cf84fdb53bd4b57204c2fe>

ODFW recommends that future coordination meetings be scheduled to include all relevant parties when discussing biological information and potential impacts to species or habitats. These parties may include but are not limited to ODOE, Department of State Lands (DSL), ODFW, and U.S. Fish and Wildlife Service. Collaboration amongst the mentioned interests will occur throughout this process, and coordinated meetings sponsored by the applicant should streamline this effort.

ODFW requests information on possible design alternatives that were analyzed to date in the scoping for this project. ODFW encourages the applicant to explore alternatives that would consolidate site development into a more uniform layout to reduce the impacts of habitat fragmentation. ODFW requests potential alternatives be presented with or prior to the application for site certificate.

ODFW is interested in additional information on site development, especially as it relates to ground disturbance and effects to grassland birds. Streaked horned larks specifically are known to occur within two miles of the proposed site and are attracted to bare ground or sparsely vegetated grasslands. The current agency understanding of the facility design is that access roads and staging areas will be created. ODFW is interested in how much ground clearing will occur on site and the timeframe for this activity. Any additional information on this process will assist ODFW in creation of comments in the future related to timing of work and disturbance potential to grassland birds.

ODFW recommends that appropriate wildlife friendly fence designs be considered. Fencing that is modified to be more visible and that is less likely to entangle wildlife is preferred. ODFW provides standards for fence designs on our website at:
https://www.dfw.state.or.us/wildlife/living_with/docs/deerelkfences.pdf

ODFW appreciates the opportunity to comment on this NOI and looks forward to working with ODOE and the Applicant on this proposed project.

Respectfully,



Joseph Stack
Regional Habitat Biologist

Cc: Sarah Reif, Salem
Jeremy Thompson, Salem
Chris Kern, Adair
Greg Reed, Adair
Jennifer Ringo, Adair

From: [STACK Joseph P * ODFW](#)
Sent: Wednesday, October 4, 2023 3:19 PM
To: [MCVEIGH-WALKER Chase * ODOE](#)
Subject: ODFW Habitat Categorization Memo
Attachments: [ODFW_ODOE Habitat Classification Clarificaton.docx](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Chase,

Sorry Chase, I had hoped to get this to you yesterday. Attached is a brief memo on how ODFW staff categorized the habitat with the boundaries of the Muddy Creek Energy Park. Please let me know if you have any questions.

Cheers,
Joe

Joe Stack
Regional Habitat Biologist
Oregon Dept of Fish and Wildlife
South Willamette Watershed District
Office: 541-757-5301/ Cell: 541-650-2840

In accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0000), department staff have come up with the following site categorization for the lands within the footprint of the Muddy Creek Energy Park. Designation of fish and wildlife habitat into the appropriate Habitat Category (1-6) requires answering a sequence of yes or no questions, also known as a dichotomous key (Figure 1), ultimately resulting in a specific habitat categorization based on the relative function and value the habitat provides for the species and the relative scarcity of the habitat on the landscape. Categorization provides a tool to guide mitigation efforts to offset or replace habitat affected by the proposed project.

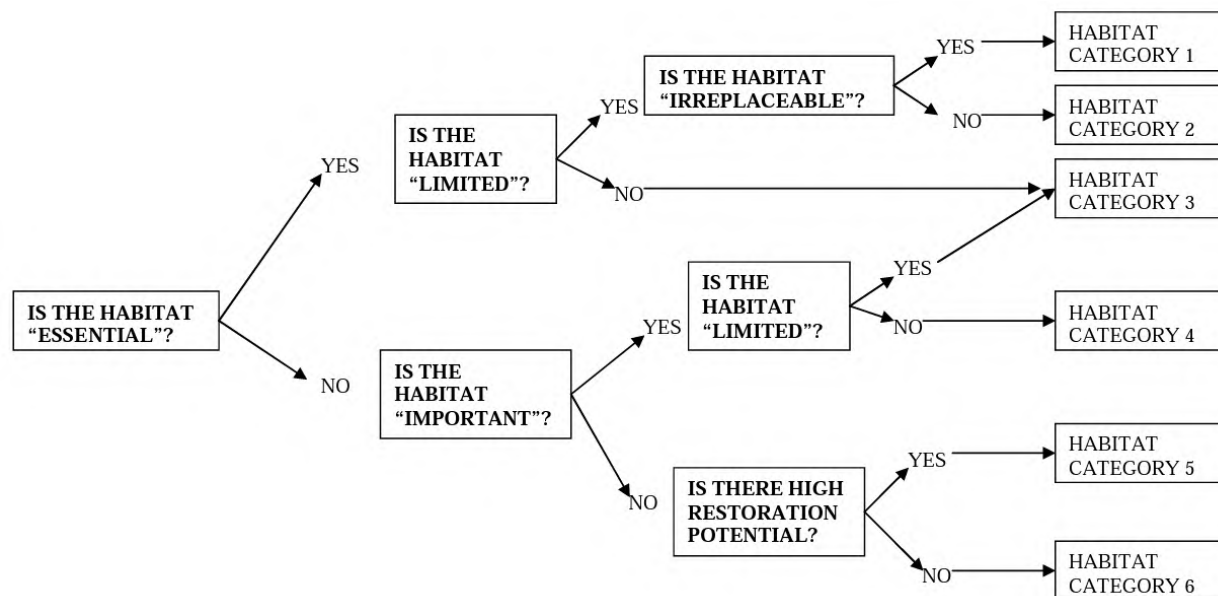


Figure 1. Mitigation Category Flow Chart

Wetlands:

Numerous wetlands occur throughout the project boundaries as indicated on the National Wetlands Inventory (NWI) layer. Wetlands are identified as an Oregon Conservation Strategy Habitat, providing essential habitat for amphibians, turtles, birds, and fish, and offer key bird and fish migratory pathways. Habitat loss, water availability, degraded water quality, and invasive species are all limiting factors affecting wetlands throughout the Willamette Valley. Efforts to restore agricultural fields and careful management of existing wetlands can help sustain this vital habitat overtime. The Department's preferred strategy is to avoid and appropriately buffer these areas for long-term protection. If wetlands cannot be avoided, mitigation goals should be consistent for "Habitat Category 2" habitat (OAR 635-415-0025(2)). "Habitat Category 2" is essential habitat for fish or wildlife species, populations, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage. The mitigation goal if impacts are unavoidable, is through reliable in-kind, in-proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided.

Grass Fields:

A majority of the project area is actively farmed grass fields, managed for grass seed production and hay. While this habitat type is not essential, it is important, providing both nesting and foraging opportunities for several grassland bird species. Native grasslands have been impacted by conversion to agriculture, development, and invasive plant species. In place of native grasslands, these farmed grass fields act as surrogate grasslands. While native grasslands remain imperiled and limited throughout the Willamette Valley, farmed grass fields are very common and are not limited across the landscape. As such, the department categorizes this habitat as "Habitat Category 4" (OAR 635-415-0025(4)). "Habitat Category 4" is important habitat for fish and wildlife species. Mitigation of impacts, if unavoidable, should be through reliable in-kind or out-of-kind, in-proximity, or off-proximity habitat to achieve no net loss in either pre-development habitat quantity or quality.

Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development actions. The project proponent is responsible for the expenses of developing, evaluating, and implementing the mitigation plan and monitoring the mitigation site.

In accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0000), department staff have come up with the following site categorization for the lands within the footprint of the Muddy Creek Energy Park. Designation of fish and wildlife habitat into the appropriate Habitat Category (1-6) requires answering a sequence of yes or no questions, also known as a dichotomous key (Figure 1), ultimately resulting in a specific habitat categorization based on the relative function and value the habitat provides for the species and the relative scarcity of the habitat on the landscape. Categorization provides a tool to guide mitigation efforts to offset or replace habitat affected by the proposed project.

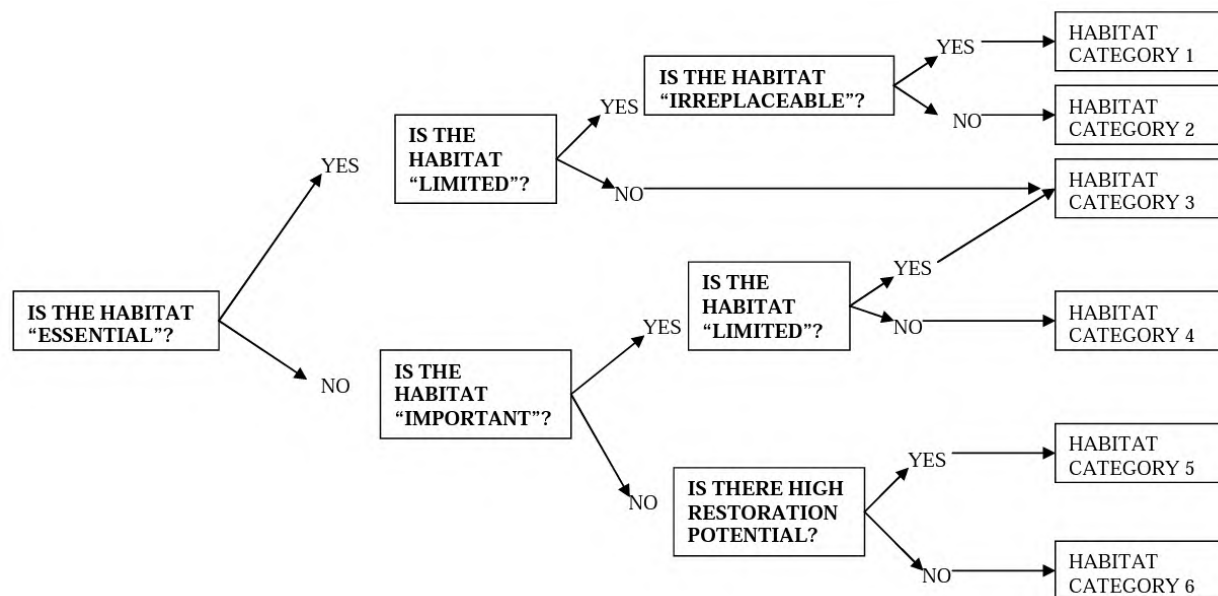


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Attachment 4: Draft Templates – Examples for pASC/ASC

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Site Boundary		
Site Boundary		acres
Micrositing Area		acres
Maximum Footprint ¹		acres
Solar Components		
PV Solar Modules		
Approx. total number		modules
Max Height at full-tilt		feet
Posts		
Approx. total number (assumes XXX concrete foundation)		posts
Cabling		
Combiner Boxes		each
Inverter Step Up Transformer Units		
Approx. total number		each
Noise level		dBA
Transformer oil-containing capacity		gallons
Related or Supporting Facility Components		
34.5 kV Collection System		
Collector line length, belowground		miles
Collector line length, overhead (OH)		miles
Wood Monopoles (max estimate for OH)		each
Collector Substations		
Substations w SCADA; Generator step-up transformers, each		each
Site size		acres
Transformer oil-containing capacity		gallons/each
Transformer noise level		dBA
Max height of structures		feet
Switchyards		
Stations; transformers, each		each
Site size (northern and/or within solar fence line); with foundations and graveled areas		acres
230 kV Transmission Line		
Length (total; northern line; southern line)		miles
Structures: Type (Wood or Galvanized Steel); quantity		each
Height of structures		feet

Commented [KT1]: Remember that this table should be modified based on what is being proposed. Not all items in this table will apply to each facility and this table should be modified based on what is being proposed by an applicant/certificate holder.

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
Battery Energy Storage System (Lithium-ion/Zinc)		
Zinc		
Approx. total batteries/containers on foundations with fans/heating systems; SCADA		each
Site size		acres
Approx. container dimensions		H x W x L; feet
Noise level (broadband)		dBA
Lithium-ion		
Approx. total batteries/containers on foundations with HVAC and fire suppression systems; SCADA		each
Site size		acres
Approx. container dimensions		H x W x L; feet
Noise level (broadband)		dBA
O&M Building		
Quantity		each
Site size		acres
Height		feet
Appurtenances	On-site well, septic system, SCADA System	
Storage for Replacement Solar Panels		
Containers		each
Approx. container dimensions		H x W x L; feet
Location		
Facility Roads		
Length		miles
Width		feet
Perimeter Fence		
Length		miles
Height		feet
Access/gates		each
Temporary Construction Areas		
Quantity		each
Site size		acres
Description		
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:		

Commented [KT1]: Remember that this table should be modified based on what is being proposed. Not all items in this table will apply to each facility and this table should be modified based on what is being proposed by an applicant/certificate holder.

Table 1: Facility Component Summary

Component and Design Standard	No.	Unit
1. The proposed energy facility would occupy approximately XXX acres within fenced micro siting areas. The entire energy facility footprint is considered a permanent disturbance area for the purposes of evaluating Fish and Wildlife Habitat; however, facility components would not occupy the entire area and under Council's Soil Protection standard, impacts within the micro siting area are not considered permanent.		

Commented [KT1]: Remember that this table should be modified based on what is being proposed. Not all items in this table will apply to each facility and this table should be modified based on what is being proposed by an applicant/certificate holder.

Table X: Proposed Facility Decommissioning Tasks and Cost Estimate

Task or Component	Quantity	Unit	Unit Cost (\$)	Estimate (\$)
1.1 Mobilization / Demobilization				
1.1.1 Equipment Mob		Lump Sum		0.00
1.1.2 Site Facilities		Lump Sum		0.00
1.1.3 Crew - Mob & Site Setup		Day		0.00
1.1.4 Crew - Demob & Site Cleanup		Day		0.00
			Subtotal	0.00
1.2 Project Site Support				
1.2.1 Site Facilities		Month		0.00
1.2.2 Field Management		Month		0.00
			Subtotal	0.00
1.3. Substation Retirement				
1.3.1 Fence Removal		Day		0.00
1.3.2 Transformer Removal		Each		0.00
1.3.3 Control Building Removal		Each		0.00
1.3.4 UG Utility & Ground Removal		Day		0.00
1.3.5 Remove Foundations		Cubic Yard		0.00
1.3.6 Misc. Material Disposal		Each		0.00
1.3.7 Restore Yard		Each		0.00
			Subtotal	0.00
1.4. Switchyard Retirement				
1.4.1 Fence Removal		Day		0.00
1.4.2 UG Utility & Ground Removal		Day		0.00
1.4.3 Dismantle/Loadout Racks & Switching		Each		0.00
1.4.4 Remove Foundations to Subgrade		Cubic Yard		0.00
1.4.5 Misc. Material Disposal		Each		0.00
1.4.6 Restore Yard		Each		0.00
			Subtotal	0.00
1.5 230 kV Transmission Line Retirement				
Conductor Removal		Feet		0.00
1.5.1 Remove Structures		Each		0.00
1.5.2 Remove Foundations to Subgrade		Each		0.00
			Subtotal	0.00
1.6 34.5 kV Overhead Collector Line Removal				
1.6.1 Conductor Removal		Feet		0.00
1.6.2 Utility Pole Removal		Each		0.00
			Subtotal	0.00
1.7 O&M Building Removal				
1.7.1 Structure Demo		Ton		0.00
1.7.2 Remove Foundations To Subgrade		Cubic Yard		0.00
1.7.3 Material T&D		Ton		0.00
			Subtotal	0.00
1.8 BESS Removal				
1.8.1 Battery Removal & Disposal		Each		0.00

1.8.2 Structure & Components Removal		Each		0.00
			Subtotal	0.00
1.9 Solar Array Retirement				
1.9.1 Fence Removal		Feet		0.00
1.9.2 Solar Panel Removal & Disposal		Panels		0.00
1.9.3.1 Solar Rack & Post Removal		Posts		0.00
1.9.3.2 Solar Rack & Post Trans. & Disposal		Truck Loads		0.00
			Subtotal	0.00
1.10 Inverter/Transformer Removal				
1.10.1 Disconnect Electrical		Each		0.00
1.10.2 Loadout Inverter & Transformer		Each		0.00
1.10.3 Trucking - Per Load		Each		0.00
			Subtotal	0.00
1.11 Inverter/Transformer/BESS Foundation Removal				
1.11.1 Excavate/Remove Foundations		Cubic Yard		0.00
1.11.2 Concrete Transport and Disposal		Each		0.00
			Subtotal	0.00
1.12 Site Restoration				
1.12.1 Site Roads - Removal and Restoration		Feet		0.00
1.12.2 Remove Conex Storage and Gravel Pads		Each		0.00
1.12.3 Spot Grade Disturbed Areas		Acre		0.00
1.12.4 Re-Seed Disturbed Areas		Acre		0.00
			Subtotal	0.00
Total Decommissioning Cost				0.00
Contractor Markups				
Home Office, Project Management			0.05	0.00
Contractor OH & Fee			0.15	0.00
			Subtotal	0.00
Total Decommissioning Cost				0.00
Performance Bond			0.01	0.00
			Gross Cost	0.00
	Basis (% of Cost)	Basis (\$)	Contingency	Estimate (\$)
Administration and Project Management	100%	-	0.10	0.00
Future Development (Exclude Battery)	#DIV/0!	#DIV/0!	0.10	#DIV/0!
Future Development (Battery Only)	#DIV/0!	#DIV/0!	0.20	#DIV/0!
			Subtotal	#DIV/0!
TOTAL ESTIMATED COST (\$Q12023)				#DIV/0!
ROUNDED				#DIV/0!

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.

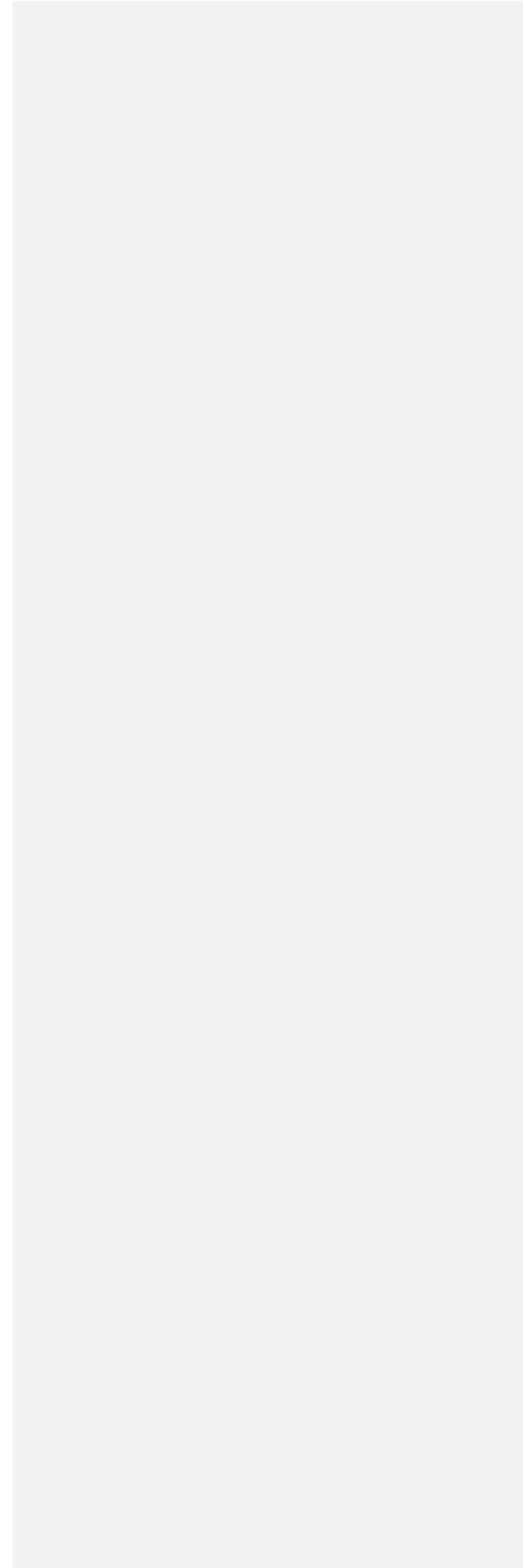
3. Tasks associated with a Lump Sum unit cost may be calculated using a fraction (in decimal form) of the actual quantities constructed or by using the more detailed breakdown of unit costs associated with the Lump Sum task identified in the cost estimating worksheet in ASC Exhibit X, Attachment X-1.

4. Added or modified by Department.

Habitat Mitigation Plan

Draft Template

December 2024



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Table of Contents

1.0 Introduction 1

2.0 Description of the Impacts Addressed by the HMP 1

3.0 Methods for Calculating the Size of the Mitigation Area 2

4.0 Mitigation Options..... 3

 4.1 Option 1: Conservation Easement Lands..... 3

 4.1.1 Habitat Enhancement Actions ~~43~~

 4.2 Option 2: Third-Party Payment-to-Provide..... 5

 4.3 Option 4: Fee-in-Lieu ~~76~~

5.0 Monitoring..... 8

6.0 Success Criteria..... 8

7.0 Amendment of the HMP..... 9

List of Tables

Table 1. Potential Impacts by Habitat Category, Type and Subtype..... 1

Table 2. Example Facility Schedule 1

Table 3. Compensatory Mitigation Ratios 2

Table 4. Land Cover Types within the Mitigation Area..... 3

List of Figures

Figure 1. Mitigation Area

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2.0 Description of the Impacts Addressed by the HMP

Commented [SE2]: Is this necessary/something we feel like we need to support?

Table 2. Example Facility Schedule

Commented [SE3]: Why is this needed?

Year	Activity

3.0 Methods for Calculating the Size of the Mitigation Area

Before beginning construction of each phase of the Facility, the Applicant will provide ODOE with a map showing the final design configuration for that phase of the Facility and a table showing the estimated acres of permanent and temporary impacts by habitat category (Table 1). The habitat mitigation area ~~was shall be~~ determined based on the Facility design and ~~actual-estimated~~ habitat impacts ~~(i.e., Category 2 vs. Category 6 habitat)~~. ~~Before beginning construction of each phase of the Facility, the Applicant will provide ODOE with a map showing the final design configuration for that phase of the Facility and a table showing the estimated acres of permanent and temporary impacts by habitat category (Table 1).~~ The Applicant will determine the final mitigation ratio in consultation with ODFW prior to construction. No mitigation will be implemented for impacts on Category 6 habitat (Table 3).

Because the Facility will be constructed in phases, it is assumed that compensatory mitigation will be based on the new impacts of each phase, and there would be no double counting of impacts associated with shared facilities with prior phases (e.g., shared transmission line or substation).

- Commented [SE4]: Don't agree with deferring the mitigation ratio to precon; this should be ironed out during permitting
- Commented [SE5]: Any clarification for Cat 6 - active ag?
- Commented [SE6]: Discuss

Table 3. Compensatory Mitigation Ratios

Final Habitat Category	Current Habitat Category ²	Mitigation Ratio Permanent ³	Mitigation Ratio Temporary ⁴

Final Habitat Category	Current Habitat Category ²	Mitigation Ratio Permanent ³	Mitigation Ratio Temporary ⁴
1. Current habitat condition and category as mapped by the Applicant prior to construction.			
2. Permanent impact areas based on final design and includes the Facility's footprint. No mitigation offered for Category 6 habitat.			

4.0 Mitigation Options

Commented [SE7]: Why are we specifying "adjacent to the facility"?

4.1 Option 1: Permittee Responsible Mitigation

Under this option, the Applicant would establish a conservation easement to fulfill the mitigation option. If Option 1 is pursued, the Applicant will continue to work with ODFW to identify opportunities to protect and enhance habitats in this area, and to define the appropriate monitoring of mitigation parcels. Prior to construction, the Applicant will provide an updated desktop analysis to confirm the habitat subtype within the mitigation parcel(s).

Table 4. Land Cover Types within the Mitigation Area

Habitat Category	Habitat Type	Acres	Percent of Mitigation Area

4.1.1 Habitat Enhancement Actions

The Applicant or a third party will address habitat enhancement as described in this section. Through implementation of habitat enhancement actions within the mitigation area, the Applicant can address the permanent and temporary habitat impacts of the Facility and meet the ODFW goals set forth in the Fish and Wildlife Habitat Mitigation Policy. The Applicant may choose one or more of the following enhancement actions based on the biological objectives of the habitat mitigation area. Final habitat enhancement actions will be based on field data and developed in coordination with ODFW and ODOE prior to construction, to improve habitat conditions, as appropriate and feasible:

1. **Shrub Planting.** The Applicant would plant native shrubs in locations within the habitat mitigation area. The Applicant would determine the size of shrub planting areas based on the professional judgment of a qualified biologist after a field survey. The size of shrub planting areas will depend on the size of the available habitat mitigation area and opportunity for survival of planted shrubs. The shrub survival rate at 4 years after planting is an indicator of successful enhancement of habitat quality to Category 2. The Applicant would complete the initial shrub planting within 1 year after beginning construction of the Facility. The Applicant would obtain shrubs from a qualified nursery and would identify the area to be planted after consultation with ODFW, subject to final approval by ODOE. The Applicant would mark planted shrub clusters at the time of planting for later monitoring purposes and would keep a record of the number of shrubs planted.
2. **Seeding.** The Applicant would plant an ODFW-approved seed mix within the habitat mitigation area in areas where the plant community would benefit from overseeding, or areas that have been recently disturbed (e.g., recent wildlife or weed treatment). The method for seed application would be determined primarily based on the size of the area to be seeded. The size of the seeded area will depend on the amount of recently disturbed area within the mitigation area. The Applicant would complete the initial seeding within 1 year after the beginning of construction of the Facility, or a particular phase of the Facility. The Applicant would record and mark the seeded areas at the time of seeding for later monitoring purposes.
3. **Weed Control.** The Applicant would implement a weed control program. Under the weed control program, the Applicant would monitor the habitat mitigation area to locate weed infestations and identify treatment areas. The Applicant would continue weed control monitoring, as needed, for the life of the Facility. As needed, the Applicant would use appropriate methods to control weeds subject to approval by ODOE, ODA, ODFW, and the county weed department. The Applicant may consider weeds to be successfully controlled when weed clusters have been eradicated or reduced to a non-competing level. Weeds may be controlled with herbicides, hand-pulling, or other method subject to agency approval. The Applicant would notify the landowner and ODOE of the specific chemicals to be used on

the site and when spraying will occur. To protect locations where young desirable forbs may be growing, spot-spraying may be used instead of total area spraying.

