Notice of Intent to Apply for a Site Certificate

Echo Solar Project
May 2022

Submitted to
Oregon Energy Facility Siting Council

Prepared for

PGR PINE GATE RENEWABLES | GETTING SOLAR DONE.

Echo Solar, LLC

Prepared by

TETRA TECH

Tetra Tech, Inc.

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Acronyms and Abbreviations

AC	alternating current
Applicant	Echo Solar, LLC
ASC	Application for Site Certificate
CFR	Code of Federal Regulations
DC	direct current
Council	Energy Facility Siting Council
FAA	Federal Aviation Administration
Facility	Echo Solar Project
I-84	Interstate 84
kV	kilovolt
MW	megawatt
NHD	National Hydrography Dataset
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
O&M	operations and maintenance
OAR	Oregon Administrative Rule
ODEQ	Oregon Department of Environmental Quality
ODOT	Oregon Department of Transportation
ODFW	Oregon Department of Fish and Wildlife
ORS	Oregon Revised Statute
PGR	Pine Gate Renewables, LLC
RFPD	Rural Fire Protection District
UEC	Umatilla Electric Cooperative
USC	United States Code
WPCF	Water Pollution Control Facilities

Exhibit A. Applicant Information – OAR 345-020-0011(1)(a)

(a) Exhibit A. Information about the applicant and participating persons, including:

(A) The name and address of the applicant including all co-owners of the proposed facility, the name, mailing address, email address and telephone number of the contact person for the NOI, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person.

Response:

Name and mailing address of Applicant:

Echo Solar, LLC
130 Roberts Street
Asheville, NC 28801

Applicant contact persons with mailing address and telephone numbers:

Joe Torkelson
Project Manager
Echo Solar, LLC
130 Roberts Street
Asheville, NC 28801
(321) 652-1835
utility@pgrenewables.com

(B) The contact name, mailing address, email address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.

Response:

Echo Solar, LLC (the Applicant) is a subsidiary of Pine Gate Renewables, LLC (PGR).

Parent Company:
Pine Gate Renewables, LLC
130 Roberts Street
Asheville, NC 28801

Contact Name, Mailing Address, Email Address, and Telephone Number:

Joe Torkelson
Project Manager
Echo Solar, LLC
130 Roberts Street
Asheville, NC 28801
(321) 652-1835
utility@pgrenewables.com

Contact persons other than the Applicant:

Linnea Fossum
Tetra Tech, Inc.
19803 North Creek Parkway, Suite 100
Bothell, WA 98011
(425) 482-7823
linnea.fossum@tetratech.com

Tim McMahan
Stoel Rives LLP
760 SW Ninth Ave, Suite 3000
Portland, OR 97205
(503) 504-8693
tim.mcmahan@stoel.com

Jeff Fox
Gallatin Power Partners, LLC
270 W Kagy Blvd, Suite #E
Bozeman, MT 59715
(406) 599-2916
Jeff@gallatinpower.com

(C) If the applicant is a corporation:

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;

(ii) The date and place of its incorporation;

(iii) A copy of its articles of incorporation and its authorization for submitting the NOI; and

(iv) In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.

Response:

The Applicant is not a corporation. Therefore, this rule is not applicable.

(D) If the applicant is a wholly owned subsidiary of a company, corporation or other business entity, in addition to the information required by paragraph (C), the full name and business address of each of the applicant's full or partial owners.

Response:

As noted above, the Applicant is a subsidiary of PGR. The parent company name and business address is as follows:

Pine Gate Renewables, LLC
130 Roberts Street
Asheville, NC 28801
https://pinegaterenewables.com/

(E) If the person submitting the NOI is an association of citizens, a joint venture or a partnership:

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI;

(ii) The name, business address and telephone number of each person participating in the association, joint venture or partnership and the percentage interest held by each;

(iii) Proof of registration to do business in Oregon;

(iv) A copy of its articles of association, joint venture agreement or partnership agreement and a list of its members and their cities of residence; and

(v) If there are no articles of association, joint venture agreement or partnership agreement, the applicant must state that fact over the signature of each member.

Response:

The Applicant is not an association of citizens, a joint venture, or a partnership. Therefore, this rule is not applicable.

(F) If the applicant is a public or governmental entity:

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI; and

(ii) Written authorization from the entity's governing body to submit an NOI.

Response:

The Applicant is not a public or governmental entity. Therefore, this rule is not applicable.

(G) If the applicant is an individual, the individual's mailing address, email address and telephone number.

Response:

The Applicant is not an individual. Therefore, this rule is not applicable.

(H) If the applicant is a limited liability company:

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;

(ii) The date and place of its formation;

(iii) A copy of its articles of organization and its authorization for submitting the NOI; and

(iv) In the case of a limited liability company not registered in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.

Response:

The Applicant is a limited liability company. The officer responsible for submitting the Notice of Intent (NOI) is as follows:

Joe Torkelson
Project Manager
Echo Solar, LLC
130 Roberts Street
Asheville, NC 28801
(321) 652-1835
utility@pgrenewables.com

The Applicant was organized and acknowledged by the Oregon Secretary of State on May 10, 2021, in Salem, Oregon. Articles of Amendment were filed on September 21, 2021, changing the entity name from Bombing Range Solar 1, LLC to Echo Solar, LLC. The Articles of Amendment are provided in Attachment 1. The Applicant is registered in Oregon; therefore, information for the resident attorney-in-fact is not required.

Exhibit B. Facility Description – OAR 345-020-0011(1)(b)

(b) Exhibit B. Information about the proposed facility, including:

(A) A description of the proposed energy facility, including as applicable:

Response:

The Applicant proposes to construct and operate a photovoltaic solar energy generation facility combined with a battery energy storage system in Morrow County, Oregon (see Figure 1). As described in more detail below, the proposed Echo Solar Project (Facility) will consist of up to 1,250 megawatts (MW) of solar generation. Located entirely on private land, the Facility Site Boundary encompasses approximately 10,900 acres (see Figure 2).

(i) The nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300.

Response:

The Facility will have up to 1,250 MW of nominal and average generating capacity as defined in Oregon Revised Statute (ORS) 469.300(4)(c).

(ii) Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate electricity and useful thermal energy.

Response:

The facility will generate electricity using photovoltaic solar panels wired in series and in parallel to form arrays. Each solar array will be composed of a combination of solar modules, tracker systems, posts, and related electrical equipment. Solar technology is rapidly evolving and the solar modules and associated equipment, and the precise layout of the solar arrays and related or supporting facilities, have not yet been determined. Therefore, the following description of major components is based on the best available design information at this time. This information will be revised and updated as necessary in the Application for Site Certificate (ASC).

Solar Modules. Solar modules use mono- or poly-crystalline cells to generate electricity by converting sunlight into direct current (DC) electrical energy. The electrical generation from a single module varies by module size and the number of cells per module. As technology continues to evolve, final module specification is usually in-flux until late in the development process. The solar industry as a whole is moving away from poly-crystalline silicon and it is likely that the facility will use mono-crystalline silicon modules. The modules used in current preliminary site design each have a nameplate rating of 485 watts and measure 7.4 feet by 3.4 feet. Solar modules consist of

a crystalline cell, antireflective glass, a metal frame, and factory installed "quick connect" wire connectors. The modules will be connected in series to form long rows. The rows of modules are then connected via combiners, cables, and switchboards. The configuration of multiple rows (the array) can vary depending on the equipment type and topography. The actual number of modules will depend on the module technology, spacing, mounting equipment, and other design criteria that will be determined during final design.

Tracker Systems. Strings of solar modules will be mounted on single-axis tracker systems that optimize electricity production by rotating the solar modules to follow the path of the sun throughout the day. Strings will each consist of 25 solar modules. The drive unit for the tracking system can control a single row or multiple rows of modules through a series of mechanical linkages and gearboxes. As the solar modules tilt throughout the day, the height of their top edges will shift accordingly, up to 16 feet high. The tracker system, and associated posts, will be specifically designed to withstand wind, snow, and seismic loads anticipated at the site.