4. Fire Control. The Applicant would implement fire control measures for wildfire minimization when Facility staff are working within the habitat mitigation area. The Applicant will employ appropriate fire prevention measures and methods to detect fires that may occur and a protocol for fire response if a fire were to occur when Facility staff were present. If any part of the habitat mitigation area is damaged by future wildfire, the Applicant would assess the extent of the damage and implement appropriate actions to restore habitat quality in the damaged area.
5. Wildlife Guzzlers. The Applicant will install wildlife guzzlers to provide water for wildlife in areas of the habitat mitigation area where water resources are scarce.
6. Fence Maintenance and Removal. Fencing will be repaired or improved along the eastern boundary with private landowners to prevent encroachment by grazing cattle. The Applicant will remove unused boundary and internal fencing to promote big game movement through the habitat mitigation area. All unused fencing will be removed from the property and disposed of appropriately.
7. Riparian Planting. The Applicant would plant appropriate riparian species along streams to enhance these riparian areas, if present, for the benefit of fish and big game. Riparian plantings will improve access to nutritious woody vegetation for wintering deer, which is essential to over-winter survival during severe winters when annual grasses and native bunchgrasses are covered in snow. Riparian plantings will improve shading of streams, which will improve temperature conditions for fish at the location of plantings, as well as downstream. Riparian plantings will also provide cover for big game and help stabilize soil.
8. Fence Building. The Applicant would build fencing around the riparian plantings to reduce grazing pressure and allow riparian vegetation to grow. Fencing would be designed to exclude cattle but not deer. Woody vegetation is used by deer for foraging in the winter and provides cover for insulation and hiding.
9. Juniper Removal. Where appropriate, the Applicant would remove encroaching juniper to increase the amount of sunlight, moisture, and nutrients available for shrubs and forbs used by mule deer.
10. Habitat Protection. The Applicant would restrict uses of the mitigation area that are inconsistent with the goals of the Fish and Wildlife Habitat Mitigation Policy.

4.2 Option 2: Third-Party Payment-to-Provide

Under this option, the Certificate holder would partner with a qualified land conservation entity in land acquisition for the purpose of habitat protection and restoration.

The Certificate holder would meet its mitigation obligation by providing a one-time payment to the third-party mitigation provider prior to commercial operation of the Facility, or phase of the

Facility. The payment would take into consideration the cost of property acquisition for the mitigation area (i.e., Land Costs), habitat improvement actions (i.e., Restoration Action Costs or Habitat Enhancement Actions), maintenance and monitoring for long-term protection and management of the site (i.e., Stewardship Costs). The following formula would be used to determine the total mitigation payment:

$$\text{Mitigation cost per acre} = M * (R + L + V + S)$$

Where:

- M = Mitigation ratio as defined in Section 3
- R = Restoration costs per acre + contract administration costs to implement restoration
- L = Restoration maintenance costs per acre
- V = Land value per acre. Land costs of the mitigation site based on the appraised land value, actual costs, or a value determined by the third-party mitigation provider
- S = Stewardship endowment costs per acre, determined by the third-party mitigation provider

Because the equation above assumes a proportional payment to the acquisition and maintenance of the third-party's mitigation site, no specific habitat assessment of the mitigation site will be provided.

Prior to the construction, the Certificate holder would provide ODOE with a Memorandum of Understanding (MOU) between the Certificate holder and the third party mitigation provider that documents the transaction, confirms the applicability of the above mitigation equation, and includes a copy of the mitigation site's management plan. The management plan will be prepared by the third-party and would describe the long-term management goals and monitoring program for the mitigation site. The Certificate holder will request that the management plan acknowledge that the monitoring reports be available for ODOE review; and will provide copies of the monitoring reports in its annual report to the Department.

If Option 2 is selected, the certificate holder shall provide a habitat assessment and copy of the executed MOU with the land management entity demonstrating acquisition of lands to satisfy ODFW's habitat mitigation goals, confirms applicability of mitigation equation as presented in this HMP, and includes a copy of the management plan with enhancement actions, for which the third-party land management entity agrees to adhere. The certificate holder shall ensure that the MOU includes provisions limiting the ability of the land management entity to provide compensatory mitigation for more area than is available within the managed area based on the mitigation obligation for individual projects.

The certificate holder shall also provide a parent company guarantee, or equivalent financial security agreement, to the Department including terms and conditions which could result in new compensatory mitigation in the event reports from the third-party land management entity demonstrate long-term failure (i.e. documented trends not achieving success with plan's

success criteria) of the mitigation area, or other mitigation actions such as different enhancement actions at the mitigation area.

4.3 Option 3: Fee-in-Lieu

The Certificate holder understands that ODFW is considering a fee-in-lieu program that could be used to mitigate habitat impacts related to energy facilities. However, at this time, this program is not yet available. Should such a program become available in the future, the Applicate could use a payment-to-provide mitigation option with the approval of ODOE and ODFW.

5.0 Monitoring

For Option 3 (Conservation Easement), the Applicant will hire a qualified investigator (botanist, wildlife biologist, or revegetation specialist) to conduct a comprehensive monitoring program for the mitigation area, as appropriate. The purpose of this monitoring is to evaluate on an ongoing basis the protection of the habitat quality and the results of enhancement actions, especially during the winter and wildlife breeding seasons.

The investigator will monitor the habitat mitigation area for the life of the Facility beginning in the year following the initial planting. Monitoring will occur annually during the first 10 years following initial planting, then will occur every other year thereafter. The Applicant will develop a monitoring protocol in coordination with ODFW and ODOE depending on the enhancement actions selected. The monitoring duration will be developed in consultation with ODOE and ODFW and could include an assessment of the following:

- Quantification of habitat types and ODFW habitat categories present at the habitat mitigation area;
- Description of the amount and quality of vegetation at the habitat mitigation area;
- Description of the year-to-date climate data;
- Success of weed control measures through monitoring of infestation extents and recommend remedial action, if needed;
- Success of shrub plantings quantitatively through belt monitoring transects as well as qualitatively through an overall assessment of the treated area;
- Percent survival of riparian plantings;
- Documentation of fence removal;
- Wildlife observed and notes on special status species (wildlife and plants) encountered onsite during routine monitoring;
- Observations of wintering mule deer will be recorded as observed from a distance (so disturbance is kept at a minimum); and
- Record any wildfire that occurs within the habitat mitigation area and any remedial actions taken to restore habitat quality in the damaged area, if applicable.

Commented [AW8]: At the draft HMP phase we will not have identified enhancement actions to determine monitoring protocol. However, we want to develop a standard set of monitoring protocols that would be used for the various enhancement actions. This will help eliminate the poor quality data we've seen on other projects that makes it difficult to determine if success criteria are met. These would be incorporated into the final HMP.

6.0 Success Criteria

Mitigation of the permanent and temporal habitat impacts of the Facility may be considered successful if the Applicant protects and enhances sufficient habitat to meet the ODFW goals for habitat impacts, or provides commensurate funding for a third party to perform enhancement and

Commented [SE9]: I think we want to get away from using the phrase temporal since we are now talking about all temporary impacts (for solar)

monitoring. The Applicant must ensure protection of the required quantity and quality of habitat within the habitat mitigation area for the life of the Facility, including providing commensurate funding for ODFW or a third party to do so.

The Applicant must protect a sufficient quantity of habitat to meet habitat mitigation area requirements based on the final design configuration of the Facility. The Applicant will determine the actual habitat mitigation area requirements for each phase of the Facility, subject to ODFW review and ODOE approval, before beginning construction. The Applicant, ODFW, or a third party may demonstrate improvement of habitat quality based on habitat categorization surveys and evidence of indicators such as survival of planted shrubs, natural recruitment of sagebrush, and successful weed control. If the Applicant cannot demonstrate that the habitat mitigation area is trending toward habitat quality goals described above within five years after initial enhancement actions, then the Applicant would propose remedial action. ODOE may require supplemental planting or other corrective measures.

7.0 Amendment of the HMP

This HMP may be amended from time to time if deemed necessary by ODOE, on behalf of the Oregon Energy Facility Siting Council (EFSC), for the facility to maintain compliance with the standard. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this HMP. ODOE shall notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this HMP agreed to by ODOE.

Figure

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Fugitive Dust Control Plan – Draft Template

Fugitive Dust Control Plan
Draft Template

Table of Contents

Fugitive Dust Control Plan – Draft Template

Introduction..... 3

Roles and Responsibilities..... 3

Monitoring..... 3

Training and Qualifications 4

Implementation of Fugitive Dust Prevention and Management 4

References 6

List of Figures

Figure 1. Dust Control Plan Flow Chart..... 6

List of Attachments

Attachment 1: Fugitive Dust Sources and Reasonable Available Control Measures

Introduction

This Fugitive Dust Control Plan is an owner-imposed Plan that is expected to be implemented, maintained, and adaptively managed by the Certificate Holder's Environmental Inspector and selected contractor throughout all phases of construction to minimize incidence of fugitive dust pollution as a result of construction activities. The performance criteria and suggested measures identified in this Plan are minimums, and the Environmental Inspector is expected to identify and implement additional measures as needed. This Plan was developed to comply with OAR 345-022-0022. and OAR 340-208-0210.

Roles and Responsibilities

The Certificate Holder will designate an Environmental Inspector who will be responsible for implementation of the Plan.

The Environmental Inspector will:

- Have an active CESCL (Certified Erosion and Sediment Control) certification.
- Retain a copy of the Dust Control Plan at the facility site at all times during construction and operation.
- Develop and maintain maps of water truck routes and water supply locations within and surrounding the project. Such documents should be available to inspectors and other agencies, upon request.
- Implement the Plan and ensure that all employees, workers, and subcontractors know their responsibilities regarding dust control.
- Monitor construction activity to ensure compliance with the Plan.
- Identify when reasonably available and best available control measures are not adequate.
- Direct water trucks, direct civil activities, and direct road maintenance.

Monitoring

The Environmental Inspector will be responsible for ensuring that the measures in this Plan are implemented, monitored, and adaptively managed, and that any exceedances are immediately reported to the Certificate Holder for corrective action.

The visual monitoring required by the 1200-C permit must occur at least once every 14 calendar days. However, because OAR 340-208-0210 restricts visible fugitive emissions on a continuous standard to a maximum of **18 seconds in any 6-minute period**, and because fugitive dust emissions may provide an immediate public safety concern, this Plan requires that fugitive dust be monitored and controlled on an ongoing basis.

Monitoring for fugitive dust emissions shall include:

- Use of EPA Method 22 (ODEQ 2019) as specified in OAR 340-208-0210, at least once per day during the summer.

Commented [SE1]: This needs work..

Commented [AW2R1]: Revised

Fugitive Dust Control Plan – Draft Template

- The observation shall be performed during times of peak construction activity at the downwind property boundary.
- Recording of observations in a fugitive dust inspection log that is kept on site and shall be available digitally to the Certificate Holder and ODOE. This log shall include all information required in EPA Method 22. Photos and/or video taken during the observation period to document conditions shall be available digitally to ODOE upon request.
- Establishment of a Dust Control Hotline.

Triggers for additional, more frequent monitoring will include:

- Observation of visible fugitive dust emissions by the contractor, agency, or Certificate Holder staff.
- Wind speeds or gusts greater than 15 miles per hour.
- Receipt of complaints or concerns through the Project Dust Control Hotline or other means.

Reporting

A dust inspection log shall be completed after each dust inspection. Log records shall be made available digitally to ODOE upon request and included in construction monitoring reports. Any documented exceedance events shall include a detailed explanation of Reasonable Available Control Measures (RACMs) implemented for corrective action and the results of subsequent monitoring demonstrating fugitive dust has returned to below exceedance thresholds.

Training and Qualifications

EPA Method 22 (ODEQ 2019) does not require a specific certification, but it is necessary that the person responsible for observations completed for this method be knowledgeable with respect to the general procedures for determining the presence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training is to be obtained from written materials found in the references cited in Method 22 or from the lecture portion of the EPA Method 9 certification course. The Environmental Inspector shall document in the inspection log how the person responsible for observations meets this requirement.

Construction workers will attend a Worker Environmental Awareness Program training prior to conducting construction activities. This training will include a summary of fugitive dust control measures included in this Plan and the responsibilities of personnel working on the Facility related to fugitive dust control.

Implementation of Fugitive Dust Prevention and Management

As shown in the flow chart in Figure 1, if fugitive dust emissions in excess of the ODEQ criteria of **18 seconds in a 6-minute period** occur, the Environmental Inspector shall:

Fugitive Dust Control Plan – Draft Template

- Implement adaptive management actions, including altering work operations, implementing supplemental RACMs, and/or pausing work until the fugitive dust emissions are controlled.
- Document that fugitive dust emissions have been controlled, including monitoring with EPA Method 22 and RACMs implemented.
- In addition to any reporting requirements required in the 1200-C permit, report noncompliance incidents and adaptive management actions taken to ODOE by the Certificate Holder within 24 hours of occurrence.

The Certificate Holder's contractor shall maintain and implement dust control during all phases of construction at the direction of the Environmental Inspector. The Certificate Holder is responsible for ensuring their contractor complies with dust control requirements. Table 1 provides suggested RACMs for anticipated fugitive dust sources based on industry-standard BMPs and reasonable precautions specified in the Oregon 1200-C permit, ODEQ's Construction Stormwater Best Management Practices Manual (ODEQ 2021), and OAR 340-208-0210. Supplemental RACMs are identified in the table in case initial RACMs are not effective in controlling fugitive dust or are not feasible to implement.

The Environmental Inspector shall identify and implement additional RACMs as needed to control fugitive dust emissions. Additionally, the Environmental Inspector may propose alternative approaches and RACMs for controlling fugitive dust. This proposal shall be made in writing and is subject to the approval of the Certificate Holder.

Commented [CC3]: I may be missing it, but I don't see a requirement for documentation of RACMs that are/will be included at the site. If we want that we may want to add to the roles and responsibilities section above?

Commented [AW4R3]: Revised to include RACM reporting

Fugitive Dust Control Plan – Draft Template

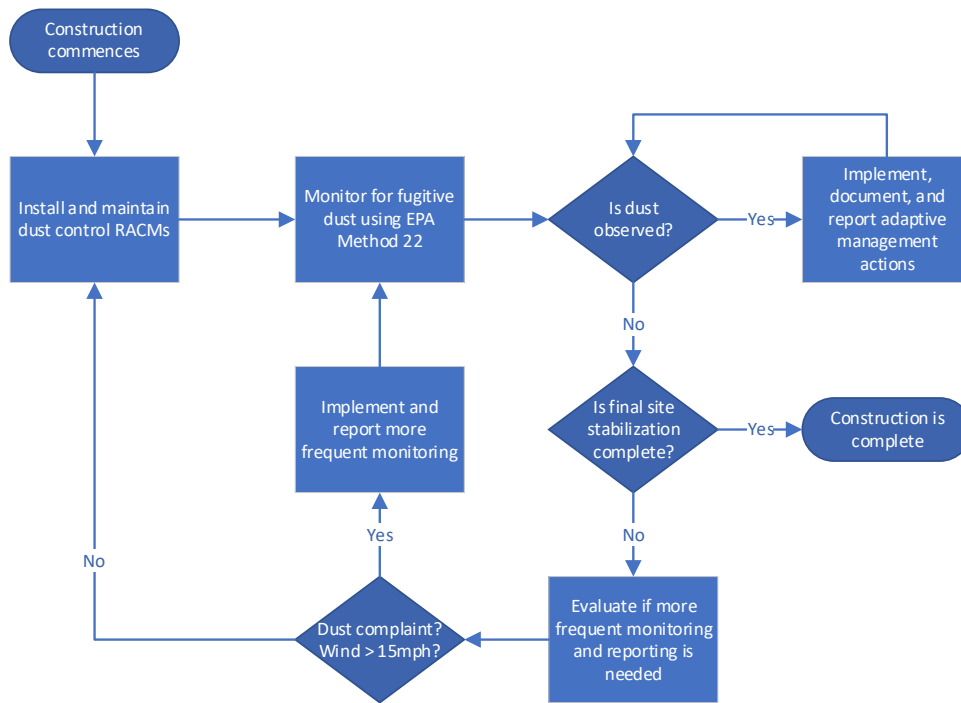


Figure 1. Dust Control Plan Flow Chart

References

- ODEQ (Oregon Department of Environmental Quality). 2019. OAR 340-208-0210 EPA Method 22. Available online at: <https://secure.sos.state.or.us/oard/viewAttachment.action?ruleVrsnRsn=256141>
- ODEQ. 2021. Construction Stormwater Best Management Practices Manual. Available online at: <https://www.oregon.gov/deq/wq/Documents/wqpBMPManual.pdf>

Fugitive Dust Control Plan – Draft Template

Attachment 1: Fugitive Dust Sources and Reasonable Available Control Measures

Fugitive Dust Control Plan – Draft Template

Table 1. Fugitive Dust Sources and Reasonable Available Control Measures

Construction Phase	RACM(s)	Supplemental RACM(s)
All Phases of Construction	Daily fugitive dust monitoring and record keeping.	Increase frequency of monitoring.
	Prominent display of Dust Control Hotline signs, providing direct access to the Environmental Inspector.	If established, proactive engagement with Community Action Council.
	Worker Environmental Awareness Program training for all construction employees.	Additional trainings and refreshers for employees.
	Maintain stockpile of BMPs on site, including sufficient palliatives for a single treatment of all site access roads and sufficient palliatives, mulch, and/or hydromulch for a minimum of 25 percent of the total disturbed area, and machinery for application.	Increase stockpile of palliatives, mulch, and/or hydromulch and add additional BMPs.
	Documentation and reporting of adaptive management actions.	Development and submittal of revised Fugitive Dust Control Plan.
Site Access	Install and maintain stabilized construction entrances at ingress/egress locations and restrict traffic to these locations.	Add additional construction entrance BMPs (e.g., wheel wash).
	Daily sweeping up of sediment from paved surfaces utilizing vacuum sweeper with HEPA filtration.	Increase sweeper frequency.
	Access roads shall be graveled.	Road maintenance and reapplication of gravel.
	Access roads will be stabilized with water or palliative sufficient to eliminate visible and sustained dust from vehicular travel and wind erosion. Reapply stabilization as necessary to maintain dust-free condition.	If water is unavailable or ineffective, or if water use is limited by any agency or regulation, access roads will be stabilized with longer-lasting palliatives.
	Restrict construction traffic to established and stabilized access routes.	Install fencing or barricades to prevent traffic outside of established routes.
	Limit traffic speeds to 15 miles per hour on stabilized unpaved roads within the site as long as such speeds do not create significant visible dust	Limit traffic speeds within the site to 5 or 10 miles per hour.

Commented [SE5]: Which of these, if any, goes beyond the requirements of the 1200-C?

Commented [AW6R5]: DEQ seems to agree with these RACMS so we're being consistent with what they would require

Fugitive Dust Control Plan – Draft Template

Construction Phase	RACM(s)	Supplemental RACM(s)
	emissions. Traffic speed signs shall be displayed prominently at all site entrances and exits.	
	Minimize disturbance areas and soil exposure to the maximum extent feasible.	Limit work to a portion of the disturbed area until all disturbed areas receive temporary or final stabilization.
	When wind speeds or gusts exceed 15 miles per hour, minimize new disturbances to the extent possible and/or mobilize additional water trucks or palliatives to minimize fugitive dust from exposed surfaces.	Stop all ground disturbing activities and apply additional dust control measures until measures are effective or wind speeds slow and fugitive emissions stop.
	Separate and cover or otherwise stabilize topsoil to preserve it until it is replaced during revegetation.	Increase maintenance frequency for topsoil cover/stabilization. Combine methods, such as mulch plus tackifier.
	Stabilize exposed soils within the timeframes established in the 1200-C permit. Stabilize exposed soils in stages based on site conditions and weather.	Stabilize exposed soils more frequently, even if additional work is anticipated within the timeframe established in the 1200-C permit. Reapply stabilization measures following any additional disturbances.
	Temporarily stabilize exposed surfaces to prohibit significant and sustained visible fugitive dust from wind erosion. Utilize BMPs such as mulch, hydromulch with or without seeds, tackifier, spreading stone or gravel, and trackwalking.	Combine stabilization methods, such as mulch plus tackifier, or trackwalking plus hydromulch. Increase frequency of maintenance of stabilization.
	Seed exposed surfaces during the appropriate season with approved temporary or permanent seed mixes.	Reapply seed to newly disturbed areas or areas with poor germination. Use temporary seeding even if additional work is anticipated before final stabilization. Use irrigation to enhance seeding success.
Removing and Hauling Sand, Soil, or other Loose Materials	Gate seals should be tight on dump trucks. Soil load shall be kept below 6 inches of the freeboard of the truck. Drop heights shall be minimized when loaders dump soil into trucks. Gate seals will be checked and tight on	Cover haul trucks with a tarp or other suitable cover.

Commented [SE7]: And? Preserve and re-place? Or can they move it and use it wherever they want?

Commented [AW8R7]: Revised

Fugitive Dust Control Plan – Draft Template

Construction Phase	RACM(s)	Supplemental RACM(s)
	dump trucks. All trucks on highways must be fully covered and secured.	

Draft Construction Vegetation and Soil Management Plan

ODOE Template

Instructions for Siting Analyst during review of an ASC/RFA:

- Provide template to applicant/certificate holder. To the extent it can be determined during review of an ASC/RFA, determine reseeding mixtures, herbicides and weed removal/management methods, soil reclamation activities, and site planning to reduce erosion, impacts to soils. Measures in this Plan should be consistent with the Wildfire Mitigation Plans, 1200-C and any Land Use Mitigation Plans.
- Once applicant or certificate holder have filled out the template, coordinate with County Weed Department's and ODA, as appropriate, to determine BMPs.
- Delete this prior to sending to applicant/certificate holder.

Instructions for Applicants and Certificate Holders:

- **Use of the template is not required**, and provisions in this template may be modified depending on the type of energy facility under review. Use of the template does not guarantee satisfaction with the Council's Soil Protection, Land Use, Fish and Wildlife or other applicable Council standard. Use of the template does not establish a defense for any enforcement action for violation of a site certificate, Council order or rule.
- Areas in yellow highlight to be updated based on the applicant/certificate holder proposal and should be filled out to the extent known at the time of review of the ASC/RFA. This information will be updated/finalized based on final design prior to operation of the facility.
- All changes to this template must be made in track changes for the Department to evaluate the scope of changes made.

Applicable EFSC Site Certificate Conditions

Copy conditions in

XXX

1.0 Finalizing Vegetation and Soil Management Plan Prior to Construction (PRE)

1.1 Update Applicable Sections of Plan

To finalize this Vegetation and Soil Management Plan prior to construction of the facility:

Update Section 2.3 (or attachments to the Plan) with Baseline data for Vegetation, Soils, Weeds, and Soil Conditions.

Update Section 3.1 (or attachments to the Plan) with facility construction phasing and resource location figure(s).

Update Section 3.4.2 with weed lists, weed management and treatment standards (timing, method, and application rates for each identified weed species of concern).

Update Section 3.5.2 with facility seed mixes, weed free straw, fertilizers and their sources and proposed location for use.

2.0 Prior to Construction Task List (PRE)

Prior to construction submit to the Department:

1. Environmental Inspector(s) or Contractors resume or qualifications and proposed on site schedule must be provided to the Department to demonstrate compliance. Section 2.1
2. Training attendee list and training materials must be provided to the Department to demonstrate compliance. Section 2.2
3. Provide evidence that existing noxious weed infestations have been identified and treated in a manner consistent with this Plan (Section 3.4.2.1). Section 2.4
4. Evidence, contact information and procedures for use of a Dust Control Hotline. Dust Control Hotline information must be publicly visible from public roads around the facility.

2.1 Environmental Inspector(s)/Contractor Qualifications

The certificate holder is responsible for ensuring that it and all contractors perform work in accordance with applicable permit requirements and all agreed upon methods designated in this Plan.

Minimum qualifications for Construction Environmental Inspector(s) include:

- Have an active CESCL (Certified Erosion and Sediment Control) certification.
- Experience implementing the measures in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit.
- Experience and knowledge of EPA Method 22 (ODEQ 2019) with respect to the general procedures for determining the presence of visible emissions.
- Experience in native plant, non-native and invasive plants, and noxious weed identification and management.
- Experience in native plant, non-native and invasive plants, and noxious weed identification;
- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; and
- Experience in coordination with agency and private landowners.
- Experience with construction-related restoration including timing, methods, and management.

- ☐ Compliance Deliverable: Environmental Inspector(s) or Contractors resume or qualifications and proposed on site schedule must be provided to the Department to demonstrate compliance.

2.2 Environmental Training (PRE)

Prior to construction, certificate holder will hold an on-site environmental training with contractors and construction personnel, environmental inspector(s), inviting specialty contractors, ODA, ODFW, the County, participating and adjacent landowners, ODOE, and any other potentially impacted or interested parties. The environmental training may be combined with other on-site training as long as the training, includes (but is not limited to):

- Weeds:
 - Education and identification of ODA and County weed species of concern;
 - Known locations of noxious weed infestations and plans for weed treatments prior to construction;
 - Best management practices (BMPs) discussed in Section XX of this Plan include when and where to wash construction equipment, limiting vehicle access in areas with weeds, and flagging, pulling and treating noxious weeds discovered during construction.
- Soil Protection and Fugitive Dust:
 - Fugitive Dust Sources
 - Fugitive dust Reasonable Available Control Measures described in Section XX of this Plan;
 - Erosion control and site stabilization measures in the NPDES 1200-C permit;
 - Topsoil management including XXXXX from Section XX of this Plan;
- Vegetation Management:
 - Vegetation and construction activities will be managed in accordance with an applicable Wildfire Mitigation Plan and in a manner that reduces wildfire risk as a result of construction of the facility (restricted vegetation height, restricted vehicle access in vegetated areas)
 - Vegetation removal and management for site preparation and construction will be designated in this plan and provided at training(s)

- ☐ Compliance Deliverable: Training attendee list and training materials must be provided to the Department to demonstrate compliance.

2.3 Baseline Pre-Construction Site Conditions and Methodology (PRE)

The final Vegetation and Soil Management Plan will include figures and survey data showing the locations for baseline measurements for soils and weeds.

Baseline measurements for soil conditions and weeds will be conducted prior to construction activities and will be used to monitor successful soil restoration (supported by revegetation) and weed management – these are addressed in the Operational Vegetation and Soil Management Plan.

The location of baseline measurement plots will be based on site specific factors such as soil type, erodibility, topography, and based on the anticipated location of facility components (solar array, graveled areas, transmission line corridors, etc.). Baseline measurement plots will be made:

- Within the solar array fence line (includes roads, solar array, O&M area, and fencelines, etc.) approximately one plot per 400 acres (25 sample plots for a 10,000 facility);
- Along transmission line corridor, approximately two plots per one mile, depending on differing or same site conditions along the corridor.

2.3.1 *Baseline Vegetation*

Baseline vegetation is not intended to create success criteria for habitat, but to inform seed mixtures and the types of vegetation that successfully grow in the area.

Seed mixtures that support low growing, noninvasive and fire resistant species appropriate for the site are XX, XX, and XX., and are discussed further in Section XX.

Background Site Information:

Fill in information from ASC/RFA, County, and/or ODFW, and Department review. Focus on lower growing vegetation/ground cover and not on larger shrub and tree species, since those types of vegetation will be removed from within the fence line.

Example:

The site is characterized as eastside grasslands and shrub-steppe. Non-native grasses including cheatgrass (*Bromus tectorum*), and medusahead (*Taeniatherum caput-medusae*), as well as the native perennial bunchgrass bluebunch wheatgrass (*Pseudoroegneria spicata*) were the dominant species both in eastside grasslands as well as the understory of shrub-steppe vegetation. Minimal bare ground. See Table XX for weed species observed.

Include attachment Exhibit P, Botanical Survey Report Attachment XX, Vascular Plants Observed During Field Surveys and Site Photographs.

2.3.2 *Baseline Weed Conditions*

2.3.2.1 *ODA and County Weeds*

Oregon State Weed Board (OSWB) and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System. There are three designations under the State's system:

- **Class A State Listed Noxious Weed:** 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 in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
 - **Recommended Action:** Infestations are subject to eradication or intensive control when and where found.

- **Class B State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but 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.
- **Class T Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. T-designated noxious weeds are selected annually from either the A or B list and the ODA is directed to develop and implement a statewide management plan for these species.

Weeds are managed in XX County by the XX Weed Program Manager to enforce its ordinance, XX.

XX County has its own weed classification system that differs from the state. Per the county ordinance, XX County defines two classifications of weeds:

- **Noxious Weed:** Any plant which determined by the County Board of Commissioners to be injurious to public health, crops, livestock, land, or property.
- **Weeds of Economic Importance:** Weeds which result in economic impact and which are identified by the County Weed Advisory Board and approved by the County Board of Commissioners as appropriate targets for intensive control or eradication as feasible.

The Oregon Department of ODA lists 46 Class A species and 94 Class B species for the state (ODA 2020). XX County specifically recognizes XX species of noxious weeds and XX weeds of economic importance. Although not all of the XX County listed noxious weeds noted in Table X occur within or near the facility, the certificate holder and its contractors should be aware of the entire list while monitoring and controlling weeds.

Table 1. XX County Weed Department Weed Lists and Classifications

Scientific Name	Common Name
Noxious Weeds	
<i>Butomus umbellatus</i>	flowering rush
<i>Cardaria (Lepidium) draba</i>	whitetop (hoary cress)
<i>Carduus acanthoides</i>	plumeless thistle
<i>Carduus nutans</i>	musk thistle
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Centromadia (Hemizonia) pungens</i>	common spikeweed
<i>Chondrilla juncea</i>	rush skeletonweed
<i>Crupina vulgaris</i>	common crupina
<i>Cynoglossum officinale</i>	houndstongue

Table 1. XX County Weed Department Weed Lists and Classifications

Scientific Name	Common Name
<i>Euphorbia esula</i>	leafy spurge
<i>Iris pseudacorus</i>	yellow flag iris
<i>Linaria dalmatica</i>	dalmatian toadflax
<i>Linaria vulgaris</i>	yellow toadflax
<i>Lythrum salicaria</i>	purple loosestrife
<i>Onopordum acanthium</i>	Scotch thistle
<i>Salvia aethiopis</i>	Mediterranean sage
<i>Senecio jacobaea</i>	tansy ragwort
Weeds of Economic Importance	
<i>Acroptilon repens</i>	Russian knapweed
<i>Aegilops cylindrica</i>	jointed goatgrass
<i>Avena fatua</i>	wild oats
<i>Bassia (Kochia) scoparia</i>	kochia
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Centaurea stoebe</i> subsp. <i>micranthos</i>	spotted knapweed
<i>Cicuta douglasii</i>	water hemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Conium maculatum</i>	poison hemlock
<i>Convolvulus arvensis</i>	field bindweed
<i>Cuscuta</i> spp.	field dodder
<i>Euphorbia myrsinites</i>	myrtle spurge
<i>Hypericum perforatum</i>	St. Johnswort
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Secale cereale</i>	cereal rye
<i>Sonchus arvensis</i>	perennial sowthistle
<i>Sorghum halepense</i>	johnsongrass
<i>Taeniatherum caput-medusae</i>	medusahead rye
<i>Tribulus terrestris</i>	puncturevine
<i>Ventenata dubia</i>	ventenata

2.3.2.2 Weeds Identified on Site**Noxious Weeds Identified at the Site During Permitting (ASC/RFA)**

The survey area for these surveys included all lands within the XX acre microsite area and/or site boundary, with the exception of active agricultural lands, including the transmission line route(s). Surveys were conducted by XX on DATE.

Table 2: Noxious Weeds Identified During DATE Surveys at the Facility

Scientific Name	Common Name	State Status (ODA) ¹	XX County Status	Frequency/Location
<i>Acroptilon repens</i>	Russian knapweed	B	Weed of Economic Importance	Two observations within the northern portion of the Facility Survey Area
<i>Aegilops cylindrica</i>	jointed goatgrass	B	Weed of Economic Importance	Two observations within the Facility Survey Area; one in the northeast and one in the southeast
<i>Bassia (Kochia) scoparia</i>	kochia	B	Weed of Economic Importance	Commonly observed within the Facility Survey Area
<i>Centaurea diffusa</i>	diffuse knapweed	B	Weed of Economic Importance	Abundant within of the Facility Survey Area
<i>Centaurea solstitialis</i>	yellow starthistle	B	Noxious Weed	Commonly observed in the central-eastern and southeastern portions of the Facility Survey Area
<i>Centromadia (Hemizonia) pungens</i>	common spikeweed	B	Noxious Weed	One observation in the central-eastern portion of the Facility Survey Area
<i>Chondrilla juncea</i>	rush skeletonweed	B/T	Noxious Weed	Observed in three locations in the south-central portion of the Facility Survey Area
<i>Convolvulus arvensis</i>	field bindweed	B	Weed of Economic Importance	One observation within the central portion of the Facility Survey Area
<i>Lepidium latifolium</i>	perennial pepperweed	B/T	Weed of Economic Importance	One observation within the north-central portion of the Facility Survey Area
<i>Onopordium acanthium</i>	Scotch thistle	B	Noxious Weed	One observation in central-eastern portion of the Facility Survey Area

Table 2: Noxious Weeds Identified During DATE Surveys at the Facility

Scientific Name	Common Name	State Status (ODA) ¹	XX County Status	Frequency/Location
<i>Secale cereale</i>	cereal rye	Not listed	Weed of Economic Importance	Commonly observed in scattered locations of the Facility Survey Area; most abundant in southwestern portion of Survey Area
Sources: XX County 20XX, ODA 20XX. 1. ODA: B = A weed of economic importance that is regionally abundant, but that may have limited distribution in some counties. T = priority targets for control.				

Noxious Weeds Identified at the Site Prior to Construction Facility

The survey area for these surveys included all lands within the XX acre micro-siting area and/or site boundary, with the exception of active agricultural lands, including the transmission line route(s). Surveys were conducted by XX on DATE.

Table 3: Table 1: Noxious Weeds Identified During DATE Surveys at the Facility

Scientific Name	Common Name	State Status (ODA) ¹	XX County Status	Frequency/Location
<i>Acroptilon repens</i>	Russian knapweed	B	Weed of Economic Importance	Two observations within the northern portion of the Facility Survey Area
<i>Aegilops cylindrica</i>	jointed goatgrass	B	Weed of Economic Importance	Two observations within the Facility Survey Area; one in the northeast and one in the southeast
<i>Bassia (Kochia) scoparia</i>	kochia	B	Weed of Economic Importance	Commonly observed within the Facility Survey Area
<i>Centaurea diffusa</i>	diffuse knapweed	B	Weed of Economic Importance	Abundant within of the Facility Survey Area
<i>Centaurea solstitialis</i>	yellow starthistle	B	Noxious Weed	Commonly observed in the central-eastern and southeastern portions of the Facility Survey Area

Table 3: Table 1: Noxious Weeds Identified During DATE Surveys at the Facility

Scientific Name	Common Name	State Status (ODA) ¹	XX County Status	Frequency/Location
<i>Centromadia (Hemizonia) pungens</i>	common spikeweed	B	Noxious Weed	One observation in the central-eastern portion of the Facility Survey Area
<i>Chondrilla juncea</i>	rush skeletonweed	B/T	Noxious Weed	Observed in three locations in the south-central portion of the Facility Survey Area
<i>Convolvulus arvensis</i>	field bindweed	B	Weed of Economic Importance	One observation within the central portion of the Facility Survey Area
<i>Lepidium latifolium</i>	perennial pepperweed	B/T	Weed of Economic Importance	One observation within the north-central portion of the Facility Survey Area
<i>Onopordium acanthium</i>	Scotch thistle	B	Noxious Weed	One observation in central-eastern portion of the Facility Survey Area
<i>Secale cereale</i>	cereal rye	Not listed	Weed of Economic Importance	Commonly observed in scattered locations of the Facility Survey Area; most abundant in southwestern portion of Survey Area
Sources: XX County 20XX, ODA 20XX. 1. ODA: B = A weed of economic importance that is regionally abundant, but that may have limited distribution in some counties. T = priority targets for control.				

In addition to noxious weeds, cheatgrass, an invasive annual grass, was identified within the microsite area/site boundary. While this species is not listed as a noxious weed by the state or county, it and other invasive annual grasses can adversely impact habitat and can increase fire risk and will be monitored and managed as described in the Operational XX Plan/Section XX.

2.3.3 Baseline Soil Conditions

Baseline soil compaction measurements will be taken prior to construction, using one or more of the following procedures:

- Soil physical observations and estimations. These tests involve describing the soils physical characteristics and include describing the soil profile and determining aggregate size. Soil pits up to 36 inches will be dug in the sampling area. Soils will then be described by their topsoil depths, Munsell Color, and aggregate size. Topsoil depth is important for water

storage and nutrient supply for plant growth. Generally, removal of the topsoil will result in loss of soil fertility, water-holding capacity, soil organic carbon content, and productivity. Soil structure is the arrangement and organization of particles in the soil. Soil structure affects the retention and transmission of water and air in the soil as well as the mechanical proper ties of the soil. This test only needs to be done once at the start of the site monitoring efforts as these characteristics will not change unless there are additional disturbances to the soil.

- Infiltration rate test. Infiltration is the process of water entering the soil. The rate at which water enters the soil is the infiltration rate, which is dependent on the soil type; soil structure, or amount of aggregation; and the soil water content (Lowery et al. 1996). This test will show the effects of compaction from construction in each site. Compacted soils will have less pore space, resulting in lower infiltration rates. Lower infiltration rates will result in more runoff (creating erosion issues) and less available water for plants.
- Nutrient test that includes organic matter content and pH. A nutrient test will show the plant available nutrients in the soil which is an indicator for plant productivity. The organic matter content measurement gives the amount of stored nutrients, including organic carbon, in the soils that can be made available to plants based on the health of the soil microorganisms. Soil pH is a measure of the acidity or alkalinity of a soil, which affects the availability of plant nutrients, activity of microorganisms, and the solubility of soil minerals. This test will show the available nutrients in the soils.
- A soil penetrometer or other appropriate method. Resistance is measured at 3-inch intervals until the meter goes above 300 psi, which is a level of soil compaction most roots cannot penetrate. For this test compaction would be measured at 3, 6, 9, and 12 inches if the soils allowed.

If any of the above criteria have changed more than 10 percent from the surrounding undisturbed soils or baseline conditions, mitigation measures such as further decompaction of the impacted soils, additional nutrients or minerals to adjust pH, or the addition of composted organic matter will be taken, as addressed in the Operational Vegetation and Soil Management Plan.

2.4 Weed Treatment Prior to Construction

Prior to construction, vegetation removal, and ground disturbing activities, weeds discovered in the baseline weed survey and within the site, will be managed using methods described in Section XX.

- Construction will be coordinated and sequenced with landowners to maintain land in current production and weed control until just prior to construction.
- In the spring, fall or winter of the year prior to when construction would occur, areas of high erosion risk (e.g., slopes, areas with low vegetative cover) should be seeded with a non-invasive, non-persistent cover crop such as triticale to demonstrate soil stabilization.
- Prior to construction, areas of noxious weed infestations will be flagged to alert construction personnel to their presence.

- ☐ Compliance Deliverable: Provide evidence that existing noxious weed infestations have been identified and treated in a manner consistent with this Plan.

3.0 Construction Vegetation and Soil Management Plan (CON)

3.1 Figures

A Site Plan or Figures is included in this plan as Figure(s)/Attachment(s) XX, and GIS data that is submitted to the Department, as applicable, will show and describe:

- General construction phasing (what will be constructed first, or at the same time, etc.);
- Location of equipment wash stations (weed control);
- Location of vegetation free areas, including dimensions, for hot work areas, parking lots, roads, graveled areas, etc.;
- Maps or locations of water truck routes and water supply locations within and surrounding the project.

3.2 Environmental Inspector(s)/Contractor(s)

The Environmental Inspector(s) will:

- Be on site during construction activities that involve ground disturbing, grading, weed treatments, vegetation removal, and high traffic volumes.
- Retain a copy of this Plan at the facility site at all times during construction.
- Monitor and record construction activity to ensure compliance with this Plan.
- Assist in contractor(s) for the direction of water trucks, civil activities, and road maintenance to reduce fugitive dust and erosion issues.
- Identify when reasonably available and best available control measures (RACMs) are not adequate, as designated in Section XX of this Plan.
- Maintain dust inspection and noxious weed logs and reporting designated in this Plan

3.3 Site Preparation BMPs

The following Best Management Practices (BMPs) will be implemented on an ongoing basis during site preparation and construction of the facility or phase of the facility.

- Where applicable, soils will be mechanically scarified (e.g., tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction, to maintain soil productivity, and reduce the potential for erosion on compacted soils.
- The topsoil will be stockpiled separately from the subsurface soils.
- Soil preparation will involve standard, commonly used methods, and will take into account all relevant site-specific factors, including slope, size of area, and erosion potential.

- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to its previous location after construction activities are completed.
- Areas of noxious weed infestations will be flagged to alert construction personnel to their presence.
- Soils from weed infested areas may be treated with a pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions.
- Existing vegetation root systems (e.g., crop stubble, fallow vegetation) will be left intact during construction to the maximum extent practicable.
- Vegetation maintained on site shall not exceed 10-12 inches. 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 contractors will prevent the accumulation of combustible “burn piles” on site.
- 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.

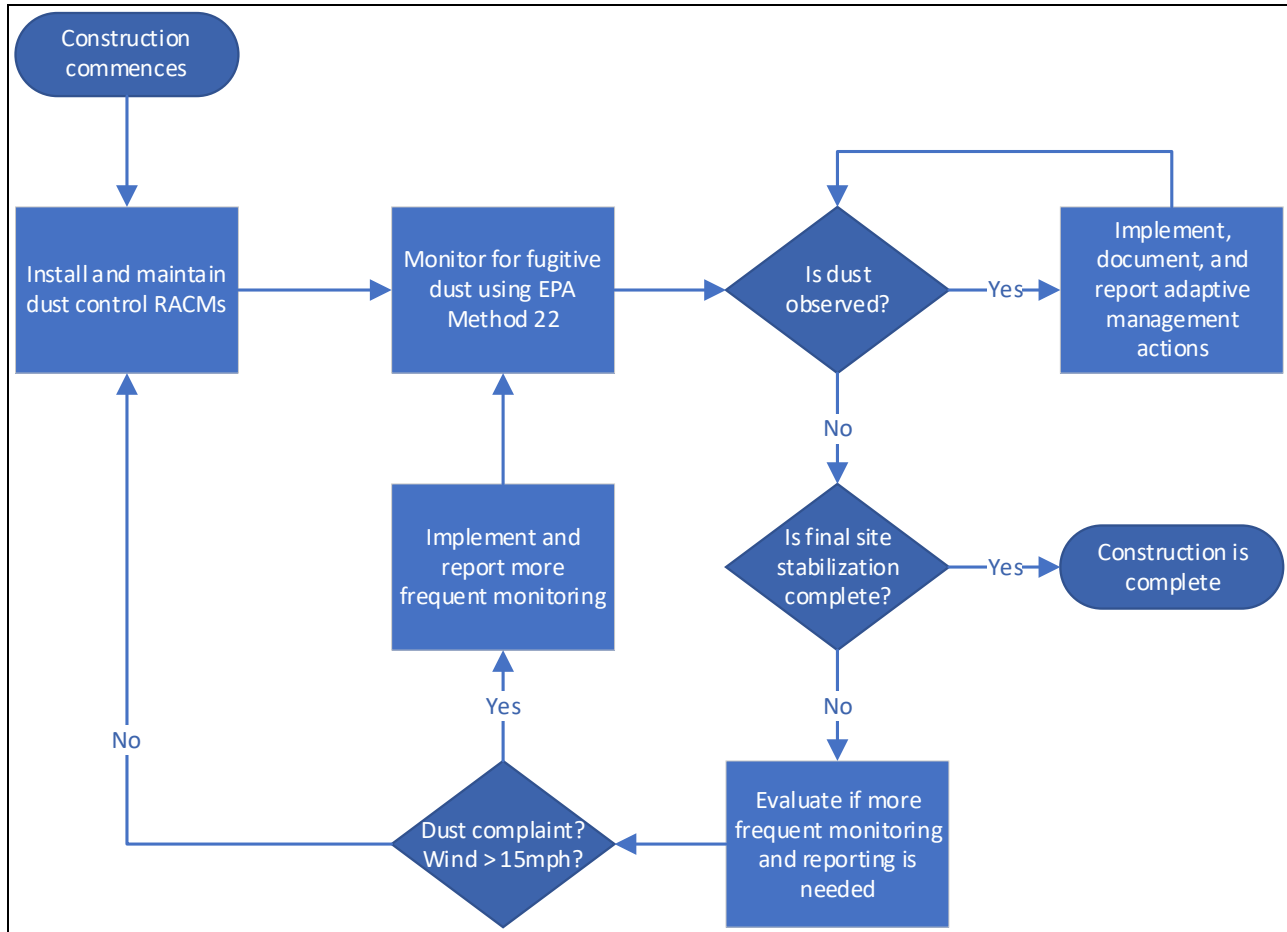
3.4 Construction Methods

3.4.1 Soils and Fugitive Dust

During construction, the certificate holder will implement the Site Preparation and Construction BMPs designated in this Plan in Section XXX and site stabilization measures, including seeding of all disturbed areas according to the NPDES 1200-C permit.

To manage fugitive dust from construction, the certificate holder and its contractors will generally follow the following Dust Control Plan Flow Chart.

Figure 1: Dust Control Plan Flow Chart



3.4.1.1 Fugitive Dust Monitoring and Reasonable Available Control Measures (RACMs)

The visual monitoring required by the 1200-C permit must occur at least once every 14 calendar days. However, because OAR 340-208-0210 restricts visible fugitive emissions on a continuous standard to a maximum of **18 seconds in any 6-minute period**, and because fugitive dust emissions may provide an immediate public safety concern, this Plan requires that fugitive dust be monitored and controlled on an ongoing basis.

Monitoring for fugitive dust emissions shall include:

- Use of EPA Method 22 (ODEQ 2019) as specified in OAR 340-208-0210, **at least once per day during the summer, during peak construction activities**.
- The observation shall be performed during times of peak construction activity at the downwind property boundary.
- Recording of observations in a fugitive dust inspection log that is kept on site and shall be kept digitally, described below.

Triggers for additional, more frequent monitoring will include:

- Observation of visible fugitive dust emissions by the Environmental inspector, contractor(s), agency, or certificate holder staff.
- Wind speeds or gusts greater than 20 miles per hour.
- Receipt of complaints or concerns through the Project Dust Control Hotline or other means.

Table 4: Fugitive Dust Sources and Reasonable Available Control Measures (RACMs)

Construction Phase	RACM(s)	Supplemental RACM(s)
All Phases of Construction	Daily fugitive dust monitoring and record keeping.	Increase frequency of monitoring.
	Prominent display of Dust Control Hotline signs, providing direct access to the Environmental Inspector.	If established, proactive engagement with Community Action Council.
	Worker Environmental Awareness Program training for all construction employees.	Additional trainings and refreshers for employees.
	Maintain stockpile of BMPs on site, including sufficient palliatives for a single treatment of all site access roads and sufficient palliatives, mulch, and/or hydromulch for a minimum of 25 percent of the total disturbed area, and machinery for application.	Increase stockpile of palliatives, mulch, and/or hydromulch and add additional BMPs.
	Documentation and reporting of adaptive management actions.	Development and submittal of revised Fugitive Dust Control Plan.
Site Access	Install and maintain stabilized construction entrances at ingress/egress locations and restrict traffic to these locations.	Add additional construction entrance BMPs (e.g., wheel wash).
	Daily sweeping up of sediment from paved surfaces utilizing vacuum sweeper with HEPA filtration.	Increase sweeper frequency.
	Access roads shall be graveled.	Road maintenance and reapplication of gravel.
	Access roads will be stabilized with water or palliative sufficient to eliminate visible and sustained dust from vehicular travel and wind	If water is unavailable or ineffective, or if water use is limited by any agency or regulation, access roads

Table 4: Fugitive Dust Sources and Reasonable Available Control Measures (RACMs)

Construction Phase	RACM(s)	Supplemental RACM(s)
	erosion. Reapply stabilization as necessary to maintain dust-free condition.	will be stabilized with longer-lasting palliatives.
	Restrict construction traffic to established and stabilized access routes.	Install fencing or barricades to prevent traffic outside of established routes.
	Limit traffic speeds to 15 miles per hour on stabilized unpaved roads within the site as long as such speeds do not create significant visible dust emissions. Traffic speed signs shall be displayed prominently at all site entrances and exits.	Limit traffic speeds within the site to 5 or 10 miles per hour.
	Minimize disturbance areas and soil exposure to the maximum extent feasible.	Limit work to a portion of the disturbed area until all disturbed areas receive temporary or final stabilization.
	When wind speeds or gusts exceed 15 miles per hour, minimize new disturbances to the extent possible and/or mobilize additional water trucks or palliatives to minimize fugitive dust from exposed surfaces.	Stop all ground disturbing activities and apply additional dust control measures until measures are effective or wind speeds slow and fugitive emissions stop.
	Separate and cover or otherwise stabilize topsoil to preserve it until it is replaced during revegetation.	Increase maintenance frequency for topsoil cover/stabilization. Combine methods, such as mulch plus tackifier.
	Stabilize exposed soils within the timeframes established in the 1200-C permit. Stabilize exposed soils in stages based on site conditions and weather.	Stabilize exposed soils more frequently, even if additional work is anticipated within the timeframe established in the 1200-C permit. Reapply stabilization measures following any additional disturbances.
	Temporarily stabilize exposed surfaces to prohibit significant and	Combine stabilization methods, such as mulch plus tackifier, or

Table 4: Fugitive Dust Sources and Reasonable Available Control Measures (RACMs)

Construction Phase	RACM(s)	Supplemental RACM(s)
	sustained visible fugitive dust from wind erosion. Utilize BMPs such as mulch, hydromulch with or without seeds, tackifier, spreading stone or gravel, and trackwalking.	trackwalking plus hydromulch. Increase frequency of maintenance of stabilization.
	Seed exposed surfaces during the appropriate season with approved temporary or permanent seed mixes.	Reapply seed to newly disturbed areas or areas with poor germination. Use temporary seeding even if additional work is anticipated before final stabilization. Use irrigation to enhance seeding success.
Removing and Hauling Sand, Soil, or other Loose Materials	Gate seals should be tight on dump trucks. Soil load shall be kept below 6 inches of the freeboard of the truck. Drop heights shall be minimized when loaders dump soil into trucks. Gate seals will be checked and tight on dump trucks. All trucks on highways must be fully covered and secured.	Cover haul trucks with a tarp or other suitable cover.