Posts. Each tracker will be supported by multiple steel posts, which could be round hollow posts or pile-type posts (i.e., H-pile, C-pile, S-pile). Post depth may vary depending on soil conditions, but the posts are typically installed 6 to 8 feet below the surface and extend approximately 5 feet above grade. Posts at the end of tracker rows are usually installed to greater depth to withstand wind uplift. In some soil conditions, concrete backfill is required for each post. Post locations will be determined by the final layout of the tracker system and geotechnical investigations of the solar area.

Inverters. The DC collected from the solar modules via combiner boxes is converted into alternating current (AC) before connecting to the collector substation. Inverter output will vary with improvements in technology. Typical inverter output is currently anticipated to be 4,000 to 5,000 kilovolt-ampere per inverter and between 600 and 700 volts AC. Cabling will be used to string each module to other modules in series to build voltage from a single module's approximately 50-volt maximum to a maximum of 1,500 volts DC. The strings of modules will then be connected in parallel to build current prior to entering the inverter which will convert the 900 to 1,500 volts DC input to 600 to 700 volts AC output. Output current will be proportional to input current minus losses.

Transformers. The Facility will have at least two types of transformers. Each inverter will have a transformer to step-up from the approximately 600-volt inverter output to 34.5 kilovolts (kV). The Facility will also have at least one generator step up transformer that will step up from 34.5 kV to the interconnection voltage of 230 kV. Transformers will be non-polychlorinated biphenyl oil-filled types.

Cabling. Solar modules generate DC electricity. Cables will collect and aggregate the DC before it is converted to AC and sent to the Facility substation. Low-voltage cabling will connect the solar modules of each tracker string in series and combine multiple strings to a single combiner box. Cabling from multiple combiner boxes will connect to a single inverter, which will convert the DC to AC and connect to the buried collection system. Cabling can be mounted to the tracker system, placed in cable trays, or buried.

Collection System. The transformers, described above, will connect the generation output of the solar array to the 34.5-kV collector lines, which will buried underground to a minimum of 3 feet.

(iii) Methods for waste management and waste disposal, including, to the extent known, the amount of wastewater the applicant anticipates, the applicant's plans for disposal of wastewater and storm water, and the location of disposal.

Response:

Construction and operation of the Facility will not produce wastewater for disposal or generate significant quantities of solid waste. Stormwater drainage, water, solid waste management, and sewage treatment are discussed further in Exhibit K of this NOI.

(iv) For thermal power plants:

(I) A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy.

(II) Methods for disposal of waste heat.

Response:

The Facility is not a thermal power plant and no waste heat will be generated.

(v) For transmission lines, approximate transmission line voltage, load carrying capacity and type of current.

Response:

The Facility will connect with the existing Umatilla Electric Cooperative (UEC) 230-kV Blue Ridge Line at the intersection of Bombing Lane Road and Alpine Lane. The Facility will have at least seven collector substations each with a generator step up transformer that will step up from 34.5 kV to either 69-kV or 115-kV lines that will transport power to the substation located at the point of interconnection, which will then step up to the interconnection voltage of 230 kV. The location of the proposed substation at the point of interconnection is shown on Figure 2. Overhead cables will connect the substation to the point of interconnection. The ASC will evaluate whether these cables are considered associated transmission lines necessary for public service as defined by ORS 215.274.

(vi) For pipelines, approximate operating pressure and delivery capacity in thousand cubic feet per day.

Response:

The Facility is not a pipeline. Therefore, this rule is not applicable.

(vii) For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors.

Response:

The Facility does not involve underground gas storage. Therefore, this rule is not applicable.

(viii) For facilities to store liquefied natural gas, the approximate volume, maximum pressure, liquefication and gasification capacity in thousand cubic feet per hour.

Response:

The Applicant does not involve the storage of liquefied natural gas. Therefore, this rule is not applicable.

(B) A description of major components, structures and systems of each related or supporting facility.

Response:

Related or supporting facilities for the proposes of this discussion include the battery storage systems, the collector substation, an operations and maintenance (O&M) building, access roads and security infrastructure, and temporary construction areas. The following description of major components is based on the best available design information at this time.