Fugitive Dust Reporting

A dust inspection log shall be completed after each dust inspection. Log records shall be kept digitally and included in construction monitoring reports as described in Section XX of this Plan. This log shall include all information required in EPA Method 22. Photos and/or video taken during the observation period to document conditions shall be available digitally to ODOE upon request. Any documented exceedance events shall include a detailed explanation of Reasonable Available Control Measures (RACMs) implemented for corrective action and the results of subsequent monitoring demonstrating fugitive dust has returned to below exceedance thresholds.

3.4.2 Weeds

The certificate holder, Environmental Inspector, and contractor(s) will implement the following best management practices to minimize the spread of noxious weeds during construction activities:

- Limiting vehicle access to designated routes, whether existing roads or newly constructed roads, and the outer limits of construction disturbances per the final design for the facility;
- Limiting vehicle traffic in noxious weed-infested areas;

- Cleaning construction vehicles each time they enter or exit the facility at a wash station located inside the facility at vehicle ingress/egress points;
- Cleaning vehicles and equipment associated with ground disturbance and movement of topsoil after performing work in noxious weed-infested areas and prior to performing work in non-infested areas utilizing a mobile wash station;
- Provide information regarding target noxious weed species at the operations and maintenance buildings;
- Treating noxious weeds via biological, mechanical or chemical control designated in this Plan;
- Existing or new populations of A listed noxious weeds, designated in XX in this Plan, will be documented in a noxious weed log and eliminated on an ongoing basis. The noxious weed log will describe the weed treatment methods and timing.

3.4.2.1 Standards and Weed Treatment

The following weed management and treatment standards (timing, method, and application rates for each identified weed species of concern) have been established between XX County Weed Department, certificate holder, and the Department.

Biological control involves the use of prescribed insects, fungi and livestock to control noxious weeds to achieve management objectives. Biological control methods are typically targeted to a specific species or plant to control its persistence. They are also used for maintenance in targeted areas for vegetation management control in height and density that includes mitigating fire risk and erosion.

Mechanical control methods rely on removal of plants, seed heads, and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc noxious weed populations.

Chemical control can effectively remove noxious weeds through use of selective herbicides. The recommended chemical treatment and timing of chemical application for noxious weeds that have been identified at the facility site are included below in Table XX. The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (e.g., thistle and knapweeds) or (2) annual grasses or monocots (e.g., jointed goatgrass), as appropriate herbicides differ substantially between dicots and monocots.

Table 5: Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
<i>Acroptilon repens</i>	2,4-D – Apply at the early stage of flower stem elongation (late April to early May).	1 to 2 lb ae/a

Table 5: Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
(Russian knapweed)	Aminopyralid – Consult label for optimum timing. Diffuse and spotted knapweed: apply to actively growing plants in fall or in spring from rosette to bolting growth stages.	1 to 1.75 oz ae/a
	Clopyralid – Up to the bud stage of knapweeds.	0.25 to 0.5 lb ae/a (0.66 to 1.33 pints/a)
	Clopyralid + 2,4-D amine (Curtail) – Apply after most rosettes emerge but before flower stem elongates.	2 to 4 quarts/a Curtail
	Glyphosate – Apply to actively growing knapweed when most plants are at bud stage.	3 lb ae/a
	Triclopyr + clopyralid – Apply from rosette to early bolt stage when weeds are actively growing.	1.5 to 2 pints/a
<i>Aegilops cylindrica</i> (jointed goatgrass)	Glyphosate – Apply to actively growing plants emerged before bolt stage (i.e., stage of growth where growth is focused on seed development versus leaf development).	0.38 to 0.75 lb ae/a
	Imazapic – Apply pre-emergence in fall. Due to the residual effect of this herbicide, it will not be used in areas to be revegetated.	0.063 to 0.188 lb/a
	Sulfometuron – Apply in fall or in late winter before jointed goatgrass is 3 inches tall.	1 to 1.5 oz ai/a (1.33 to 2 oz/a)
<i>Bassia (Kochia) scoparia</i> (Kochia)	Chlorsulfuron – Apply pre-emergence (late winter/early spring), or post-emergence from seedling to bolting stage of growth.	0.75 oz ai/a (1 oz/a)
	Fluroxypyr – Apply in spring from seedling to bolting stage of growth.	2.1 to 7.7 oz ae/a (6 to 22 o/a)
	Glyphosate – Apply in spring from seedling to flowering stage of growth.	1.1 to 1.7 lb ae/a
	Hexazinone – Apply pre-emergence in the early spring.	0.5 to 1.5 lb ai/a (2 to 6 pints/a)
	Imazapyr – Apply pre-emergence (late winter/early spring) or post-emergence to actively growing kochia.	0.5 to 1.5 lb ae/a (2 to 4 pints/a)

Table 5: Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
	Metsulfuron – Apply in spring from seedling to flowering stage of growth.	0.6 to 1.2 oz ai/a (1 to 2 oz/a)
	Rimsulfuron – Apply pre-emergence (late winter/early spring) or post-emergence to kochia seedlings.	1 oz ai/a (4 oz/a)
<i>Centaurea diffusa</i> (diffuse knapweed)	See Russian knapweed (<i>Acroptilon repens</i>)	
<i>Centaurea solstitialis</i> (yellow starthistle)	2,4-D LV ester or 2,4-D amine – Apply before flowering.	1 lb ae/a in 50 gallons of water
	Aminopyralid (Milestone) – Apply to plants at the rosette through bolting stages.	0.75 to 1.25 oz ae/a (3 to 5 fluid oz/a Milestone)
	Chlorsulfuron – For best results apply to young, actively growing plants.	1.125 oz ai/a (1.5 oz/a)
	Clopyralid – After most rosettes have emerged but before bud formation.	0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)
	Clopyralid + 2,4-D amine (Curtail) – Apply after most rosettes have emerged but before bud formation.	1 to 5 quarts/a Curtail
	Triclopyr + clopyralid – Apply from rosette to early bolt stage when starthistle is actively growing.	1.5 to 2.5 pints/a
<i>Centromadia (Hemizonia) pungens</i> (common spikeweed)	2,4-D – Apply post-emergence when plants are in rosette stage in winter or early spring.	1.4 lb ae/a
	Chlorsulfuron – Apply pre-emergence or post-emergence to plants in rosette stage.	0.375 to 0.75 oz ai/a
<i>Chondrilla juncea</i> (rush skeletonweed)	2,4-D or MCPA – Apply to rosettes in the spring immediately before or during bolting.	2 lb ae/a
	Aminopyralid (Milestone) – Spring or fall when rosettes are present.	1.75 oz ae/a (7 fluid oz/a Milestone)
	Clopyralid – Apply to rosettes in fall or up to early bolting in spring.	0.25 to 0.375 lb ae/a (0.66 to 1 pint/a)
<i>Convolvulus arvensis</i>	2,4-D amine – Apply at bud growth stage or at summer fallow stage in early August	2 to 3 lb ae/a

Table 5: Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
(field bindweed)	Glyphosate + 2,4-D – Apply when bindweed runners are at least 10 inches long. Tilling after treatment may improve control.	Broadcast: 0.378 to 0.67 lb ae/a. Spot treatment: 1 to 2% solution.
	Imazapic – Apply after 25% of plants are blooming through fall.	0.125 to 0.188 lb ai/a
	Metsulfuron – Apply to actively growing bindweed in bloomstage.	0.6 to 1.2 oz ai/a
	Quinclorac (Paramount) – Apply to actively growing bindweed in bloomstage.	6 oz ai/a (8 oz/a)
<i>Lepidium latifolium</i> (perennial pepperweed)	2,4-D amine – Apply at bud stage of growth.	4 lb ae/a
	Chlorsulfuron – Apply in fall or spring up through bloom stage.	0.75 oz ai/a
	Imazapic – Apply after flowers open (full bloom) until plants desiccate. Fall rosettes may also be treated if moisture permits.	0.125 to 0.188 lbs. ai/acre
	Metsulfuron – Apply to actively growing plants.	0.6 to 1.2 ounces ai/acre
<i>Onopordum acanthium</i> (Scotch thistle)	2,4-D – spring or fall.	1.5 to 2 lbs. ae/acre
	Aminopyralid (Milestone) – Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes.	0.75 to 1.25 oz ae/a (3 to 5 fluid ounces/acre Milestone)
	Chlorsulfuron – Apply to young, actively growing plants.	0.75 oz ai/a (1 ounces/acre)
	Clopyralid + 2,4-D amine (Curtail) – Apply to actively growing thistle after most basal leaves emerge but before bud stage.	1 to 5 quarts/acre Curtail
	Clopyralid – Apply up to the bud stage.	0.09 to 0.375 lb ae/acre (0.25 to 1 pint/acre)
	Glyphosate + 2,4-D – Apply to plants in rosette stage of growth in spring or before freeze-up in fall.	Broadcast: 16 to 32 fluid ounces/acre. Spot treatment: 1 to 2% solution.
	Metsulfuron (Escort and others) – Apply post-emergence to actively growing plants.	Escort: 0.6 oz ai/a (1 ounces/acre)

Table 5: Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
	Triclopyr + clopyralid – Apply to actively growing plants from rosette to early bolt stage.	1.5 to 2 pints/acre
<i>Secale cereale</i> (cereal rye)	Consult with Morrow County Weed Supervisor. Glyphosate applied post-emergence in spring provides good (80-95% control); however, does not provide residual weed control. Rimsulfuron applied in early fall or in the spring provides good (80-95%) control.	
Sources: XXXX Notes: a = acre; ae = acid equivalent; ai = active ingredient; lb= pound; oz = ounces.		

Herbicide Application, Handling, and Spills

Herbicide application will adhere to EPA and ODA standards. Only those herbicides that are approved by the EPA and ODA will be used. In general, application of herbicides will not occur when the following conditions exists:

- Wind velocity exceeds 20 miles per hour for granular application, or exceeds 10 miles per hour for liquid applications;
- Snow or ice covers the foliage of target species; or
- Adverse weather conditions are forecasted within the next few days.

Hand application methods (e.g., backpack spraying) may be used in roadless areas or in rough terrain. Vehicle-mounted sprayers (e.g., handgun, boom and injector) will be used mainly in open areas that are readily accessible by vehicle.

Herbicide spills will be managed according to facility SPCC plans.

Special Considerations

The certificate holder will provide special consideration to intermittent and ephemeral streams/draws during treatment activities. No herbicide will be sprayed where the drift can enter standing water or saturated soil. It will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water, regardless of the season when the herbicide is applied. Similar considerations will be made when in proximity to agricultural fields.

3.5 Immediate Post Construction Remediation (after Ground Disturbance is Complete)**3.5.1 Soil Preparation**

Prior to reseeding for site stabilization, soils will be prepared for successful stabilization, including:

- Ensure that soils from weed infested areas are treated with a pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions.

- Soils may need to be loosened by mechanical scarification (tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction. Soil amendment, by addition of organic matter (compost), may also be necessary to alleviate compaction.
- In general, soil needs to be prepared into a firm, fine-textured seedbed that is relatively free of debris before seeding or planting. Shallow tilling with a disc, followed by a harrow or drag if necessary, can typically achieve this. If replaced soil is too soft, then seeds may be buried too deep to properly germinate; a roller or culti-packer should be used to pack down the soil.
- Replacing topsoil stockpiled separately from the subsurface soils

Soils should be evaluated to determine whether soils within disturbance areas are more than 10 percent compacted than the baseline plot (See Section X). If results show soils are more than 10 percent compacted than the baseline plot then remediation activities must be completed before revegetation activities can begin.

- Prior to construction completion at the Facility site and prior to the initiation of revegetation activities, soil compaction testing following the above protocols must be completed.
- If soil measurements demonstrate that the soils within the work areas are more than 10 percent compacted than the baseline plot, then remediation activities must be completed prior to initiation of seeding/revegetation activities. Remediation methods may be selected from this Plan, proposed by the certificate holder or Department and the Facility NPDES 1200-C permit, and applicable site certificate conditions.

3.5.2 Seeding

All seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law (OAR 603-056). The final seed mix for areas within the solar array fence line area will include lower growing grasses with desired vegetation conditions under the solar arrays (i.e., species whose mature height would not interfere with electrical equipment). The seeding methods and timing of planting have been designated by coordination with the certificate holder, Department, ODA, County Weed Department, and the seed supplier(s). Seeding methods and mixes include:

- XX
- XX

Table 6: Columbia Plateau Seed Mix

Common Name	Scientific Name	Percent of Mix
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50
Bottlebrush squirreltail	<i>Elymus elymoides</i>	15
Sandberg's bluegrass	<i>Poa secunda</i>	15
Thickspike wheatgrass	<i>Elymus lanceolatus</i>	20

Reseeding, site stabilization, and weed control include:

- Seeded areas will be temporarily stabilized to facilitate establishment. This can be accomplished by application of seedless, certified weed-free hydromulch containing a tackifier. Alternate methods such may be proposed by the revegetation contractor but will require prior written approval by ODOE and must provide demonstrated success in sites with similar wind and soil conditions.
- Inspecting and certifying that the seed and straw mulch used for site rehabilitation and revegetation are free of noxious weeds and seeds.
- The construction contractor and/or Environmental Inspector will implement mulching and other appropriate practices, as required by the NPDES 1200-C permit, to control erosion and sediment during construction and revegetation work.

If it is determined that noxious weeds have invaded areas immediately adjacent to the facility (e.g., areas visible just beyond the outer limits of construction disturbances associated with the facility or along access roads) as a result of construction, the certificate holder will contact the landowner and seek approval to treat those noxious weed populations.

Supplemental seeding of desirable species may be needed in some areas disturbed by construction. Fertilizer application will be limited in areas treated for noxious weeds, as fertilizer can stimulate the growth of noxious weeds, and the timing of revegetation activities will need to be coordinated with noxious weed treatments.

The three common seed application methods that may be used for revegetation are broadcast seeding, drill seeding, and hydroseeding; each of these are discussed further below. Other seeding methods may be proposed for review and approval prior to revegetation efforts.

Broadcast Seeding

Broadcast seeding is the application of seed directly to the ground surface. This method may be chosen for areas with shallow and rocky soils, and the type of broadcast spreader would depend on the size of the area to be seeded and the terrain.

In this method, the seed mix would be broadcast using at least the application rates specified by the seed supplier for broadcast seeding. When feasible, due to the seasonality of when planting can occur, the entire area will be seeded after grading is complete but before placement of facility components, providing more flexibility in seed application. In those instances where seeding occurs prior to installation of components, follow-up seeding will occur in areas temporarily disturbed by installation and any areas that are deficient in vegetation from the first round of seeding.

Immediately following seed application, hydromulch or certified weed-free straw would be applied. Broadcast seeding will not be employed if winds exceed 5 miles per hour. If certified weed-free straw is unavailable, the certificate holder or a designated construction contractor will identify a local source of straw. This straw may either be crimped into the ground or applied with a tackifier.

Drill Seeding

Drill seeding can be used for larger areas with deeper soils and moderate to gentle terrain to accommodate mechanical equipment. This method provides the advantage of planting the seed at a uniform depth and may provide better soil to seed contact. Using a range seed drill, seeds will be

sown according to the application rates recommended by the seed supplier. Drill seeding will be difficult after facility components have been installed so it will primarily be used if seeding occurs after grading is complete but before components are installed or in areas that were temporarily disturbed during construction that do not have any permanent infrastructure (e.g., temporary access roads, laydown areas).

Hydroseeding

Hydroseeding is most applicable for areas drill or broadcast seeding machinery cannot access, this usually includes steeper sloped or narrow terrain, but can be used in all terrains. Soil bed preparation is also crucial for growth success and frequently includes tracking perpendicular to the slope to create micro conditions for seed. Flat grading and compaction are not recommended. Seeding rates increase by 30 to 50 percent of broadcast seeding rates or single applications.

4.0 Plan Updates, Amendments and Reporting Requirements

The following will be provided to the Department in the semi-annual construction report required per OAR 345-026-0080:

- Any updates to construction phasing or design and figures described in Section 3.1
- Dust inspection log(s) described in Section 3.4.1.
- Noxious weed log described in Section 3.4.2
- A summary of the areas and actions for remediation post construction, if applicable

This information may be used to establish the performance of the this Vegetation and Soil Management Plan. If determined by certificate holder or Department, adjustments or improvements must be proposed to ensure this Plan provides sufficient soil remediation, revegetation to support soil remediation and noxious weed control. 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 an issue.

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.

Draft Operational Revegetation, Vegetation and Noxious Weed Management, and Soil Reclamation Plan

ODOE Template

Commented [KT1]: Update

Instructions for Siting Analyst during review of an ASC/RFA:

- Provide template to applicant/certificate holder. To the extent it can be determined during review of an ASC/RFA, determine facility design features such as setbacks, road widths and locations, vegetation management etc. This information should be reflected in Section 3.0 and should be consistent with the facility description in ASC/RFA exhibits and in other mitigation plans (Noxious Weed Plan, Reveg Plan, and Dust Control Plan).
- Review comments from fire departments to determine if any recommendations differ from what is provided in WMP. Provide WMP to County and fire department(s), and ask if the measures (setbacks, fire protection equipment) are sufficient. If comments indicate or request additional measures, work with analyst team and Senior Policy Advisor to determine if any changes should be made to the WMP.
- Delete this prior to sending to applicant/certificate holder.

Instructions for Applicants and Certificate Holders:

- This template includes preventative actions, procedures, and standards commonly proposed to meet the requirements of OAR 345-022-0115(1)(b) and reflects practices the Department has identified as appropriate to minimize wildfire risk at solar photovoltaic power generation facilities. **Use of the template is not required**, and provisions in this template may be modified depending on the type of energy facility under review. Use of the template does not guarantee satisfaction with the Council's Wildfire Prevention and Risk Mitigation Standard. Use of the template does not establish a defense for any enforcement action for violation of a site certificate, Council order or rule. Use of the template or a separately-developed Wildfire Mitigation Plan does not relieve a certificate holder from proactively managing wildfire risk and taking steps to protect against wildfire beyond the measures included in the template or a separately-developed Plan.
- Areas in yellow highlight to be updated based on the applicant/certificate holder proposal and should be filled out to the extent known at the time of review of the ASC/RFA. This information will be updated/finalized based on final design prior to operation of the facility.
- All changes to this template must be made in track changes for the Department to evaluate the scope of changes made.

Applicable EFSC Site Certificate Conditions

Copy conditions in

1.0 Finalizing Wildfire Mitigation Plan Prior to Operation (PRO)

1.1 Update Applicable Sections of Plan

To finalize this Plan prior to operation of the facility, finalize the following subsections of the Plan.

1.1.1 Designation of Environmental Inspector

Update Section XX with details of Environmental Inspector.

1.1.2 Site Plan

Update Section XX

1.1.3 Baseline Data for Vegetation, Weeds, and Soil Conditions

Update Sections XX, XX, and XX with baseline data for vegetative cover, weed presence and density, and soil conditions. Sections in Plan must provide a summary or details of baseline results; actual Baseline reporting and mapping may be provided as an attachment to the final Plan.

2.0 Prior to Construction Task list (PRO)

Prior to construction of the facility, complete the activities in Sections 2.1 and 2.2.

Do site prep stuff
Do trainings
Do weed treatments

2.1 Environmental Training (PRE)

Prior to construction, organize and hold an on-site environmental training with certificate holder, contractors and construction personnel, inviting specialty contractors, ODA, ODFW, the County, participating and adjacent landowners, ODOE, and any other potentially impacted or interested parties. The environmental training may be combined with other on-site training as long as the training, includes (but not limited to):

- Weeds:
 - Education and identification of ODA and County weed species of concern;
 - Known locations of noxious weed infestations and plans for weed treatments prior to construction;
 - Best management practices (BMPs) discussed in Section XX of this Plan include when and where to wash construction equipment, limiting vehicle access in areas with weeds, and flagging, pulling and treating noxious weeds discovered during construction.
- Soil Protection and Fugitive Dust:
 - Fugitive Dust Sources and Reasonable Available Control Measures described in Section XX of this Plan;
 - Erosion control and site stabilization measures, including seeding of all disturbed areas according to the NPDES 1200-C permit;
 - Topsoil management including XXXXX from Section XX of this Plan;

- **Vegetation Management:**
 - Vegetation and construction activities will be managed in accordance with an applicable Wildfire Mitigation Plan and in a manner that reduces wildfire risk as a result of construction of the facility;
 - Construction personnel will be trained in the vegetation disturbance levels described in this Plan. Disturbance levels are primarily determined by site conditions such as slope, gradient, and existing vegetation. Construction activities will aim to minimize disturbance levels 3 and 4.

☐ Compliance Deliverable: Training attendee list and training materials must be provided to the Department to demonstrate compliance.

3.0 XX Operational Plan (OPR)

This plan addresses revegetation methods for temporary impacts to non-agriculture (i.e., Orchards, Vineyards, Wheat Fields, Other Row Crops habitat subtype) and non-developed (i.e., Urban and Mixed Environs habitat subtype) habitat types, as well as revegetation and vegetation management of lands within the solar array fence line area. Restoration of temporarily disturbed developed habitat (i.e., Urban and Mixed Environs habitat subtype) will be determined on a case-by-case basis and is not covered further in this plan. Temporary disturbances to agricultural habitat (i.e., Orchards, Vineyards, Wheat Fields, Other Row Crops habitat subtype) will be restored as described in **Section 4.5.1. The** Applicant will restore temporarily disturbed areas by re-establishing slope, surface stability, and drainage features, as needed, followed by soil preparation and seeding. Soil preparation and seeding techniques are described below.

Revegetation will be performed in phases and will begin as soon as feasible after completion of each phase of ground disturbance. Seeding and planting will be done in a timely manner and in the appropriate season to facilitate germination and establishment of seeded species.

Prior to construction, final revegetation methods will be developed for each disturbance level in consultation with ODOE, ODA, ODFW, and the county weed department and will be incorporated as an amendment to this Plan upon ODOE approval.

3.1 Environmental Inspector/**Contractor?**

A construction contractor qualified to perform restoration and revegetation will be responsible for implementing the measures in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit, as well as the revegetation activities discussed herein during and immediately after construction. **A qualified botanist or revegetation specialist will be responsible for monitoring and reporting on revegetation success. Remedial revegetation actions, as needed during the operation phase, will be performed by a qualified contractor. The Applicant will be responsible for ensuring that all contractors perform work in accordance with permit requirements and all agreed upon methods for revegetation.**

Options for contracting and managing this work include:

Commented [KT2]: PRO/OPR

- Having the construction contractor subcontract the revegetation work out to a qualified restoration and seeding contractor. The contract will stipulate the Applicant's right to dictate the timing, methods, and management of revegetation.
- Contracting directly with the qualified restoration and seeding contractor, with the power to contractually enforce revegetation timing and methods.
- Having the environmental contractor contract with the qualified restoration and seeding contractor, with the power to contractually enforce revegetation timing and methods.

Soil

Soil Training and Qualifications

The Certificate Holder will designate an Environmental Inspector who will be responsible for implementation of this Plan. The Environmental Inspector is XXX.

The Environmental Inspector will:

- Have an active CESCL (Certified Erosion and Sediment Control) certification.
- Retain a copy of this Plan at the facility site at all times during construction.
- Monitor construction activity to ensure compliance with the Plan.
- Identify when reasonably available and best available control measures are not adequate, as designated in Section XX of this Plan.
- Direct water trucks, direct civil activities, and direct road maintenance.

EPA Method 22 (ODEQ 2019) does not require a specific certification, but it is necessary that the person responsible for observations completed for this method be knowledgeable with respect to the general procedures for determining the presence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training is to be obtained from written materials found in the references cited in Method 22 or from the lecture portion of the EPA Method 9 certification course. The Environmental Inspector shall document in the inspection log how the person responsible for observations meets this requirement.

Weeds

Experience in native plant, non-native and invasive plants, and noxious weed identification and management.

A qualified contractor or Environmental Inspector will supervise the treatment of noxious weeds.

The Applicant will ensure that noxious weed management actions will be carried out by specialists with the following qualifications:

- Experience in native plant, non-native and invasive plants, and noxious weed identification;

- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; and
- Experience in coordination with agency and private landowners.

Reveg:

Options for contracting and managing this work include:

- Having the construction contractor subcontract the revegetation work out to a qualified restoration and seeding contractor. The contract will stipulate the Applicant's right to dictate the timing, methods, and management of revegetation.
- Contracting directly with the qualified restoration and seeding contractor, with the power to contractually enforce revegetation timing and methods.
- Having the environmental contractor contract with the qualified restoration and seeding contractor, with the power to contractually enforce revegetation timing and methods.

The restoration and seeding contractor's qualifications and scope of work will be provided as a submittal to ODOE prior to construction. Additionally, a crosswalk of the final version of this Plan will be prepared for use by the restoration contractor prior to initiation of revegetation to facilitate Plan implementation. A kick-off meeting with the Applicant, their environmental contractor, restoration contractor, and ODOE will be held at least 14 days prior to initiation of restoration activities. A copy of the Plan crosswalk will be provided to ODOE staff prior to the kick-off meeting date. Staff from either the Applicant or their environmental contractor will field-verify seeding methods and timing requirements are followed appropriately and will document any variances and the justifications for those variances. Monitoring and follow-up will be provided as described in Section 6.0 to ensure oversight and increase the probability of revegetation success.

Commented [KT3]: PRE

1. Applicant shall provide the restoration and seeding contractor's qualifications and scope of work as a submittal to ODOE.

3.2 Site Plan

Site Plan and GIS data, as applicable, that show and describe:

- General construction phasing (what will be constructed first, or at the same time, etc.);
- Location of equipment ash stations (weed control)

- Vegetation free areas such as hot work areas, parking lots, roads, graveled areas, etc.;
- Areas where the slope and gradient are within the solar panel and racking tolerances will receive minimal grading;
- Location of baseline/sample plots for vegetation, weeds, and soil
- Maps or locations of water truck routes and water supply locations within and surrounding the project.
- Applicant shall finalize the plan based on impacts associated with the final design/layout by disturbance level and habitat type and category.
- Applicant shall develop and incorporate maps showing anticipated construction disturbance levels along with the total acreage and major activities associated with each level.
- Applicant shall provide shapefiles showing anticipated construction disturbance levels at the site as a submittal to ODOE.
- Construction will be coordinated and sequenced with landowners to maintain land in current production and weed control until just prior to construction.
- Applicant shall provide the number and location of reference sites to be utilized during short- and long-term monitoring of temporary impact areas for review and approval by ODOE in consultation with ODFW.
- Applicant shall develop and incorporate maps showing anticipated construction disturbance levels along with the total acreage and major activities associated with each level.

Vegetation-free, Noncombustible Space

The following areas will be managed to be vegetation-free, noncombustible space, or gravel surface:

- XX foot wide service roads within solar fence line - graveled
- XX wide perimeter roads – graveled
- 10- foot noncombustible, defensible space clearance along the fenced perimeter of the site boundary – vegetation free
- Within and a 10-foot perimeter of the inverter/transformer pads, collector substation and battery energy storage system (BESS) – graveled, similar noncombustible base, or vegetation free
- Parking and O&M building perimeter - graveled
- Vegetation along service roads will be managed by mowing or other vegetation removal

In the spring, fall or winter of the year prior to when construction would occur, areas of high erosion risk (e.g., slopes, areas with low vegetative cover) should be seeded with a non-invasive, non-persistent cover crop such as triticale to demonstrate soil stabilization.

3.3 Baseline Operational Site Conditions

Applicant will provide maps and shapefiles showing anticipated construction disturbance levels at the Facility, along with the total acreage and major activities associated with each level. For Level 3 and Level 4 disturbance areas, Applicant will also provide maps and schedule of ground disturbance phasing. This will serve to demonstrate the Applicant's avoidance and minimization of ground disturbing activities to the extent practicable.

3.3.1 Baseline Vegetation

To determine if the revegetation of temporarily disturbed areas are meeting success criteria, paired monitoring and reference sites will be established in each of the habitat subtypes that will be temporarily disturbed by construction (with the exception of agricultural land). Reference sites are intended to represent target conditions for the revegetation effort. Vegetation within monitoring sites in revegetation areas will be compared with those in the associated reference sites to measure success of the revegetation activities.

Prior to initiation of revegetation, the following shall be completed:

1. Applicant shall hold a kick-off meeting with their environmental contractor, restoration contractor, and ODOE at least 14 days prior to initiation of restoration activities.
2. Applicant shall prepare a crosswalk of the final version of this Plan for use by the restoration contractor. A copy of the Plan crosswalk will be provided to all participating parties prior to the kick-off meeting date.
3. Applicant shall complete post-construction soil compaction testing and submit results for review and approval to ODOE.

Applicant shall conduct pre-construction habitat surveys at the approved reference sites for the purpose of collecting baseline quantitative data (vascular plant species present, native/non-native species present, percent cover of dominant species, percent cover of state and county listed noxious weed, and evidence of disturbance).

1. Applicant shall provide the number and location of reference sites to be utilized during short- and long-term monitoring of temporary impact areas for review and approval by ODOE in consultation with ODFW.
2. Applicant shall develop and incorporate maps showing anticipated construction disturbance levels along with the total acreage and major activities associated with each level.

3.3.2 Baseline Weed Conditions

Noxious Weeds Identified at the Prior to Construction Facility

Field surveys for the state-listed threatened plant species Laurent's milkvetch (*Astragalus collinus* var. *laurentii*) were conducted for Wheatridge Wind (Wheatridge Renewable Energy Facility I and Wheatridge Renewable Energy Facility II) June 29 – July 2, 2019 and July 17 – 18, 2019 (Tetra Tech

2019), and for the Facility from July 13-15, 2020 and June 22, 2021 (Tetra Tech 2021a). Noxious weeds were also recorded during these surveys. The Survey Area for these surveys included all lands within the site boundary, with the exception of active agricultural lands, as well as 9.5 acres of land where right of entry was not permitted at the time of surveys.

The Applicant will conduct an additional pre-construction noxious weed survey to identify the noxious weeds present at the Facility at the time of construction to inform management actions. The Applicant may coordinate with landowners regarding noxious weed presence. Identified noxious weed infestations will be treated prior to construction.

Table 2 identifies both state and county listed noxious weed species observed within the Facility Survey Area during pre-construction surveys, and their estimated frequency of occurrence. The locations of these noxious weeds are shown in Figure 1.

In addition to noxious weeds, cheatgrass, an invasive annual grass, was identified in grassland habitats within the site boundary. While this species is not listed as a noxious weed by the state or county, it and other invasive annual grasses can adversely impact habitat and can increase fire risk. The certificate holder will monitor the spread of these species as explained in section 6.0.

Commented [KT4]: This will be done for permitting/application review, and it will also re re-done prior to construction. So, when the Plan says update this section, it's intended to be updated for permitting and then updated prior to construction.

Table 1. Noxious Weeds Identified During DATE Surveys at the Facility

Scientific Name	Common Name	State Status (ODA) ¹	Morrow County Status	Frequency/Location
<i>Acroptilon repens</i>	Russian knapweed	B	Weed of Economic Importance	Two observations within the northern portion of the Facility Survey Area
<i>Aegilops cylindrica</i>	jointed goatgrass	B	Weed of Economic Importance	Two observations within the Facility Survey Area; one in the northeast and one in the southeast
<i>Bassia (Kochia) scoparia</i>	kochia	B	Weed of Economic Importance	Commonly observed within the Facility Survey Area
<i>Centaurea diffusa</i>	diffuse knapweed	B	Weed of Economic Importance	Abundant within of the Facility Survey Area
<i>Centaurea solstitialis</i>	yellow starthistle	B	Noxious Weed	Commonly observed in the central-eastern and southeastern portions of the Facility Survey Area
<i>Centromadia (Hemizonia) pungens</i>	common spikeweed	B	Noxious Weed	One observation in the central-eastern portion of the Facility Survey Area
<i>Chondrilla juncea</i>	rush skeletonweed	B/T	Noxious Weed	Observed in three locations in the south-central portion of the Facility Survey Area
<i>Convolvulus arvensis</i>	field bindweed	B	Weed of Economic Importance	One observation within the central portion of the Facility Survey Area
<i>Lepidium latifolium</i>	perennial pepperweed	B/T	Weed of Economic Importance	One observation within the north-central portion of the Facility Survey Area
<i>Onopordium acanthium</i>	Scotch thistle	B	Noxious Weed	One observation in central-eastern portion of the Facility Survey Area
<i>Secale cereale</i>	cereal rye	Not listed	Weed of Economic Importance	Commonly observed in scattered locations of the Facility Survey Area; most abundant in southwestern portion of Survey Area
Sources: XX County 20XX, ODA 20XX. 1. ODA: B = A weed of economic importance that is regionally abundant, but that may have limited distribution in some counties. T = priority targets for control.				

3.3.3 Baseline Soil Conditions

1. Applicant shall submit baseline soil compaction sample locations and baseline compaction results to ODOE.

Soil measurements conducted per Section 4.2 shall be evaluated to determine whether soils within disturbance areas are more than 10 percent compacted than the baseline plot. If results show soils are more than 10 percent compacted than the baseline plot then remediation activities must be completed before revegetation activities can begin. Prior initiation of revegetation, the Applicant will provide the results of soil compaction testing to ODOE. ODOE will authorize revegetation to begin when soils are 10 percent or less compacted than the baseline plot.

Soil scientists use a soil penetrometer to field measure subsurface compaction in soil. This tool measures resistance (pressure) to the advance of a cone-tipped rod with a T-handle, vertically through the soil column. The metric intends to measure soil compaction that can inhibit the ability of plants to penetrate the soil. An operator pushes the penetrometer rod with a cone base into the ground with consistent force. A pressure gauge records pressure in pounds per square inch, equaling levels of resistance at differing soil layers. Resistance is measured at 3-inch intervals until the meter goes above 300 psi, which is a level of soil compaction most roots cannot penetrate. For this test compaction would be measured at 3, 6, 9, and 12 inches if the soils allowed. Baseline soil compaction measurements will be taken prior to construction. Baseline soil compaction sample locations and baseline compaction results will be submitted to ODOE prior to construction.

1. Baseline and post-construction soil compaction measurements and testing must be done in conditions favorable to soil testing (e.g. non-saturated or frozen soils).
2. Baseline soil compaction measurements will be documented and established by using the above protocol, or other protocol as approved by ODOE, to establish baseline soil conditions within temporary impact areas.
3. Recordation of the baseline soil plots must be represented on a map based on final Facility design.
4. Prior to construction completion at the Facility site and prior to the initiation of revegetation activities, soil compaction testing following the above protocols must be completed.
5. If soil measurements demonstrate that the soils within the work areas are more than 10 percent compacted than the baseline plot, then remediation activities must be completed prior to initiation of revegetation activities. See Section 6.4 below, the Facility NPDES 1200-C permit, and applicable site certificate conditions.

3.4 Pre-Construction Site Preparation to Support Soil Protection, Weed Infestations and Revegetation Efforts

- Existing vegetation root systems (e.g., crop stubble, fallow vegetation) will be left intact during construction to the maximum extent practicable.

- Areas where the slope and gradient are within the solar panel and racking tolerances will receive minimal grading.
- Where applicable, soils will be mechanically scarified (e.g., tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction, to maintain soil productivity, and reduce the potential for erosion on compacted soils.
- The applicant or a designated construction contractor will use mulching and other appropriate practices, as required by the NPDES 1200-C permit and this plan, to control erosion and sediment during construction and revegetation work.
- Areas of noxious weed infestations will be flagged to alert construction personnel to their presence.
- Providing information regarding target noxious weed species at the operations and maintenance buildings;
-

Treating noxious weeds via biological, mechanical or chemical control – treat weeds from baseline or updated assessment according to Section XX Treatment. Prior to Construction, weeds discovered in the baseline weed survey and within the site, will be managed using methods described in Section XX.

Commented [KT5]: Route to treatment

Provide evidence that existing noxious weed infestations have been identified and treated in a manner consistent with Morrow County recommendations.

3.5 Construction Methods

3.5.1 Soils

In addition, in areas where soil is removed during construction, the following measures will be taken where appropriate:

- During construction, excavated soils will be stockpiled by soil horizon, so that they can be replaced in proper order with the topsoil on the surface, preventing mixing of topsoil and subsoils and maintaining soil productivity. The conserved soil will be put back in place as topsoil prior to revegetation activities. The conserved soil will be put back in place as topsoil prior to revegetation activities.
- Soil preparation will involve standard, commonly used methods (i.e. tracking, decompaction, and tilling), and will consider all relevant site-specific factors, including slope, size of area, and erosion potential.
- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to their previous location during reclamation activities to eliminate the transport of weed seeds, roots, or rhizomes.

- Soils from weed-infested areas will be treated with a non-persistent, pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions.
- Prior to final regrade and revegetation efforts, any weeds that have grown during periods of construction dormancy should be removed mechanically or treated with an herbicide in consultation with the Morrow County Weed Department.
- The construction contractor will use appropriate erosion and sediment control practices (i.e., unseeded hydromulch, tackifier, weed-free erosion control blankets, weed-free or locally sourced straw mulch) to maintain topsoil during construction in impacted areas.

During construction, the Applicant will implement site stabilization measures, including seeding of all disturbed areas according to the Applicant's anticipated NPDES 1200-C permit.

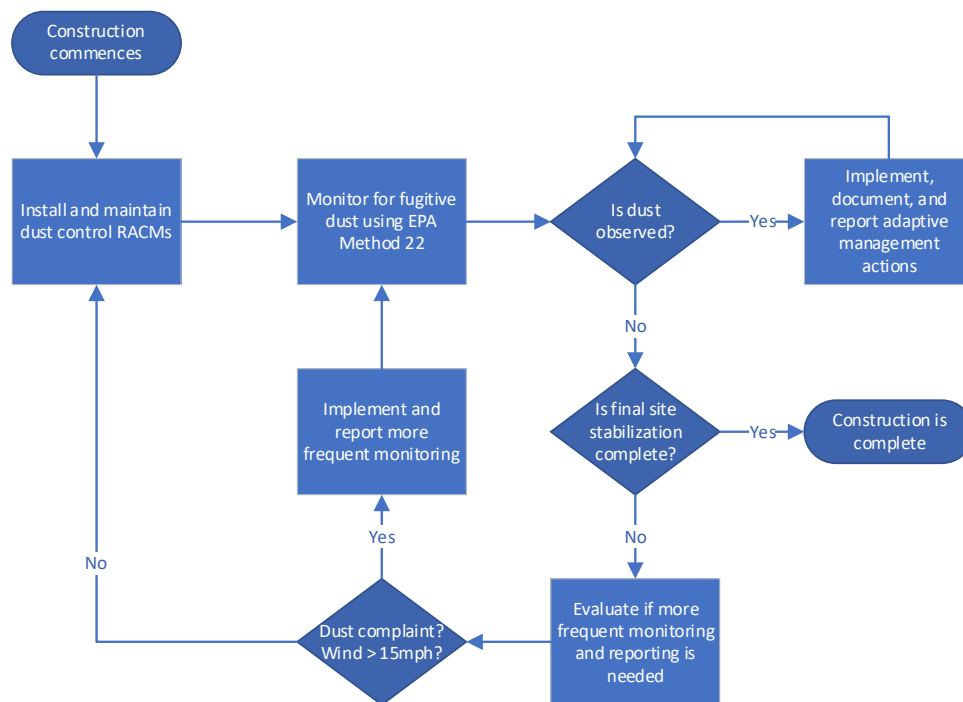


Figure 1. Dust Control Plan Flow Chart

Table 1. Fugitive Dust Sources and Reasonable Available Control Measures

Construction Phase	RACM(s)	Supplemental RACM(s)
All Phases of Construction	Daily fugitive dust monitoring and record keeping.	Increase frequency of monitoring.
	Prominent display of Dust Control Hotline signs, providing direct access to the Environmental Inspector.	If established, proactive engagement with Community Action Council.
	Worker Environmental Awareness Program training for all construction employees.	Additional trainings and refreshers for employees.
	Maintain stockpile of BMPs on site, including sufficient palliatives for a single treatment of all site access roads and sufficient palliatives, mulch, and/or hydromulch for a minimum of 25 percent of the total disturbed area, and machinery for application.	Increase stockpile of palliatives, mulch, and/or hydromulch and add additional BMPs.
	Documentation and reporting of adaptive management actions.	Development and submittal of revised Fugitive Dust Control Plan.
Site Access	Install and maintain stabilized construction entrances at ingress/egress locations and restrict traffic to these locations.	Add additional construction entrance BMPs (e.g., wheel wash).
	Daily sweeping up of sediment from paved surfaces utilizing vacuum sweeper with HEPA filtration.	Increase sweeper frequency.
	Access roads shall be graveled.	Road maintenance and reapplication of gravel.
	Access roads will be stabilized with water or palliative sufficient to eliminate visible and sustained dust from vehicular travel and wind erosion. Reapply stabilization as necessary to maintain dust-free condition.	If water is unavailable or ineffective, or if water use is limited by any agency or regulation, access roads will be stabilized with longer-lasting palliatives.
	Restrict construction traffic to established and stabilized access routes.	Install fencing or barricades to prevent traffic outside of established routes.

Construction Phase	RACM(s)	Supplemental RACM(s)
	Limit traffic speeds to 15 miles per hour on stabilized unpaved roads within the site as long as such speeds do not create significant visible dust emissions. Traffic speed signs shall be displayed prominently at all site entrances and exits.	Limit traffic speeds within the site to 5 or 10 miles per hour.
	Minimize disturbance areas and soil exposure to the maximum extent feasible.	Limit work to a portion of the disturbed area until all disturbed areas receive temporary or final stabilization.
	When wind speeds or gusts exceed 15 miles per hour, minimize new disturbances to the extent possible and/or mobilize additional water trucks or palliatives to minimize fugitive dust from exposed surfaces.	Stop all ground disturbing activities and apply additional dust control measures until measures are effective or wind speeds slow and fugitive emissions stop.
	Separate and cover or otherwise stabilize topsoil to preserve it until it is replaced during revegetation.	Increase maintenance frequency for topsoil cover/stabilization. Combine methods, such as mulch plus tackifier.
	Stabilize exposed soils within the timeframes established in the 1200-C permit. Stabilize exposed soils in stages based on site conditions and weather.	Stabilize exposed soils more frequently, even if additional work is anticipated within the timeframe established in the 1200-C permit. Reapply stabilization measures following any additional disturbances.
	Temporarily stabilize exposed surfaces to prohibit significant and sustained visible fugitive dust from wind erosion. Utilize BMPs such as mulch, hydromulch with or without seeds, tackifier, spreading stone or gravel, and trackwalking.	Combine stabilization methods, such as mulch plus tackifier, or trackwalking plus hydromulch. Increase frequency of maintenance of stabilization.
	Seed exposed surfaces during the appropriate season with approved temporary or permanent seed mixes.	Reapply seed to newly disturbed areas or areas with poor germination. Use temporary seeding

Construction Phase	RACM(s)	Supplemental RACM(s)
		even if additional work is anticipated before final stabilization. Use irrigation to enhance seeding success.
Removing and Hauling Sand, Soil, or other Loose Materials	Gate seals should be tight on dump trucks. Soil load shall be kept below 6 inches of the freeboard of the truck. Drop heights shall be minimized when loaders dump soil into trucks. Gate seals will be checked and tight on dump trucks. All trucks on highways must be fully covered and secured.	Cover haul trucks with a tarp or other suitable cover.

Reveg:

3.5.2 Weeds

- The Certificate Holder will implement the following best management practices to minimize the spread of noxious weeds during construction activities, revegetation efforts, and operation and maintenance activities. The following practices center around ensuring that noxious weed seeds or reproductive plant fragments are not unintentionally dispersed within or outside of the Facility boundaries by personnel or their vehicles. These practices allow for responsible movement around sites with noxious weeds already present and ensure that new populations or species are not accidentally introduced into the Facility boundaries. Prior to construction, areas of noxious weed infestations will be flagged to alert construction personnel to their presence;
- Limiting vehicle access to designated routes, whether existing roads or newly constructed roads, and the outer limits of construction disturbances per the final design for the Facility;
- Limiting vehicle traffic in noxious weed-infested areas;
- Cleaning construction vehicles each time they enter or exit the Facility at a wash station located inside the Facility at vehicle ingress/egress points;

- Cleaning vehicles and equipment associated with ground disturbance and movement of topsoil after performing work in noxious weed-infested areas and prior to performing work in non-infested **areas utilizing a mobile wash station**;
- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to its previous location during reclamation activities;
- Soils from infested areas will be treated with a pre-emergent herbicide prior to initiation of revegetation efforts;
- Movement of topsoil and other soils from non-infested areas will be limited to eliminate the transport of weed seeds, roots, or rhizomes.
- Providing information regarding target noxious weed species at the operations and maintenance buildings;
- Treating noxious weeds via biological, mechanical or chemical control (see Section 5.3);
- Preventing conditions favorable for noxious weed germination and spread by revegetating temporarily disturbed areas as soon as possible;
- Monitoring areas of disturbance for noxious weeds after construction (see Section 6.0), during the normal course of revegetation maintenance of temporary work spaces, and implementing control measures as appropriate;
- Revegetating the site with appropriate, local native seed or native plants; when these are not available, non-invasive and non-persistent non-native species may be used; and
- Inspecting and certifying that the seed and straw mulch used for site rehabilitation and revegetation are free of noxious weed seed and propagules.
- **Weed inspections will occur across the entire Facility through visual inspection of the site while driving and/or walking.** During the construction phase of the Facility, construction staff will conduct periodic monitoring of noxious weeds. Noxious weeds observed during construction will be treated with mechanical or chemical treatments (Section **5.3**) or other best management practices, as applicable.
- **Monitoring: Develop final noxious weed monitoring methods in consultation with ODOE and incorporate** as an amendment to this plan upon ODOE approval.

3.5.3 Revegetation and Vegetation Management for Fire Safety

Revegetation will be performed in phases and will begin as soon as feasible after completion of each phase of ground disturbance. See Section **XX**.

3.5.3.1 Vegetation-free, Noncombustible Space

The following areas will be managed to be vegetation-free, noncombustible space, or gravel surface:

- XX foot wide service roads within solar fence line - graveled

- XX wide perimeter roads – graveled
- 10- foot noncombustible, defensible space clearance along the fenced perimeter of the site boundary – vegetation free
- Within and a 10-foot perimeter of the inverter/transformer pads, collector substation and battery energy storage system (BESS) – graveled, similar noncombustible base, or vegetation free
- Parking and O&M building perimeter - graveled
- Vegetation along service roads will be managed by mowing or other vegetation removal

Vegetation in these areas will be managed by the following techniques:

- XX
- XX
-

3.5.4 Vegetation Standards, Surveys and Management

Vegetation within the fence line and below the solar arrays will be maintained in accordance with the approved Revegetation and Reclamation Plan for the facility. Vegetation will be limited to a height of 10-12 inches, with a minimum clearance of 12 inches from electrical equipment. 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.

- 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 as designate din this Plan.

3.6 Standards, Definitions, Monitoring and Reporting

3.6.1 Fugitive Dust Monitoring and Reasonable Available Control Measures (RACMs)

The Environmental Inspector will be responsible for ensuring that the measures in this Plan are implemented, monitored, and adaptively managed, and that any exceedances are immediately reported to the Certificate Holder for corrective action.

The visual monitoring required by the 1200-C permit must occur at least once every 14 calendar days. However, because OAR 340-208-0210 restricts visible fugitive emissions on a continuous standard to a maximum of **18 seconds in any 6-minute period**, and because fugitive dust emissions may provide an immediate public safety concern, this Plan requires that fugitive dust be monitored and controlled on an ongoing basis.

Monitoring for fugitive dust emissions shall include:

- Use of EPA Method 22 (ODEQ 2019) as specified in OAR 340-208-0210, **at least once per day during the summer, during peak construction activities.**
- The observation shall be performed during times of peak construction activity at the downwind property boundary.
- Recording of observations in a **fugitive dust inspection log that is kept on site and shall be available digitally to the Certificate Holder and ODOE.** This log shall include all information required in EPA Method 22. Photos and/or video taken during the observation period to document conditions shall be available digitally to ODOE upon request.
- Establishment of a Dust Control Hotline.

Triggers for additional, more frequent monitoring will include:

- Observation of visible fugitive dust emissions by the contractor, agency, or Certificate Holder staff.
- Wind speeds or gusts greater than 15 miles per hour.
- Receipt of complaints or concerns through the Project Dust Control Hotline or other means.

Reporting

A dust inspection log shall be completed after each dust inspection. Log records shall be made available digitally to ODOE upon request and included in construction monitoring reports. Any documented exceedance events shall include a detailed explanation of Reasonable Available Control Measures (RACMs) implemented for corrective action and the results of subsequent monitoring demonstrating fugitive dust has returned to below exceedance thresholds.

Table 1. Fugitive Dust Sources and Reasonable Available Control Measures (RACMs)

Construction Phase	RACM(s)	Supplemental RACM(s)
All Phases of Construction	Daily fugitive dust monitoring and record keeping.	Increase frequency of monitoring.
	Prominent display of Dust Control Hotline signs, providing direct access to the Environmental Inspector.	If established, proactive engagement with Community Action Council.
	Worker Environmental Awareness Program training for all construction employees.	Additional trainings and refreshers for employees.
	Maintain stockpile of BMPs on site, including sufficient palliatives for a single treatment of all site access roads and sufficient palliatives, mulch, and/or hydromulch for a minimum of	Increase stockpile of palliatives, mulch, and/or hydromulch and add additional BMPs.

Construction Phase	RACM(s)	Supplemental RACM(s)
	25 percent of the total disturbed area, and machinery for application.	
	Documentation and reporting of adaptive management actions.	Development and submittal of revised Fugitive Dust Control Plan.
Site Access	Install and maintain stabilized construction entrances at ingress/egress locations and restrict traffic to these locations.	Add additional construction entrance BMPs (e.g., wheel wash).
	Daily sweeping up of sediment from paved surfaces utilizing vacuum sweeper with HEPA filtration.	Increase sweeper frequency.
	Access roads shall be graveled.	Road maintenance and reapplication of gravel.
	Access roads will be stabilized with water or palliative sufficient to eliminate visible and sustained dust from vehicular travel and wind erosion. Reapply stabilization as necessary to maintain dust-free condition.	If water is unavailable or ineffective, or if water use is limited by any agency or regulation, access roads will be stabilized with longer-lasting palliatives.
	Restrict construction traffic to established and stabilized access routes.	Install fencing or barricades to prevent traffic outside of established routes.
	Limit traffic speeds to 15 miles per hour on stabilized unpaved roads within the site as long as such speeds do not create significant visible dust emissions. Traffic speed signs shall be displayed prominently at all site entrances and exits.	Limit traffic speeds within the site to 5 or 10 miles per hour.
	Minimize disturbance areas and soil exposure to the maximum extent feasible.	Limit work to a portion of the disturbed area until all disturbed areas receive temporary or final stabilization.
	When wind speeds or gusts exceed 15 miles per hour, minimize new disturbances to the extent possible	Stop all ground disturbing activities and apply additional dust control measures until measures are

Construction Phase	RACM(s)	Supplemental RACM(s)
	and/or mobilize additional water trucks or palliatives to minimize fugitive dust from exposed surfaces.	effective or wind speeds slow and fugitive emissions stop.
	Separate and cover or otherwise stabilize topsoil to preserve it until it is replaced during revegetation.	Increase maintenance frequency for topsoil cover/stabilization. Combine methods, such as mulch plus tackifier.
	Stabilize exposed soils within the timeframes established in the 1200-C permit. Stabilize exposed soils in stages based on site conditions and weather.	Stabilize exposed soils more frequently, even if additional work is anticipated within the timeframe established in the 1200-C permit. Reapply stabilization measures following any additional disturbances.
	Temporarily stabilize exposed surfaces to prohibit significant and sustained visible fugitive dust from wind erosion. Utilize BMPs such as mulch, hydromulch with or without seeds, tackifier, spreading stone or gravel, and trackwalking.	Combine stabilization methods, such as mulch plus tackifier, or trackwalking plus hydromulch. Increase frequency of maintenance of stabilization.
	Seed exposed surfaces during the appropriate season with approved temporary or permanent seed mixes.	Reapply seed to newly disturbed areas or areas with poor germination. Use temporary seeding even if additional work is anticipated before final stabilization. Use irrigation to enhance seeding success.
Removing and Hauling Sand, Soil, or other Loose Materials	Gate seals should be tight on dump trucks. Soil load shall be kept below 6 inches of the freeboard of the truck. Drop heights shall be minimized when loaders dump soil into trucks. Gate seals will be checked and tight on dump trucks. All trucks on highways must be fully covered and secured.	Cover haul trucks with a tarp or other suitable cover.

3.6.2 Disturbance Levels

Revegetation needs will be determined by a combination of disturbance level and existing vegetative cover. Disturbance levels will primarily be determined by site conditions such as slope, gradient, and existing vegetation. Disturbance levels are defined as follows:

Level 1 - Mowing: Mowing is used to conserve vegetative resources within a large project area. Vegetation is mowed to a height of generally 12 inches, but no less than 6 inches during construction. Depending on site objectives, vegetation can be allowed to reach a normal height or kept trimmed to a height between 6 inches and the plant's full height potential. Crushing of vegetation will be minimal and this disturbance level is designed to have a minimal impact on existing vegetation. This method is least likely to result in invasions of undesirable plant species. Existing vegetation root systems (e.g., crop stubble, fallow vegetation) will be left intact during construction, although construction vehicles driving across the site may affect these existing root systems.

Level 2 – Overland Drive and Crush: Disturbance caused by accessing a site without significantly modifying the landscape. Vegetation is crushed but not cropped. No surface soil is removed. Even though vegetation may be damaged and even destroyed, the surface soil and seed bank remains in place. Some crushed vegetation will likely sprout after disturbance ceases. These activities would result in minimal to moderate disturbance. This type of disturbance will result in the fastest recovery time for vegetation. Soil seed banks remain largely in place, perennial vegetation can grow back, and minimal external efforts are necessary. This method is less likely to result in invasions of undesirable plant species. This would involve crushing or mowing vegetation typically to the ground surface. Existing vegetation root systems (e.g., crop stubble, fallow vegetation) will be left intact during construction, although construction vehicles driving across the site may affect these existing root systems.

Level 3 – Clear and Cut: Disturbance caused by accessing the project site but having to remove all vegetation in order to improve or provide suitable access for other equipment. All vegetation is removed, soils are compacted, but no surface soil is removed. Clear and cut activities would result in moderate disturbance. This type of disturbance will result in moderate recovery times for vegetation. This method has a moderate risk for invasion of undesirable plant species. An example is imprinting to crush vegetation down into the soil.

Level 4 – Clear and Cut with Soil Removal: Disturbance is caused by removing all vegetation in the impact zone, the soils are compacted and the surface soil is displaced, and for Facility components requiring underground installation, the subsurface soils are displaced as well. These activities result in heavy disturbance. This type of disturbance results in an extensive recovery time for vegetation, and is most likely to lead to invasions of undesirable plant species, which can result in lengthy and expensive control efforts. Includes disc-and-roll construction, and other traditional construction methods where no vegetation is left intact.

The seeding methods and timing of planting will be appropriate to the seed mixes, weather conditions (e.g., precipitation, wind speed, temperature, etc.), and site conditions (including area

size, slope, and erosion potential) based upon consultation with ODOE, ODA, ODFW, the county weed department, and the seed supplier. Seeding between late-fall and late-winter/early-spring is typically recommended; however, the Applicant will consult with ODOE, ODA, and/or the seed supplier to determine the optimal timing for seed application based on climatic conditions of the particular year when construction and revegetation efforts are implemented.

The three common seed application methods that may be used for revegetation are broadcast seeding, drill seeding, and hydroseeding; each of these are discussed further below. Other seeding methods may be proposed for review and approval prior to revegetation efforts.

3.6.3 ODA and County Weeds

3.6.3.1 State of Oregon

In Oregon, noxious weeds are defined under Oregon Revised Statutes (ORS) 569.175 as “terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board (OSWB) under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs.” Noxious weeds have been declared by ORS 569.350 as a menace to public welfare, and control of these plants is the responsibility of private landowners and operators, as well as county, state, and federal governments.

The OSWB was established under ORS 561.650. It provides direction to control noxious weeds at the state level and develops and maintains the State Noxious Weed List. OSWB and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System (ODA 2020). There are three designations under the State’s system:

- **Class A State Listed Noxious Weed:** 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 in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
 - **Recommended Action:** Infestations are subject to eradication or intensive control when and where found.
- **Class B State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but 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.
- **Class T Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. T-designated noxious weeds are selected annually from either the A

or B list and the ODA is directed to develop and implement a statewide management plan for these species.

3.6.3.2 Morrow County

The Morrow County Code Enforcement Ordinance (Morrow County 2021) establishes procedures for enforcing Morrow County Code through the authority granted to general law counties by ORS Chapter 203. Section 11 of the county ordinance establishes Morrow County as a weed control district, defines what is considered a noxious weed or weed of economic importance, identifies the responsibility of private landowners to control weeds, and outlines the authority of the weed control district and the Morrow County Weed Program Manager to enforce the ordinance.

Morrow County has its own weed classification system that differs from the state. Per the county ordinance, Morrow County defines two classifications of weeds:

- **Noxious Weed:** Any plant which determined by the County Board of Commissioners to be injurious to public health, crops, livestock, land, or property.
- **Weeds of Economic Importance:** Weeds which result in economic impact and which are identified by the County Weed Advisory Board and approved by the County Board of Commissioners as appropriate targets for intensive control or eradication as feasible.

//

The ODA lists 46 Class A species and 94 Class B species for the state (ODA 2020). Morrow County specifically recognizes 17 species of noxious weeds and 20 weeds of economic importance (Table 1; Morrow County 2021). Although not all of the Morrow County listed noxious weeds noted in Table 1 occur within or near the Facility, the Applicant and its contractors should be aware of the entire list while monitoring and controlling weeds. Noxious weeds known to occur within or near the Facility are discussed in Section 4.0.

Table 2. Morrow County Weed Department Weed Lists and Classifications

Scientific Name	Common Name
Noxious Weeds	
<i>Butomus umbellatus</i>	flowering rush
<i>Cardaria (Lepidium) draba</i>	whitetop (hoary cress)
<i>Carduus acanthoides</i>	plumeless thistle
<i>Carduus nutans</i>	musk thistle
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Centromadia (Hemizonia) pungens</i>	common spikeweed
<i>Chondrilla juncea</i>	rush skeletonweed
<i>Crupina vulgaris</i>	common crupina
<i>Cynoglossum officinale</i>	houndstongue
<i>Euphorbia esula</i>	leafy spurge

Scientific Name	Common Name
<i>Iris pseudacorus</i>	yellow flag iris
<i>Linaria dalmatica</i>	dalmatian toadflax
<i>Linaria vulgaris</i>	yellow toadflax
<i>Lythrum salicaria</i>	purple loosestrife
<i>Onopordum acanthium</i>	Scotch thistle
<i>Salvia aethiopis</i>	Mediterranean sage
<i>Senecio jacobaea</i>	tansy ragwort
Weeds of Economic Importance	
<i>Acroptilon repens</i>	Russian knapweed
<i>Aegilops cylindrica</i>	jointed goatgrass
<i>Avena fatua</i>	wild oats
<i>Bassia (Kochia) scoparia</i>	kochia
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Centaurea stoebe</i> subsp. <i>micranthos</i>	spotted knapweed
<i>Cicuta douglasii</i>	water hemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Conium maculatum</i>	poison hemlock
<i>Convolvulus arvensis</i>	field bindweed
<i>Cuscuta</i> spp.	field dodder
<i>Euphorbia myrsinites</i>	myrtle spurge
<i>Hypericum perforatum</i>	St. Johnswort
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Secale cereale</i>	cereal rye
<i>Sonchus arvensis</i>	perennial sowthistle
<i>Sorghum halepense</i>	johnsongrass
<i>Taeniatherum caput-medusae</i>	medusahead rye
<i>Tribulus terrestris</i>	puncturevine
<i>Ventenata dubia</i>	ventenata

3.6.4 Standards and Weed Treatment

Consult with the Morrow County Weed Department on timing, method, and application rates for each identified weed species of concern.

Control of noxious weeds and other invasive weed species will be implemented through biological, mechanical or chemical control measures.

Existing noxious weed populations will be prevented from expanding in size and density and will not be spread to new sites.

Commented [KT6]: During review of ASC/RFA

Existing populations of A listed noxious weeds will be eliminated.

If it is determined that noxious weeds have invaded areas immediately adjacent to the Facility (e.g., areas visible just beyond the outer limits of construction disturbances associated with the Facility or along access roads) as a result of construction, the Applicant will contact the landowner and seek approval to treat those noxious weed populations.

Commented [KT7]: Certificate holder

Short-term weed treatments associated with construction should not affect the establishment of the native perennial cover that will help provide the long-term weed control.

Supplemental seeding of desirable species may be needed in some areas disturbed by construction. Fertilizer application will be limited in areas treated for noxious weeds, as fertilizer can stimulate the growth of noxious weeds, and the timing of revegetation activities will need to be coordinated with noxious weed treatments.

3.6.4.1 Biological Control

Biological control involves the use of prescribed insects, fungi and livestock to control noxious weeds to achieve management objectives. Biological control methods are typically targeted to a specific species or plant to control its persistence. They are also used for maintenance in targeted areas for vegetation management control in height and density that includes mitigating fire risk and erosion. Biological control is environmentally friendly and should be the first consideration when applicable.

3.6.4.2 Mechanical Treatment

Mechanical control methods rely on removal of plants, seed heads, and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc noxious weed populations. Hand removal of plants is also included under this treatment method. Mechanical methods are useful for smaller, isolated populations of noxious weeds). Some rhizomatous plants can spread by discing or tillage; therefore, implementation of discing will be species specific. If such a method is used in areas to be reclaimed, subsequent seeding will be conducted to re-establish desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of noxious weeds. Discing or other mechanical treatments that disturb the soil surface within native habitats will be avoided in favor of herbicide application (see Section 5.3.2), which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new infestations.

3.6.4.3 Chemical Treatments

Chemical control can effectively remove noxious weeds through use of selective herbicides. The recommended chemical treatment and timing of chemical application for noxious weeds that have been identified during surveys at the Facility (Table 2) are presented in Table 3. The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (e.g., thistle and knapweeds) or (2) annual grasses or monocots (e.g., jointed goatgrass), as appropriate herbicides differ substantially between dicots and monocots.

All herbicides included in Table 3 are currently approved for use by the U.S. Environmental Protection Agency (EPA) and ODA; however, the status of herbicide approval and specific herbicide products should be checked annually. Prior to construction and every fall season during facility operation, the Applicant or its contractor shall consult with the Morrow County Weed Supervisor on timing, method and application rates for each identified weed species of concern, to allow for adaptive weed management given changes in weed control effectiveness from noxious weed species tolerance to herbicide treatment over time. Results of the consultation shall be reported in the Applicant's annual weed monitoring report. Any alternative control methods can be proposed by the Applicant or its contractors, after consulting with the Morrow County Weed Supervisor, and included in the Certificate Holder's annual weed monitoring report.

Table 3. Recommended Timing and Method of Control

Noxious Weed Species	Method and Timing of Control	Application Rate
<i>Acroptilon repens</i> (Russian knapweed)	2,4-D – Apply at the early stage of flower stem elongation (late April to early May).	1 to 2 lb ae/a
	Aminopyralid – Consult label for optimum timing. Diffuse and spotted knapweed: apply to actively growing plants in fall or in spring from rosette to bolting growth stages.	1 to 1.75 oz ae/a
	Clopyralid – Up to the bud stage of knapweeds.	0.25 to 0.5 lb ae/a (0.66 to 1.33 pints/a)
	Clopyralid + 2,4-D amine (Curtail) – Apply after most rosettes emerge but before flower stem elongates.	2 to 4 quarts/a Curtail
	Glyphosate – Apply to actively growing knapweed when most plants are at bud stage.	3 lb ae/a
	Triclopyr + clopyralid – Apply from rosette to early bolt stage when weeds are actively growing.	1.5 to 2 pints/a
<i>Aegilops cylindrica</i> (jointed goatgrass)	Glyphosate – Apply to actively growing plants emerged before bolt stage (i.e., stage of growth where growth is focused on seed development versus leaf development).	0.38 to 0.75 lb ae/a
	Imazapic – Apply pre-emergence in fall. Due to the residual effect of this herbicide, it will not be used in areas to be revegetated.	0.063 to 0.188 lb/a
	Sulfometuron – Apply in fall or in late winter before jointed goatgrass is 3 inches tall.	1 to 1.5 oz ai/a (1.33 to 2 oz/a)

Noxious Weed Species	Method and Timing of Control	Application Rate
<i>Bassia (Kochia) scoparia</i> (Kochia)	Chlorsulfuron – Apply pre-emergence (late winter/early spring), or post-emergence from seedling to bolting stage of growth.	0.75 oz ai/a (1 oz/a)
	Fluroxypyr – Apply in spring from seedling to bolting stage of growth.	2.1 to 7.7 oz ae/a (6 to 22 o/a)
	Glyphosate – Apply in spring from seedling to flowering stage of growth.	1.1 to 1.7 lb ae/a
	Hexazinone – Apply pre-emergence in the early spring.	0.5 to 1.5 lb ai/a (2 to 6 pints/a)
	Imazapyr – Apply pre-emergence (late winter/early spring) or post-emergence to actively growing kochia.	0.5 to 1.5 lb ae/a (2 to 4 pints/a)
	Metsulfuron – Apply in spring from seedling to flowering stage of growth.	0.6 to 1.2 oz ai/a (1 to 2 oz/a)
	Rimsulfuron – Apply pre-emergence (late winter/early spring) or post-emergence to kochia seedlings.	1 oz ai/a (4 oz/a)
<i>Centaurea diffusa</i> (diffuse knapweed)	See Russian knapweed (<i>Acroptilon repens</i>)	
<i>Centaurea solstitialis</i> (yellow starthistle)	2,4-D LV ester or 2,4-D amine – Apply before flowering.	1 lb ae/a in 50 gallons of water
	Aminopyralid (Milestone) – Apply to plants at the rosette through bolting stages.	0.75 to 1.25 oz ae/a (3 to 5 fluid oz/a Milestone)
	Chlorsulfuron – For best results apply to young, actively growing plants.	1.125 oz ai/a (1.5 oz/a)
	Clopyralid – After most rosettes have emerged but before bud formation.	0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)
	Clopyralid + 2,4-D amine (Curtail) – Apply after most rosettes have emerged but before bud formation.	1 to 5 quarts/a Curtail
	Triclopyr + clopyralid – Apply from rosette to early bolt stage when starthistle is actively growing.	1.5 to 2.5 pints/a
<i>Centromadia (Hemizonia) pungens</i>	2,4-D – Apply post-emergence when plants are in rosette stage in winter or early spring.	1.4 lb ae/a

Noxious Weed Species	Method and Timing of Control	Application Rate
(common spikeweed)	Chlorsulfuron – Apply pre-emergence or post-emergence to plants in rosette stage.	0.375 to 0.75 oz ai/a
<i>Chondrilla juncea</i> (rush skeletonweed)	2,4-D or MCPA – Apply to rosettes in the spring immediately before or during bolting.	2 lb ae/a
	Aminopyralid (Milestone) – Spring or fall when rosettes are present.	1.75 oz ae/a (7 fluid oz/a Milestone)
	Clopyralid – Apply to rosettes in fall or up to early bolting in spring.	0.25 to 0.375 lb ae/a (0.66 to 1 pint/a)
<i>Convolvulus arvensis</i> (field bindweed)	2,4-D amine – Apply at bud growth stage or at summer fallow stage in early August	2 to 3 lb ae/a
	Glyphosate + 2,4-D – Apply when bindweed runners are at least 10 inches long. Tilling after treatment may improve control.	Broadcast: 0.378 to 0.67 lb ae/a. Spot treatment: 1 to 2% solution.
	Imazapic – Apply after 25% of plants are blooming through fall.	0.125 to 0.188 lb ai/a
	Metsulfuron – Apply to actively growing bindweed in bloomstage.	0.6 to 1.2 oz ai/a
	Quinclorac (Paramount) – Apply to actively growing bindweed in bloomstage.	6 oz ai/a (8 oz/a)
<i>Lepidium latifolium</i> (perennial pepperweed)	2,4-D amine – Apply at bud stage of growth.	4 lb ae/a
	Chlorsulfuron – Apply in fall or spring up through bloom stage.	0.75 oz ai/a
	Imazapic – Apply after flowers open (full bloom) until plants desiccate. Fall rosettes may also be treated if moisture permits.	0.125 to 0.188 lbs. ai/acre
	Metsulfuron – Apply to actively growing plants.	0.6 to 1.2 ounces ai/acre
<i>Onopordum acanthium</i> (Scotch thistle)	2,4-D – spring or fall.	1.5 to 2 lbs. ae/acre

Noxious Weed Species	Method and Timing of Control	Application Rate
	Aminopyralid (Milestone) – Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes.	0.75 to 1.25 oz ae/a (3 to 5 fluid ounces/acre Milestone)
	Chlorsulfuron – Apply to young, actively growing plants.	0.75 oz ai/a (1 ounces/acre)
	Clopyralid + 2,4-D amine (Curtail) – Apply to actively growing thistle after most basal leaves emerge but before bud stage.	1 to 5 quarts/acre Curtail
	Clopyralid – Apply up to the bud stage.	0.09 to 0.375 lb ae/acre (0.25 to 1 pint/acre)
	Glyphosate + 2,4-D – Apply to plants in rosette stage of growth in spring or before freeze-up in fall.	Broadcast: 16 to 32 fluid ounces/acre. Spot treatment: 1 to 2% solution.
	Metsulfuron (Escort and others) – Apply post-emergence to actively growing plants.	Escort: 0.6 oz ai/a (1 ounces/acre)
	Triclopyr + clopyralid – Apply to actively growing plants from rosette to early bolt stage.	1.5 to 2 pints/acre
<i>Secale cereale</i> (cereal rye)	Consult with Morrow County Weed Supervisor. Glyphosate applied post-emergence in spring provides good (80-95% control); however, does not provide residual weed control. Rimsulfuron applied in early fall or in the spring provides good (80-95%) control.	
Sources: DiTomaso et al. 2013; Kyser et al. 2014; Prather et al. 2019. Notes: a = acre; ae = acid equivalent; ai = active ingredient; lb= pound; oz = ounces.		

Herbicides will be applied to identified, treatable, noxious weed infestations. The Certificate Holder or their contractors will coordinate with the Morrow County Weed Control Supervisor to determine which populations are treatable and will notify landowners of proposed herbicide use on their lands prior to application. If a noxious weed population is deemed to be untreatable (e.g., too widespread and established in an area to successfully control), the Applicant will implement the prevention measures discussed in Section 5.2, except for treatment with herbicides.

Herbicide Application and Handling

Herbicide application will adhere to EPA and ODA standards. Only those herbicides that are approved by the EPA and ODA will be used. In general, application of herbicides will not occur when the following conditions exists:

- Wind velocity exceeds 15 miles per hour for granular application, or exceeds 10 miles per hour for liquid applications;
- Snow or ice covers the foliage of target species; or
- Adverse weather conditions are forecasted within the next few days.

Hand application methods (e.g., backpack spraying) may be used in roadless areas or in rough terrain. Vehicle-mounted sprayers (e.g., handgun, boom and injector) will be used mainly in open areas that are readily accessible by vehicle. Calibration checks of equipment will be conducted prior to spraying activities, as well as periodically throughout use, to ensure that appropriate application rates are achieved.

Herbicides will be transported to the Facility daily with the following stipulations:

- Only the quantity needed for that day's work will be transported.
- Concentrate will be transported in approved containers only, and in a manner that will prevent spilling, stored separately from food, clothing, and safety equipment.
- Mixing will be done off site and at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive species' habitat. No herbicides will be applied at these areas unless authorized by the appropriate regulatory agencies.
- All herbicide equipment and containers will be inspected daily for leaks.
- Herbicides use will be in accordance with all manufacture's label recommendations and warnings.

Herbicide Spills and Cleanups

All appropriate precautions will be taken to avoid herbicide spills. In the event of a spill, cleanup will be immediate. Contractors will keep spill kits in their vehicles and in an appropriate storage shed to allow for quick and effective response to spills. Items included in the spill kit will be:

- Protective clothing and gloves;
- Adsorptive clay, "kitty litter," or other commercial adsorbent;
- Plastic bags and a bucket;
- A shovel;
- A fiber brush and screw-in handle;
- A dust pan;
- Caution tape;
- Highway flares (use on existing hard-top roads only); and
- Detergent.

Response to an herbicide spill will vary with the size and location of the spill, but general procedures include:

- Stopping the leak;
- Containing the spilled material;
- Traffic control;

- Dressing the clean-up team in protective clothing;
- Cleaning up and removing the spilled herbicide, as well as the contaminated adsorptive material and soil; and
- Transporting the spilled herbicide and contaminated material to an authorized disposal site.

Herbicide Spill Reporting

All herbicide contractors will have readily available copies of the appropriate material safety data sheets for the herbicides used at their disposal and will keep copies of the material safety data sheets in the application vehicle. All herbicide spills will be reported in accordance with applicable laws and requirements. If a spill occurs, the appropriate agency and spill coordinators will be notified promptly. In case of a spill into wetlands and waterbodies, the appropriate federal, state, and county agencies will be notified immediately.

Special Considerations

The Certificate Holder will provide special consideration to intermittent and ephemeral streams/draws during treatment activities. No herbicide will be sprayed where the drift can enter standing water or saturated soil. It will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water, regardless of the season when the herbicide is applied. Similar considerations will be made when in proximity to agricultural fields.

3.6.5 Seeding

Broadcast Seeding

Broadcast seeding is the application of seed directly to the ground surface. This method may be chosen for areas with shallow and rocky soils, and the type of broadcast spreader would depend on the size of the area to be seeded and the terrain.

In this method, the seed mix would be broadcast using at least the application rates specified by the seed supplier for broadcast seeding. When feasible, due to the seasonality of when planting can occur, the entire area will be seeded after grading is complete but before placement of Facility components, providing more flexibility in seed application. In those instances where seeding occurs prior to installation of components, follow-up seeding will occur in areas temporarily disturbed by installation and any areas that are deficient in vegetation from the first round of seeding.

Immediately following seed application, hydromulch or certified weed-free straw would be applied. Broadcast seeding will not be employed if winds exceed 5 miles per hour. If certified weed-free straw is unavailable, the Applicant or a designated construction contractor will identify a local source of straw. The local source of the straw will be approved by the county weed master and ODFW prior to purchase. This straw will either be crimped into the ground or applied with a tackifier.

Drill Seeding

Drill seeding can be used for larger areas with deeper soils and moderate to gentle terrain to accommodate mechanical equipment. This method provides the advantage of planting the seed at a uniform depth and may provide better soil to seed contact. Using a range seed drill, seeds will be sown according to the application rates recommended by the seed supplier. Drill seeding will be difficult after Facility components have been installed so it will primarily be used if seeding occurs after grading is complete but before components are installed or in areas that were temporarily disturbed during construction that do not have any permanent infrastructure (e.g., temporary access roads, laydown areas).

Hydroseeding

Hydroseeding is most applicable for areas drill or broadcast seeding machinery cannot access, this usually includes steeper sloped or narrow terrain, but can be used in all terrains. Soil bed preparation is also crucial for growth success and frequently includes tracking perpendicular to the slope to create micro conditions for seed. Flat grading and compaction are not recommended. Seeding rates increase by 30 to 50 percent of broadcast seeding rates or single applications per consultation with the seed supplier and ODFW. Prior to hydroseeding the tackifier and fertilizer, if included, will be reviewed and approved in consultation with ODOE.

3.7 Immediate Post Construction Remediation (after Ground Disturbance is Complete)

- In general, soil needs to be prepared into a firm, fine-textured seedbed that is relatively free of debris before seeding or planting. Shallow tilling with a disc, followed by a harrow or drag if necessary, can typically achieve this. If replaced soil is too soft, then seeds may be buried too deep to properly germinate; a roller or culti-packer should be used to pack down the soil.
- In non-cropland temporary disturbance areas, site complexity will be considered during soil preparation. For instance, it may be desirable to purposely create an uneven, patchy site that allows for depressions and other microsites that result in small variations in aspect and moisture holding to promote complexity.
- Seeded areas will be temporarily stabilized to facilitate establishment. This can be accomplished by application of seedless, certified weed-free hydromulch containing a tackifier. Alternate methods such may be proposed by the revegetation contractor but will require prior written approval by ODOE and must provide demonstrated success in sites with similar wind and soil conditions.
- Monitoring areas of disturbance for noxious weeds after construction (see Section 6.0), during the normal course of revegetation maintenance of temporary work spaces, and implementing control measures as appropriate;
- Revegetating the site with appropriate, local native seed or native plants; when these are not available, non-invasive and non-persistent non-native species may be used; and

- Inspecting and certifying that the seed and straw mulch used for site rehabilitation and revegetation are free of noxious weed seed and propagules.

3.8 Revegetation in Disturbance Areas

Revegetation will be performed in phases and will begin as soon as feasible after completion of each phase of ground disturbance. Seeding and planting will be done in a timely manner and in the appropriate season to facilitate germination and establishment of seeded species.

Following the completion of each construction phase, permanent impact areas will be reseeded with a mix of native or non-invasive, non-native grasses and forbs as appropriate based on disturbance level and actual site conditions. All seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law (OAR 603-056). The final seed mix for areas within the solar array fence line area will include lower growing grasses and pollinator-friendly forbs compatible with desired vegetation conditions under the solar arrays (i.e., species whose mature height would not interfere with or shade the solar array).

3.8.1 Agricultural Lands

Temporarily disturbed agricultural lands will be reseeded with the appropriate crop or maintained as fallow in consultation with the landowner or farm operator. The Applicant will also consult with the landowner or farm operator to determine seed mix, application methods, and rates for seed and fertilizer. Success of cropland revegetation will have been achieved when production of the revegetated area is comparable to that of adjacent, non-disturbed croplands of the same type.

Dryland croplands will be reseeded to match the timing of the crop rotation on adjacent cropland in order to facilitate easy harvest and re-establish the appropriate crop rotation on that land. Dryland cropland that will be seeded in the year that construction is complete can be temporarily hydromulched or otherwise stabilized until seeding can occur in the fall; dryland cropland that will be fallow for a year (i.e., fallow rather than reseeded the year construction is complete) will be planted with a cover crop (dependent on timing of construction closeout) or have continued stabilization with hydromulch or other best management practices (BMPs) through the fallow year.

Soil compaction as a result of construction activity is a concern for restoring agricultural soils to their pre-construction productivity. Within temporary disturbance areas, the Applicant will excavate and store soils by soil horizon, so that soils are replaced and restored appropriately, including replacing topsoil. During post-construction restoration of temporary impacts to agricultural areas, the Applicant will loosen agricultural soil by mechanical scarification (tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction. Soil amendment, by addition of organic matter (compost), may also be necessary to alleviate compaction.

Success determination will involve consultation with the landowner or farm operator, and the Applicant will report to ODOE on the success of cropland restoration efforts. Noxious weed control is necessary for successful revegetation of croplands and will be implemented per the methods described in the Draft Noxious Weed Control Plan.

4.0 Plan Updates Amendments and Reporting Requirements

This Plan will be updated annually and results will be provided to the Department in the annual report required per OAR 345-026-0080. Updates to this WMP will include:

- Section 3.1 and 3.2, any changes in wildfire risk at the site or changes in facility components or preventative features.
- Section 3.4, any changes in local fire protection agency personnel and operational managers.
- Section 3.4, any changes in analysis area residence/landowner addresses or contact information.
- Fill out Table 2: *Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results*, with the dates, personnel, and results of inspections and maintenance performed. A different form or checklist of operational inspection, vegetation management, and maintenance may be used if approved by the Department.
- A copy of the Fire Season Restriction Log identified in Section 3.5. Changes in wildfire risk if different from the Site Plan provided prior to operations. Evaluation of wildfire risk will be consistent with the requirements of OAR 345-022-0115(1) using current data from reputable sources.

Identify changes in standards, policies, future technologies or best practices that could be implemented at the facility to address wildfire prevention or protection, including but not limited to those identified in Table 3, below.

This information may be used to establish the performance of the WMP. If determined by certificate holder or Department, adjustments or improvements must be proposed to ensure the WMP provides wildfire mitigation. 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.

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.

Contents

1.0	Finalizing Wildfire Mitigation Plan Prior to Construction (PRE)	4
1.1	Update Applicable Sections of WMP	4
2.0	Prior to Construction Task List (PRE)	4
2.1	Training (PRE):	4
2.2	Facility Site Map(s) Submission (PRE):	5
3.0	Construction Wildfire Mitigation Plan (CON)	5
3.1	Summary of Construction Phasing	5
3.2	Facility Site Map(s):	5
3.3	Specifications for Fire Protection Equipment	6
3.4	Facility Contact Information and Emergency Response Procedures	6
3.5	Use of Vehicles and Power Driven Machinery at Site	7
3.6	Fire Precaution Levels and Restrictions during Fire Season	8
3.7	Vegetation Management	11
3.7.1	Vegetation-free, Noncombustible Space, and Vegetation Standards	11
3.8	Construction Training(s)	11
3.8.1	Safety Training	11
4.0	Plan Updates: Amendments and Reporting Requirements:	12

Draft Construction Wildfire Mitigation Plan

ODOE Template

Instructions for Siting Analyst during review of an ASC/RFA:

XXX Energy Facility

- Provide template to applicant/certificate holder. To the extent it can be determined during review of an ASC/RFA, determine facility design features such as setbacks, road widths and locations, vegetation management etc. This information should be reflected in Section 3.0 and should be consistent with the facility description in ASC/RFA exhibits and in other mitigation plans (Noxious Weed Plan, Reveg Plan, and Dust Control Plan).
- Provide WMP to County and fire department(s), and ask if the measures (setbacks, fire protection equipment) are sufficient. If comments indicate or request additional measures, work with analyst team and Senior Policy Advisor to determine if any changes should be made to the WMP.
- Delete this prior to sending to applicant/certificate holder.

Instructions for Applicant's and Certificate Holders:

- This template includes preventative actions, procedures, and standards commonly proposed to meet the requirements of OAR 345-022-0115(1)(b) and reflects practices the Department and EFSC have identified as appropriate to minimize wildfire risk at solar photovoltaic power generation facilities. **Use of the template is not required**, and provisions in this template may be modified depending on the type of energy facility under review. Use of the template does not guarantee satisfaction with the Council's Wildfire Prevention and Risk Mitigation Standard. Use of the template does not establish a defense for any enforcement action for violation of a site certificate, Council order or rule. Use of the template or a separately-developed Wildfire Mitigation Plan does not relieve a certificate holder from proactively managing wildfire risk and taking steps to protect against wildfire beyond the measures included in the template or a separately-developed Plan.
- Areas in **yellow highlight** to be update based on the applicant/certificate holder facility proposal and should be filled out to the extent known at the time of review of the ASC/RFA. This information will also be updated/finalized based on facility design and the construction plan prior to construction of the facility.
- All changes to this template must be made in track changes for the Department to determine the scope of changes made.

Applicable EFSC Site Certificate Conditions

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 XX to the Final Order on ASC. 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 ASC]

Wildfire Prevention and Risk Mitigation Condition 2 (CON): During construction of the facility or phase, as applicable, the certificate holder shall:

- a. Implement and require all onsite contractors and employees to adhere to, the Construction Wildfire Mitigation Plan required under PRE-WF-01.
- b. After the first six months of construction; and then semi-annually during construction, review and update Construction Wildfire Mitigation Plan as designated in the Plan, and submit the results in the semi-annual construction report.

- c. 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 ASC]

1.0 Finalizing Wildfire Mitigation Plan Prior to Construction (PRE)

1.1 Update Applicable Sections of WMP

To finalize this WMP prior to construction of the facility:

Update Section 3.1 with a summary of construction phasing including vegetation removal and grading based on areas of construction work or facility component.

Update Section 3.2 and include in this WMP the facility site maps described in Section 3.2.

Update Section 3.4 with fire department, certificate holder, and operational manager contact information and emergency response procedures. Update Section 3.4 with analysis area residence contact information and confirm analysis area residence contact letter sent to residences within site boundary and 0.5 miles from the facility.

Update section 3.7 to describe vegetation management and areas that will be managed to be vegetation-free, noncombustible space, or gravel surface.

2.0 Prior to Construction Task List (PRE)

Prior to construction of the facility, complete the activities in Sections 2.1 and 2.2.

2.1 Training (PRE):

Before beginning construction, the certificate holder will hold an on-site training for contractors and construction personnel, inviting specialty contractors, local fire department(s), participating and adjacent landowners, emergency management office personnel, ODOE, and any other emergency management agency. The training will cover:

- Description of construction phasing;
- The type, location, and proper use of fire protection equipment;
- Fire protection equipment usage and maintenance requirements;
- The location(s) of water source(s) and proper usage, storing and maintenance for the pump, hose nozzle; and water hose;
- Overview of smoking policy and locations;
- Overview of procedures and restrictions of construction maintenance activities during Fire Season and Red Flag Warnings designated in this Plan;
 - Designation of individual(s) responsible for Fire Watch Service;

- Designation of individual(s) responsible for checking fire danger/designations for the day.
- Rescue, Alarm, Contain and Extinguish RACE procedures including:
 - 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).
- Provide information and encourage attendees to sign up for the County’s emergency management notification system.

Training attendee list and training materials must be provided to the Department to demonstrate compliance.

The certificate holder will fill out and submit to the Department the template residence outreach letter provided as Attachment 1 of this WMP. Once Department confirms the letter to be sufficient, the certificate holder will mail to each residence within the 0.5 mile analysis area. Certificate holder will confirm mailing and submit to Department.

2.2 Facility Site Map(s) Submission (PRE):

Submit updated site maps from Section 3.2 concurrently to local fire department(s), County emergency management office, and the Department.

3.0 Construction Wildfire Mitigation Plan (CON)

3.1 Summary of Construction Phasing

Provide a summary of construction phasing including vegetation removal and grading based on areas of construction work or facility component.

3.2 Facility Site Map(s):

This Construction WMP includes facility site maps as Attachment XX that identify:

- The phasing for construction, including location of vegetation removal and grading, for facility features and components;
- Location and dimensions of facility roads. Facility perimeter roads are XX feet wide and service roads are XX feet wide;
- Location of vegetation free, noncombustible, defensible spaces;
- Wildfire risk at the site;
- High-fire consequence areas/resources (includes existing infrastructure, residences, sensitive habitat, or cultural resources)
- The location of facility access points. Primary access points are located at XX road at the N/S/E/W portion of the facility;
- A description and the location 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 (e.g. The facility will be gated

and accessible by access codes. Local fire departments and emergency officials will receive codes to access the facility in the event of a fire);

- The type and location of fire protection equipment on site;
- The location(s) of water source(s) that will be on-site during construction. (e.g. Water trucks on site during construction will be staged at the O&M building and moved to locations where construction/hot work will be conducted).
-

3.3 Specifications for Fire Protection Equipment

The following fire suppression equipment will be carried in vehicles conducting maintenance activities and stored on-site at the O&M building at all times:

- Fire Extinguisher: Dry chemical. 2A:10BC (5 pound), 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.

During fire season (as designated in this Plan) water truck(s)/water source, water buffalo, or tank with minimum 500-gallon capacity must be on site. The water truck or water supply shall include the following, unless approved by the Department:

- 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.
- Provide enough hose (500 feet minimum) not less than 3/4" inside diameter to reach areas where power driven machinery has worked.
- Water supply, pump, and at least 250' of hose with nozzle must be maintained as a connected, operating unit ready for immediate use.

All internal combustion engines must be equipped with exhaust systems, mufflers and screens, or include an appropriate spark arrestor; and must be kept in good operating condition. All combustion engines (including but not limited to off road vehicles, chainsaws, and generators) will be equipped with a spark arrestor that meets U.S. Forest Service Standard 5100-1.

All power driven machinery will be kept free of excess flammable material which may create a risk of fire.

3.4 Facility Contact Information and Emergency Response Procedures

Describe fire detection, fire suppression, and emergency procedures that will be implemented in the event of a fire.

Local fire department and county emergency management contact information:

- X
- X

Fire department response times to the site:

- X
- X

Certificate holder primary contact and contact of construction contractor manager(s):

- X
- X

Provide list of residence addresses within the site boundary and 0.5 miles from the site boundary.

Residence/landowner outreach letter is provided as Attachment 1 of this WMP. Use this letter to provide to new or updated residences with the analysis area as designated in Section 4.0, Plan Updates and Reporting Requirements.

Contact 911 in the event of:

- A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;
- A fire ignition on-site that spreads out of the fence line;
- Any fire off-site that does not have emergency responders on site.
 - 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.

3.5 Use of Vehicles and Power Driven Machinery at Site

The following best management practices (BMPs) to minimize fire risk from vehicle travel, equipment use, and fueling activities will 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 as designate din this Plan.
- 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.
- 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.

- All power driven machinery will be kept free of excess flammable material which may create a risk of fire.

3.6 Fire Precaution Levels and Restrictions during Fire Season

Definitions:

 **Non-Fire Season** – Approximately October - May

 **Fire Season** – Approximately June-September, formally designated by the Oregon Department of Forestry (ODF). Under ORS 478.960 (4), a Fire Chief can establish Fire Season within a Fire District when ODF, under ORS 477.505, declares Fire Season. Begins seasonal restrictions for public and industry.

 **Fire Weather Watch** - A fire weather watch is issued when there is a high potential for the development of a red flag event. A watch is issued 18 to 96 hours in advance of the expected onset of criteria. Intent of a fire weather watch is to alert forecast users at least a day in advance for the purposes of resource allocation and fire fighter safety. A watch means critical fire weather conditions are possible but not imminent or occurring.

 **Red Flag Weather Warning** - A red flag warning is used to warn of impending or occurring red flag conditions. Its issuance denotes a high degree of confidence that weather and fuel conditions consistent with local red flag event criteria will occur in 48 hours or less. Specific Red Flag criteria differ for each situation and district in Oregon. Be extremely careful with open flames and other activities that emit sparks.

Hot Work - Any cutting, grinding, welding, or other activity that creates spark or open flame.

Fire Watch Service -

Fire watch shall:

- Be physically capable and experienced to operate firefighting equipment.
- Have facilities for transportation and communications to summon assistance.
- Observe portions of the facility where equipment activity occurred during the day.

Upon discovery of a fire, fire watch personnel must: First report the fire, summon any necessary firefighting assistance, describe intended fire suppression activities; then, after determining a safety zone and an escape route that will not be cut off if the fire increases or changes direction, immediately proceed to control and extinguish the fire, consistent with firefighting training and safety.

Fire-Prevention Measures and Restrictions Associated with Fire Season:

Certificate holder shall maintain a log when construction activities are impacted by Fire Restrictions during Fire Season as designed in this Section. The log will include:

- The date;
- Fire Precaution Level;
- Description of actions taken, including if any measures were taken to reduce wildfire risk that are not identified in this Plan.

Non-Fire Season

- All hot work (must be conducted on roads or on non-combustible surfaces.
- Smoking in designated areas only.



Fire Season

- Before the start of each daily shift, at approximately 07:00 a.m. local time, a designated individual will check the fire danger posting by the National Weather Service for any Red Flag Warnings for that day.
- 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.
- Water source meeting specifications in this Plan will be on site during fire season.
- 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.
- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- Smoking in designated areas only.



Fire Weather Watch

- No hot work permitted.
- Driving and parking only permitted on graveled surfaces.
- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- No smoking on site.



Red Flag Weather Warning

- No hot work permitted.
- On-site personnel must be aware of Red Flag Warning.
- Driving and parking only permitted on graveled surfaces.
- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- No smoking on site.

Table 1: Fire Prevention Measures During Fire Season Summary

Requirement	 Non-Fire Season	 Fire Season	 Fire Weather Watch	 Red Flag Warning
Fire weather advisory	Not required	Check for fire weather advisory	Check for fire weather advisory	Check for fire weather advisory

Table 1: Fire Prevention Measures During Fire Season Summary

Requirement	 Non-Fire Season	 Fire Season	 Fire Weather Watch	 Red Flag Warning
		daily before work begins.	daily before work begins.	daily before work begins. On-site personnel must be aware of Red Flag Warning.
On-site water source	N/A	As specified in Section 3.2	As specified in Section 3.2 and 3.3.	As specified in Section 3.2 and 3.3.
Hot work	Only permitted on roads or on non-combustible surfaces.	Only permitted on roads or on non-combustible surfaces; fire watch required for 60 minutes after completion	Not Permitted	Not Permitted
Fire Watch Service	Not required	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.
Driving and Parking	As described in Section 3.5.	As described in Section 3.5.	Only permitted on roads or on non-combustible surfaces and Section 3.5.	Only permitted on roads or on non-combustible surfaces and Section 3.5.
Smoking	Designated areas only	Designated areas only	Not permitted	Not permitted

3.7 Vegetation Management

3.7.1 Vegetation-free, Noncombustible Space, and Vegetation Standards

Vegetation within the fence line and below the solar arrays will be maintained in accordance with the approved Revegetation and Reclamation Plan for the facility.

- Vegetation will be limited to a height of 10-12 inches, with a minimum clearance of 12 inches from electrical equipment. 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.
- Vegetation buildup in the fence line(s), shall be removed.
- 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.

The following areas will be managed to be vegetation-free, noncombustible space, or gravel surface:

- XX foot wide service roads within solar fence line - graveled
- XX wide perimeter roads – graveled
- 10- foot noncombustible, defensible space clearance along the fenced perimeter of the site boundary – vegetation free
- Within and a 10-foot perimeter of the inverter/transformer pads, collector substation and battery energy storage system (BESS) – graveled, similar noncombustible base, or vegetation free
- Parking and O&M building perimeter - graveled
- Vegetation along service roads will be managed by mowing or other vegetation removal

Vegetation in these areas will be managed by the following techniques:

- XX
- XX

3.8 Construction Training(s)

3.8.1 Safety Training

Once a year after construction begins, organize and hold an on-site training with certificate holder and construction personnel, inviting equipment manufacturers, specialty contractors, local fire department(s), participating and adjacent landowners, emergency management office personnel, ODOE, and any other emergency management agency that covers:

- The location of electrical facility components and the fire safety measures associated with each component that have been constructed;
- Description of remaining construction phasing;
- The type, location, and proper use of fire protection equipment;
- Fire protection equipment usage and maintenance requirements;
- The location(s) of water source(s) and proper usage, storing and maintenance for the pump, hose nozzle; and water hose;

- Overview of smoking policy and locations;
- Overview of procedures and restrictions of construction activities during Fire Season, Fire Weather Watches, and Red Flag Warnings designated in this Plan;
 - Designation of individual(s) responsible for Fire Watch Service;
 - Designation of individual(s) responsible for checking fire danger/designations for the day.
- Rescue, Alarm, Contain and Extinguish (RACE) procedures including:
 - 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).
- Provide information and encourage attendees County’s emergency management notification system.

4.0 Plan Updates: Amendments and Reporting Requirements:

The following information must be provided to the Department in the semi-annual construction report required per OAR 345-026-0080:

- Section 3.1 and 3.2, any changes in wildfire risk at the site or changes in facility components or preventative features.
- Section 3.4, any changes in local fire protection agency personnel and operational managers.
- Section 3.4, any changes in analysis area residence/landowner addresses or contact information.
- A copy of the Fire Season Restriction Log identified in Section 3.6.

Information from the semi-annual construction reporting may be used to establish the performance of the WMP. If determined by certificate holder or Department, adjustments or improvements must be proposed to ensure the WMP provides wildfire mitigation. 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.

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.

Attachment 1: Residence/Landowner Outreach Letter

Contents

1.0	Finalizing Wildfire Mitigation Plan Prior to Operation (PRO)	4
1.1	Update Applicable Sections of WMP	4
2.0	Prior to Operation Task list (PRO).....	4
2.1	Training (PRO).....	5
2.2	Facility Site Map(s) Submission (PRO):	5
3.0	Operational Wildfire Mitigation Plan (OPR).....	5
3.1	Summary of As-Built Facility Description with Design Features	5
3.2	Facility Site Map(s):	6
3.3	Specifications for Fire Protection Equipment	6
3.4	Facility Contact Information and Emergency Response Procedures	7
3.5	Fire Precaution Levels and Restrictions during Fire Season.....	7
3.6	Vegetation Management.....	10
3.6.1	Vegetation-free, Noncombustible Space.....	10
3.6.2	Vegetation Standards, Surveys and Management	10
3.7	Inspections and Maintenance.....	11
3.8	Use of Vehicles and Power Driven Machinery at Site.....	18
3.9	Operational Training(s)	18
3.9.1	Annual or Biannual Safety Training	18
3.9.2	Electrical Safety Program	19
3.10	Facility Monitoring.....	19
4.0	Plan Updates: Amendments and Reporting Requirements.....	19

Draft Operational Wildfire Mitigation Plan
ODOE Template

Instructions for Siting Analyst during review of an ASC/RFA:

- Provide template to applicant/certificate holder. To the extent it can be determined during review of an ASC/RFA, determine facility design features such as setbacks, road widths and locations, vegetation management etc. This information should be reflected in Section 3.0 and should be consistent with the facility description in ASC/RFA exhibits and in other mitigation plans (Noxious Weed Plan, Reveg Plan, and Dust Control Plan).
- Provide WMP to County and fire department(s), and ask if the measures (setbacks, fire protection equipment) are sufficient. If comments indicate or request additional measures, work with analyst team and Senior Policy Advisor to determine if any changes should be made to the WMP.
- Delete this prior to sending to applicant/certificate holder.

Instructions for Applicants and Certificate Holders:

- This template includes preventative actions, procedures, and standards commonly proposed to meet the requirements of OAR 345-022-0115(1)(b) and reflects practices the Department and EFSC have identified as appropriate to minimize wildfire risk at solar photovoltaic power generation facilities. **Use of the template is not required**, and provisions in this template may be modified depending on the type of energy facility under review. Use of the template does not guarantee satisfaction with the Council's Wildfire Prevention and Risk Mitigation Standard. Use of the template does not establish a defense for any enforcement action for violation of a site certificate, Council order or rule. Use of the template or a separately-developed Wildfire Mitigation Plan does not relieve a certificate holder from proactively managing wildfire risk and taking steps to protect against wildfire beyond the measures included in the template or a separately-developed Plan.
- Areas in **yellow highlight** to be updated based on the applicant/certificate holder facility proposal and should be filled out to the extent known at the time of review of the ASC/RFA. This information will also be updated/finalized based on final design prior to operation of the facility.
- All changes to this template must be made in track changes for the Department to evaluate the scope of changes made.

Applicable EFSC Site Certificate Conditions

Wildfire Prevention and Risk Mitigation Condition 3 (PRO): Prior to operation of the facility or phase, as applicable, the certificate holder shall:

- a. Finalize the Operational Wildfire Mitigation Plan, as provided in Attachment XX to the Final Order on ASC. The final Operational Wildfire Mitigation Plan shall be submitted to the Department for review and approval.
- b. Complete pre-operational tasks and actions designated in the Operational Wildfire Mitigation Plan approved under sub a of PRO-WF-01.

[PRO-WF-01, Final Order on ASC]

Wildfire Prevention and Risk Mitigation Condition 4 (OPR): During operation, the certificate holder shall:

- a. Implement the Operational Wildfire Mitigation Plan required under PRO-WF-01, included as Attachment XX to the Final Order on ASC.

- b. After the first operational year, annually review and update Operational Wildfire Mitigation Plan as designated in the Plan, and submit the results in the annual report for that year.
- c. Updates to the Wildfire Mitigation Plan may be required if determined necessary by the certificate holder 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 ASC]

1.0 Finalizing Wildfire Mitigation Plan Prior to Operation (PRO)

1.1 Update Applicable Sections of WMP

To finalize this WMP prior to operation of the facility:

Update Section 3.1 based on final facility design including a brief description of the facility.

Update Section 3.2 and include in this WMP the facility site maps described in Section 3.2.

Update Section 3.4 with fire department, certificate holder, and operational manager contact information and emergency response procedures. Describe fire detection, fire suppression, and emergency shut off systems that will be activated in the event of a fire. Update Section 3.4 with analysis area residence contact information and confirm analysis area residence contact letter sent to residences within site boundary and 0.5 miles from the facility.

Update section 3.6 to describe vegetation management and areas that will be managed to be vegetation-free, noncombustible space, or gravel surface.

Update Section 3.7 and Table 2: *Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results*, based on manufacturer recommendations associated with each type of facility component and vegetation management consistent with this WMP and Revegetation Plan; and include an appendix with excerpts of manufacturer recommendations.

Update Section 3.10 with any additional details about facility monitoring.

Update Section 4.0 with any additional standards for future review and plan updates. Note that Table 2: *Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results*, will be used as a compliance checklist by the Department to establish the performance of the WMP. If determined by certificate holder or Department, adjustments or improvements must be proposed to ensure the WMP provides wildfire mitigation.

2.0 Prior to Operation Task list (PRO)

Prior to operation of the facility, complete the activities in Sections 2.1 and 2.2.

2.1 Training (PRO)

Before beginning operation, the certificate holder will hold an on-site training for operational personnel, inviting equipment manufacturers, specialty contractors, local fire department(s), participating and adjacent landowners, emergency management office personnel, ODOE, and any other emergency management agency. The training will cover:

- The location of electrical facility components and the fire safety measures associated with each component;
- Battery-specific safety protocols, including how to appropriately address chemical fires, in the event of an emergency;
- The type, location, and proper use of fire protection equipment;
- Fire protection equipment maintenance requirements;
- The location(s) of water source(s) and proper usage, storing and maintenance for the pump, hose nozzle; and water hose;
- Overview of smoking policy and locations;
- Overview of procedures and restrictions of operational maintenance activities during Fire Season and Red Flag Warnings designated in this Plan;
 - Designation of individual(s) responsible for Fire Watch Service;
 - Designation of individual(s) responsible for checking fire danger/designations for the day.
- Overview of procedures for Rescue, Alarm, Contain and Extinguish (RACE) procedures, including:
 - 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).
- Provide information and encourage attendees to sign up for the County's emergency management notification system.

Training attendee list and training materials must be provided to the Department to demonstrate compliance.

The certificate holder will fill out and submit to the Department the template residence outreach letter provided as Attachment 1 of this WMP. Once Department confirms the letter to be sufficient, the certificate holder will mail to each residence within the 0.5 mile analysis area. Certificate holder will confirm mailing and submit to Department.

2.2 Facility Site Map(s) Submission (PRO):

Submit updated site maps from Section 3.2 concurrently to local fire department(s), County emergency management office, and the Department.

3.0 Operational Wildfire Mitigation Plan (OPR)

3.1 Summary of As-Built Facility Description with Design Features

Include a brief summary of the facility.

3.2 Facility Site Map(s):

This Operational WMP includes facility site maps as Attachment XX that identify:

- Location and dimensions of facility roads. Facility perimeter roads are XX feet wide and service roads are XX feet wide;
- Location of vegetation free, noncombustible, defensible spaces;
- Wildfire risk at the site and date;
- High-fire consequence areas/resources (includes existing infrastructure, residences, sensitive habitat, or cultural resources)
- The location of facility access points. Primary access points are located at XX road at the N/S/E/W portion of the facility;
- A description and the location 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. (e.g. The facility will be gated and accessible by access codes. Local fire departments and emergency officials will receive codes to access the facility in the event of a fire);
- The type and location of fire protection equipment on site;
- The location(s) of water source(s) that will be on-site during operations. (e.g. Water trucks on site during fire season will be staged at the O&M building).

3.3 Specifications for Fire Protection Equipment

The following fire suppression equipment will be carried in vehicles conducting maintenance activities and stored on-site at the O&M building:

- Fire Extinguisher: Dry chemical. 2A:10BC (5 pounds), 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.

During fire season (as designated in this Plan) water truck(s)/water source, water buffalo, or tank with minimum 500-gallon capacity must be on site. The water truck or water supply shall include the following, unless approved by the Department:

- Pump should be maintained ready to operate and capable of providing 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. Provide enough hose (500 feet minimum) not less than 3/4" inside diameter to reach areas where power driven machinery has worked.
- Water supply, pump, and at least 250' of hose with nozzle must be maintained as a connected, operating unit ready for immediate use.

All internal combustion engines must be equipped with exhaust systems, mufflers and screens, or include an appropriate spark arrester; and must be kept in good operating condition.

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.

All power driven machinery will be kept free of excess flammable material which may create a risk of fire.

3.4 Facility Contact Information and Emergency Response Procedures

Describe fire detection, fire suppression, and emergency shut off systems that will be activated in the event of a fire.

Local fire department and county emergency management contact information:

- X
- X

Fire department response times to the site:

- X
- X

Certificate holder primary contact and contact of operational manager(s):

- X
- X

Provide list of residence addresses within the site boundary and 0.5 miles from the site boundary.

Residence/landowner outreach letter is provided as Attachment 1 of this WMP. Use this letter to provide to new or updated residences with the analysis area as designated in Section 4.0, Plan Updates and Reporting Requirements.

Contact 911 in the event of:

- A fire or emergency on-site that cannot be addressed by personnel on-site and requires the assistance of fire or emergency medical personnel;
- A fire ignition on-site that spreads out of the fence line;
- Any fire off-site that does not have emergency responders on site.
 - 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.

3.5 Fire Precaution Levels and Restrictions during Fire Season

Definitions:

 **Non-Fire Season** – Approximately October - May

 **Fire Season** – Approximately June-September, formally designated by the Oregon Department of Forestry (ODF). Under ORS 478.960 (4), a Fire Chief can establish Fire Season within a Fire District when ODF, under ORS 477.505, declares Fire Season. Begins seasonal restrictions for public and industry.

  **Fire Weather Watch** - A fire weather watch is issued when there is a high potential for the development of a red flag event. A watch is issued 18 to 96 hours in advance of the expected onset of criteria. Intent of a fire weather watch is to alert forecast users at least a day in advance for the

purposes of resource allocation and fire fighter safety. A watch means critical fire weather conditions are possible but not imminent or occurring.



Red Flag Weather Warning - A red flag warning is used to warn of impending or occurring red flag conditions. Its issuance denotes a high degree of confidence that weather and fuel conditions consistent with local red flag event criteria will occur in 48 hours or less. Specific Red Flag criteria differ for each situation and district in Oregon. Be extremely careful with open flames and other activities that emit sparks.

Hot Work -Any cutting, grinding, welding, or other activity that creates spark or open flame.

Fire Watch Service:

Fire watch shall:

- Be physically capable and experienced to operate firefighting equipment.
- Have facilities for transportation and communications to summon assistance.
- Observe portions of the operation on which activity occurred during the day.

Upon discovery of a fire, Firewatch personnel must: First report the fire, summon any necessary firefighting assistance, describe intended fire suppression activities; then, after determining a safety zone and an escape route that will not be cut off if the fire increases or changes direction, immediately proceed to control and extinguish the fire, consistent with firefighting training and safety.

Fire-Prevention Measures and Restrictions Associated with Fire Season:

Certificate holder shall maintain a log when operational activities are impacted by Fire Restrictions during Fire Season as designed in this Section. The log will include:

- The date;
- Fire Precaution Level;
- Description of actions taken, including if any measures were taken to reduce wildfire risk that are not identified in this Plan.



Non-Fire Season

- All hot work must be conducted on roads or on non-combustible surfaces.
- Smoking in designated areas only.



Fire Season

- Before the start of each daily shift, at approximately 07:00 a.m. local time, a designated individual will check the fire danger posting by the National Weather Service for any Red Flag Warnings for that day.
- 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.
- Water source meeting specifications in this Plan will be on site during fire season.
- 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.

- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- Smoking in designated areas only.



Fire Weather Watch

- No hot work permitted.
- Driving and parking only permitted on graveled surfaces.
- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- No smoking on site.



Red Flag Weather Warning

- No hot work permitted.
- On-site personnel must be aware of Red Flag Warning.
- Driving and parking only permitted on graveled surfaces.
- Fire watch shall be on duty during any breaks and for one hour after all power driven machinery used by the operator has been shut down for the day.
- No smoking on site.

Table 1: Fire Prevention Measures During Fire Season Summary

Requirement	 Non-Fire Season	 Fire Season	 Fire Weather Watch	 Red Flag Warning
Fire weather advisory	Not required	Check for fire weather advisory daily before work begins.	Check for fire weather advisory daily before work begins.	Check for fire weather advisory daily before work begins. On-site personnel must be aware of Red Flag Warning.
On-site water source	N/A	As specified in Section 3.2	As specified in Section 3.2 and 3.3.	As specified in Section 3.2 and 3.3.
Hot work	Only permitted on roads or on non-combustible surfaces.	Only permitted on roads or on non-combustible surfaces; fire watch required for 60 minutes after completion	Not Permitted	Not Permitted

Table 1: Fire Prevention Measures During Fire Season Summary

Requirement	 Non-Fire Season	 Fire Season	 Fire Weather Watch	 Red Flag Warning
Fire Watch Service	Not required	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.	During breaks and for 60 minutes after all power-driven machinery has been shut down for the day.
Driving and Parking	As described in Section 3.9.	As described in Section 3.9.	Only permitted on roads or on non-combustible surfaces and Section 3.9.	Only permitted on roads or on non-combustible surfaces and Section 3.9.
Smoking	Designated areas only	Designated areas only	Not permitted	Not permitted

3.6 Vegetation Management

3.6.1 Vegetation-free, Noncombustible Space

The following areas will be managed to be vegetation-free, noncombustible space, or gravel surface:

- XX foot wide service roads within solar fence line - graveled
- XX wide perimeter roads – graveled
- 10- foot noncombustible, defensible space clearance along the fenced perimeter of the site boundary – vegetation free
- Within and a 10-foot perimeter of the inverter/transformer pads, collector substation and battery energy storage system (BESS) – graveled, similar noncombustible base, or vegetation free
- Parking and O&M building perimeter - graveled
- Vegetation along service roads will be managed by mowing or other vegetation removal

Vegetation in these areas will be managed by the following techniques:

- XX
- XX
-

3.6.2 Vegetation Standards, Surveys and Management

Vegetation within the fence line and below the solar arrays will be maintained in accordance with the approved Revegetation Plan, Soil Reclamation Plan and Noxious Weed Plan for the facility.

- Vegetation will be limited to a height of 10-12 inches, with a minimum clearance of 12 inches from electrical equipment. 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.
- Vegetation buildup in the fence line(s), shall be removed.
- 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.

A vegetation assessment survey of the fenced area will be completed at least twice a year to monitor for vegetation clearances and maintenance of fire breaks, and wildfire hazards. One survey will occur before the fire season begins, in May or June. The second survey will occur in October or November. Additional vegetation surveys and management may be required throughout the year based on seasonally heightened fire risk, vegetation growth, or observations from operational maintenance staff.

The survey will be conducted by the a vegetation specialist and will be used to assess the frequency of upcoming vegetation maintenance and will assess and document the following:

- Location;
- Species;
- Height;
- Proximity to facility components;
- Estimated growth rate;
- Abundance;
- Clearance/setbacks; and
- Risk of fire hazard.

Results of surveys shall be provided in the annual updates to this WMP, designated in Section 4.0.

Vegetation control includes: (to be consistent with this WMP, Revegetation Plan, Soil Reclamation Plan and Noxious Weed Plan.)

- XXX
- XXX

3.7 Inspections and Maintenance

Facility components will be inspected and maintained as designated in Table 2: *Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results* below. Update Table 2 based on manufacturer recommendations associated with each type of facility component and vegetation management consistent with this WMP and Revegetation Plan.

Table 2 includes an operational check list that will be filled out designating which personnel conducted inspections and maintenance, the dates of inspections and maintenance, and results. As designated in Section 4.0, of this WMP, this table checklist will be submitted to demonstrate compliance with the WMP and used to determine if changes to the WMP are necessary. Other checklist may be provided prior to operation and in the annual review of the WMP, as approved by the Department.

Manufacturers' recommendations, or excerpts for inspections and maintenance are included as Appendix XX to plan.

Lock Out/Tag Out Program:

During maintenance activities, electrical equipment is de-energized and physically locked or tagged in the de-energized positions to avoid inadvertent events that could result in arc flash.

- Ensure equipment is maintained to prevent and control sources of ignition.

Table 2: Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results

Facility Component(s)	Inspection Procedure	Inspection Frequency	Standard ¹	Maintenance Schedule	Date and Personnel Completing Inspection(s); Inspection Results	Date and Personnel Completing Maintenance; Maintenance Results
System Protection	Protection Relays - Verify calibration and check functionality. Breaker Trip Testing - Verify the ability to trip breakers via coil.	X	Manufacturer’s maintenance recommendations	Repair or replace once every 5 years	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
System Protection	System Protection Potential Transducers (“PTs”) and Current Transducers (“CTs”)ul> Verify calibration and check functionality.	X	Manufacturer’s maintenance recommendations	Repair or replace once every 11 years	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
Solar Inverter	ul> - Visual inspection of inverter and surrounding area. - Verify torque specifications. - For alternating current (AC)/direct current (DC), perform inspection of communication and control power terminations. - Cycle AC/DC disconnects, inspect AC/DC contactors and cooling fans. - Perform infrared scan. Inverter Testing and Preventative Parts Replacement - Preventative maintenance replacement of inverter parts (e.g.: cooling system and power supplies that are operating effectively but scheduled for replacement per manufacturer's recommendations).		Spill Prevention, Control, and Countermeasures (SPCC) Plan ³ Manufacturer’s maintenance recommendations	ul> - Monthly SPCC Plan - Bi-annual Preventative Maintenance - Per manufacturer’s recommendations	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
	Vegetation: Visual inspection during component inspections and visual inspections during vegetation surveys twice a year.	Vegetation: Twice a year during vegetation surveys and additional visual inspections during routine inspections of components.	Vegetation: Herbicide application on gravel pad around inverter to prevent vegetation growth. IEEE 80 NEC 70	Vegetation: Yearly, depending on vegetation condition. Or more frequent based on vegetation survey results or upon visual inspections listed above.	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
Tracker System	ul> - Perform visual inspection of tracking components; sync data with the Applicant’s Operations Center. - Perform visual inspection of module clamps and rail fasteners for integrity. - Perform visual inspection of gear drives and shaft assemblies for alignment. - Grease gear boxes and/or drive shaft. - Verify wind stow functionality and lubricate slew ring.		Manufacturer’s maintenance recommendations	ul> Per manufacturer’s recommendations	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
Solar Array Structures	ul> Perform visual inspection of mounting structures,		Manufacturer’s	Repair or replace annually	Date:	Date:
					Personnel:	Personnel:

Table 2: Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results

Facility Component(s)	Inspection Procedure	Inspection Frequency	Standard ¹	Maintenance Schedule	Date and Personnel Completing Inspection(s); Inspection Results	Date and Personnel Completing Maintenance; Maintenance Results
	grounding, and cabling.		maintenance recommendations		Personnel:	Personnel:
					Results:	Results:
					Notes:	Notes:
Solar Array Panels, Harnesses, and Combiner Boxes	At Applicant’s sole discretion, to perform one of the following options: • Infra-red (“IR”) Flyover a. IR scan of Site providing DC health of the Facility down to string level reporting; or • Physical DC Health Inspection a. Perform visual inspection of whips and wires connectors for damage or exposed conductors in gutters of harness combiner boxes. b. Measure and record current of each whip using clamp-on meter and identify low performing whips.		Applicant’s discretion	Repair or replace annually	Date:	Date:
					Personnel:	Personnel:
					Results:	Results:
					Notes:	Notes:
	Vegetation: Visual inspection during component inspections and visual inspections during vegetation surveys twice a year.	Vegetation: Twice a year during vegetation surveys and additional visual inspections during routine inspections of components	Vegetation: Vegetation under solar arrays will be maintained to a height of 10-12 inches, with a minimum clearance of 12 inches from electrical equipment. Methods include manual removal, mowing, or as designate din this Plan.	Vegetation: Twice a year, or more often, as designate din this Plan.	Date:	Date:
					Personnel:	Personnel:
Collector Substation	• Perform visual inspection of the grounding system. • Perform thermographic and visual inspection. • Perform uninterrupted power supply (UPS) inspection and maintenance.		Manufacturer’s maintenance recommendations North American Electric Reliability Corporation (NERC)	Repair or replace annually	Date:	Date:
					Personnel:	Personnel:
	Vegetation: Visual inspection during component inspections and visual inspections during vegetation surveys twice a year.	Vegetation: Twice a year during vegetation surveys and additional visual inspections during routine inspections of components.	Vegetation: Herbicide application on substation gravel pad. IEEE 80 NEC 70	Vegetation: Yearly, depending on vegetation condition. Or more frequent based on vegetation survey results or upon routine visual inspections.	Results:	Results:
					Notes:	Notes:

Table 2: Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results

Facility Component(s)	Inspection Procedure	Inspection Frequency	Standard ¹	Maintenance Schedule	Date and Personnel Completing Inspection(s); Inspection Results	Date and Personnel Completing Maintenance; Maintenance Results
BESS	- Set battery maintenance (system check, cell balancing). - Battery cable, appearance, grounding, dust removal. - Inspect battery management system alarms. - Visual inspection of electrical terminations using thermal imager.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:
	Vegetation: Visual inspection during component inspections and visual inspections during vegetation surveys twice a year.	Vegetation: Twice a year during vegetation surveys and additional visual inspections during routine inspections of components.	Vegetation: Herbicide application on substation gravel pad. IEEE 80 NEC 70	Vegetation: Yearly, depending on vegetation condition. Or more frequent based on vegetation survey results or upon routine visual inspections.	Results: Notes:	Results: Notes:
Unit Control Enclosure Battery	- Check for correct operations of battery monitoring system and battery charging system. - Perform visual inspection of the battery room, mounting rack, batteries, and connections.		Manufacturer's maintenance recommendations	Repair or replace monthly	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
Unit Control Enclosure Battery	Perform individual cell float charge and specific gravity checks.		Manufacturer's maintenance recommendations	Repair or replace quarterly	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
Unit Control Enclosure Battery	Measure float cell voltage, pilot cell voltage, and electrolyte temperature of pilot cell.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
Supervisory, Control and Data Acquisition (SCADA) & Network Equipment	Plant equipment will be evaluated every 5 years to determine state of health and provide recommendations to Savion.		Manufacturer's maintenance recommendations	Upgrade, repair, or replace every 5 years	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
BESS Junction Box/ Auxiliary System/Miscellaneous	- Auxiliary equipment maintenance and inspection. - Enclosure dust removal. - Inspect cable entry, grounding, sealing, dust removal.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:

Table 2: Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results

Facility Component(s)	Inspection Procedure	Inspection Frequency	Standard ¹	Maintenance Schedule	Date and Personnel Completing Inspection(s); Inspection Results	Date and Personnel Completing Maintenance; Maintenance Results
	- Critical sensor calibration check. - Maintenance report.				Results: Notes:	Results: Notes:
BESS Fire Safety System	- Fire alarm and detection system inspection. - Fire alarm and detection system maintenance. - Fire suppression System Inspection.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
BESS Thermal Management System	- Thermal management system inspection. - Thermal management system maintenance. - Motor Lubrication. - Clean Filters by rinsing with water. - Electric Heater - Dust accumulation on the coil, signs of overheating on the heater frame, traces of water or rust on the electric heater control box.		Manufacturer's maintenance recommendations	Repair or replace semi-annually	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
BESS Thermal Management System	Coolant tester visual inspection.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
BESS General	System configuration check.		Manufacturer's maintenance recommendations	Repair or replace annually	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
Medium Voltage (MV) and High Voltage (HV) Breaker	- Clean out dirt and debris. - Perform a manual operation test. - Perform an electrical test. - Perform a gas leakage test.		Manufacturer's maintenance recommendations	Repair or replace per manufacturer's recommendations	Date: Personnel:	Date: Personnel:
			NERC		Results: Notes:	Results: Notes:
Generator Step-Up (GSU) Transformer	- Perform a visual inspection and check for proper operation of fan motor, oil pump motor, and breather. - Inspect and maintain substation transformer bushings		SPCC Plan ³	Repair, overhaul, refurbish, or replace per manufacturer's recommendations	Date: Personnel:	Date: Personnel:

Table 2: Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results

Facility Component(s)	Inspection Procedure	Inspection Frequency	Standard ¹	Maintenance Schedule	Date and Personnel Completing Inspection(s); Inspection Results	Date and Personnel Completing Maintenance; Maintenance Results
	and control panel. Perform visual inspection of bushings for indications of local heating, oil leaks, proper oil level and indication of contaminants.		Manufacturer's maintenance recommendations		Results: Notes:	Results: Notes:
Inverter Step-up Transformer	- Perform infrared scans on low side of transformer when power is >80%. - Verify temperature and pressure sync with the contractor's Operations Center. - Perform visual inspection of the physical integrity of the enclosure and check for oil leakage. - Perform visual inspection for damage or discoloration of bushings. - Perform oil sample analysis on MV transformer(s). - Collect MV transformer oil sample(s) for 3rd party analysis. - Perform electrical test of transformer. - Verify integrity of surge arresters and check for proper tap position.		SPCC Plan ³ Manufacturer's maintenance recommendations	Replace or repair per manufacturer's recommendation	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
	Vegetation: Visual inspection during component inspections and visual inspections during vegetation surveys twice a year.	Vegetation: Twice a year during vegetation surveys and additional visual inspections during routine inspections of components.	Vegetation: Herbicide application on gravel pad around inverter to prevent vegetation growth. IEEE 80 NEC 70	Vegetation: Yearly, depending on vegetation condition. Or more frequent based on vegetation survey results or upon visual inspections listed above.	Date: Personnel:	Date: Personnel:
					Results: Notes:	Results: Notes:
Overhead electrical lines	Visual inspection of components, grounding and APLIC measures.		APLIC		Date: Personnel:	Date: Personnel:
	Vegetation: Visual inspection of vertical clearance distance between conductor and vegetation.		Vegetation: National Energy Reliability Corporation (NERC) - Vegetation maintenance standard FAC-003-0. Mow vegetation to achieve clearance requirements between conductor and ground.	Vegetation: Yearly, depending on vegetation condition.	Results: Notes:	Results: Notes:

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.

3.8 Use of Vehicles and Power Driven Machinery at Site

The following best management practices (BMPs) to minimize fire risk from vehicle travel, equipment use, and fueling activities will be implemented at the site during operational activities:

- The movement of vehicles will be planned and managed to minimize fire risk.
- As necessary, contractor(s) or operational personnel 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 as designate din this Plan.
- 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.
- 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.
- All power driven machinery will be kept free of excess flammable material which may create a risk of fire.

3.9 Operational Training(s)

3.9.1 Annual or Biannual Safety Training

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

- The location of electrical facility components and the fire safety measures associated with each component;
- Battery-specific safety protocols, including how to appropriately address chemical fires, in the event of an emergency;
- The type, location, and proper use of fire protection equipment;
- Fire protection equipment maintenance requirements;
- The location(s) of water source(s) and proper usage, storing and maintenance for the pump, hose nozzle; and water hose;
- Overview of smoking policy and locations;
- Overview of procedures and restrictions of operational maintenance activities during Fire Season and Red Flag Warnings designated in this Plan; Rescue, Alarm, Contain and Extinguish (RACE) procedures, including:
 - 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).
- Provide information and encourage attendees to sign up for the County's emergency management notification system.

Training attendee list and training materials must be provided to the Department to demonstrate compliance.

3.9.2 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;
- Lockout/tagout procedures
- Electrical equipment testing and troubleshooting;
- Switching system;
- Provisions for entering high voltage areas (e.g., substation);
- Minimum approach distances; and
- Required personal protective equipment.

3.10 Facility Monitoring

Facility components that are monitored via the supervisory, control, and data acquisition (SCADA) system are the solar inverters, collector substation, battery energy storage system (BESS), and overhead electrical lines associated with the alternate gen-tie line.

Facility components will be monitored remotely with the SCADA system 24 hours a day, 7 days a week.

Smoke and fire detectors are placed throughout the facility, will be connected to the SCADA system, and will contact local firefighting services if needed. The BESS will also have integrated fire safety and monitoring systems to detect and alarm if a fire condition is detected.

Facility has remote shutdown capabilities that involve XXX.

4.0 Plan Updates: Amendments and Reporting Requirements

The following information must be provided to the Department in the annual report required per OAR 345-026-0080::

- Section 3.1 and 3.2, any changes in wildfire risk at the site or changes in facility components or preventative features.
- Section 3.4, any changes in local fire protection agency personnel and operational managers.
- Section 3.4, any changes in analysis area residence/landowner addresses or contact information.
- Fill out Table 2: *Operational Electrical Component and Vegetation Inspection and Maintenance Schedule and Results*, with the dates, personnel, and results of inspections and maintenance performed. A different form or checklist of operational inspection, vegetation

management, and maintenance may be used if approved by the Department.

- A copy of the Fire Season Restriction Log identified in Section 3.5.

The certificate holder must review this WMP annually to determine if updates to the WMP are necessary. In its annual review, the certificate holder will evaluate changes in standards, policies, future technologies or best practices that could be implemented at the facility to address wildfire prevention or protection, including but not limited to those identified in Table 3, below.

Information from the annual reporting and from the certificate holder or Department review of sources in Table 3 may be used to establish the performance of the WMP. If determined by certificate holder or Department, adjustments or improvements must be proposed to ensure the WMP provides wildfire mitigation. 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.

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 3: Standards for Future Review

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.
Oregon Fire Code	The Oregon State Fire Marshal adopts the Oregon Fire Code, establishing minimum fire prevention and protection systems requirements applicable to certain structures, including but not limited to, energy systems.	The applicant will adhere to any applicable standards of the Oregon Fire Code and will incorporate features necessary to meet those standards into the design of the facility. Certificate holder will annually review and apply applicable standards that may apply to

Table 3: Standards for Future Review

Reference	Description	Method
NFPA Codes and Standards	The National Fire Protection Association publishes codes and standards intended to minimize the possibility and effects of fire and other risks/	The applicant will identify and adhere to any applicable codes and standards and will incorporate features necessary to meet those standards into the design of the facility. Certificate holder will annually review and apply applicable standards that may apply to an operational facility.
APLIC	Avian protection methods for electrical facility reduce 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).
ORS chapter 477, OAR chapter 629-043	Standards and rules for fire prevention in forest and range land administered by Oregon Department of Forestry	The applicant will be familiar with and operate consistently with the applicable standards, including any updates to rules or standards and will provide a summary of standards that are updated and implemented at the facility.
OAR chapter 860, division 024	Safety standards for transmission lines adopted by Oregon PUC	The applicant will maintain consistency with any applicable vegetation clearance requirements, pruning standards, and high fire risk zone safety standards and will provide a summary of standards that are updated and implemented at the facility.
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.		

Attachment 1: Residence/Landowner Outreach Letter

COMPANY LOGO/LETTERHEAD

DATE

RE: Community Outreach Letter for XXX Energy Facility

My name is XXX and I'm the XXX for XX LLC. We are the certificate holder of the XXX Energy Facility, approved by the Oregon Energy Facility Siting Council (EFSC). Construction of the facility will start/was completed in XX. The facility is a XX megawatt solar facility located XX. You are receiving this letter because your address is within 0.5 miles from the facility site boundary and we want to make sure you are aware of the following information:

- Safety at the facility is our highest priority. We have emergency procedures in place in the event of an emergency on site or off site that may impact the facility and adjacent areas. This includes an EFSC Wildfire Mitigation Plan (WMP) that addresses vegetation management, facility inspections, and maintenance protocols to ensure that the facility minimizes fire risk. The WMP also requires fire protection equipment to be on site and allows for emergency access for fire departments in the event of a fire on site or off site.
- In the event of an emergency on site or off site that cannot be addressed by facility personnel, local emergency and law enforcement will be contacted and procedures designated by the XX County's Office of emergency management will be followed, if necessary.
- If you have not already done so, we recommend you sign up for XX County emergency notification system. You may sign up via the County's webpage or directly via this link:
Link: XX

Please contact me if you have any questions about the facility, XX company, or any other concerns regarding construction and operation of the facility. Further, the Oregon Department of Energy (ODOE) is staff to EFSC and can be contacted if you have questions. Follow the link below for contact information:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/Compliance-Program.aspx>

Thank you,

NAME

TITLE

CONTACT INFORMATION

DATE