Distributed Battery Storage. There will be distributed battery storage (approximately 1,250 MW, 6-hour duration) throughout the proposed solar fields, which will consist of lithium-ion batteries in storage containers. Each container will be 9 feet wide, 53 feet long, and 8.5 feet tall. Each container will be placed on a concrete foundation that will extend past those dimensions. Each container holds the batteries, a supervisory and power management system, and a fire prevention system. Lithium-ion battery systems are modular systems in which each module contains multiple smaller battery cells. The cells are the primary containment for the gel or liquid electrolyte materials. The module containing the cells is relatively small, generally about the size of a desktop computer processer, and serves as leak-proof secondary containment. Modules are placed in anchored racks within the containers; typically, each rack houses battery modules along with a switchgear assembly. Cooling units will be placed either on top of the containers or along the side.

Collector Substations. The Facility will connect with the existing UEC 230-kV Blue Ridge Line via a new substation at the intersection of Bombing Lane Road and Alpine Lane on the north side of the Facility Site Boundary. This new substation will occupy approximately 5 acres. Prior to construction, the substation site will be cleared and graded, with a bed of crushed rock applied for a durable surface. There will also be seven collector substations located throughout the project. Each collector substation site will be approximately 2.5 acres in size. The substation will include transformers, transmission line termination structures, a bus bar, circuit breakers and fuses, control systems, meters, and other equipment.

Operations and Maintenance Building. There will be one O&M building for the proposed Facility, located on an approximately 0.5-acre fenced facility. The O&M building will be one-story, prefabricated, and approximately 2,000 square feet in size. The O&M building may include a utility room, covered vehicle parking, storage for maintenance supplies and equipment, and Supervisory Control and Data Acquisition system. Graveled parking and a storage area for employees, visitors, and equipment will be located adjacent to the O&M building. The building will not have an on-site well and septic system and power will be supplied by a local service provider using overhead and/or underground lines.

Site Access, Service Roads, Perimeter Fencing, and Gates. The Facility will utilize existing access roads to the extent practicable. Primary transportation corridors to the Facility include Interstate 84 (I-84) and Oregon Route 207 (Lexington-Echo Highway). Other county and state roads in the immediate vicinity include Bombing Range Road, Doherty Road, Sand Hollow Road, Melville Road, and Grieb Lane. The bulk of the site is accessible via grass corridors. Corridors between module racking will be at least 10 feet wide and racking will be no closer than 15 feet from perimeter fencing. Some new road construction will be required to access site features. Roads will be compacted gravel and typically 15 feet in width, with some exceptions, including access to the substation and main travel corridors where two-way traffic is required. In these cases, roads will be 20-feet-wide. Vegetation maintenance along proposed solar array interior roads will include mowing to a height no more than 24 inches (pollinator friendly and low enough to keep modules clear of vegetation).

Chain-link or Fixed-Knot (wildlife friendly) perimeter fencing, up to 8 feet in height, will enclose the solar array as well as other infrastructure. The perimeter fencing will have lockable vehicle and pedestrian access gates.

Temporary Construction Areas. Approximately 50 temporary construction staging areas will be required to facilitate the delivery and assembly of materials and equipment. Construction areas will each be approximately 5 acres in size. Construction areas may include temporary storage of diesel and gasoline. Diesel and gasoline will be stored in aboveground storage tanks located within designated secondary containment areas. All temporary construction staging areas will be within the Site Boundary.

(C) The approximate dimensions of major facility structures and visible features.

Response:

Major Facility structures and visible features include the various components of the solar array, distributed battery storage, the substation, and the O&M building. The estimated dimensions of the major Facility structures, as currently available, are summarized below.

- **Solar Array.** The solar modules will be grouped in blocks 3.4 feet wide by 7.4 feet long, with a maximum height of up to16 feet when the modules are tilted.

- **Distributed Battery Storage.** The Facility will include battery sites, to be dispersed within the solar arrays. Each individual site will include a container housing, with each container measuring up to 9 feet wide, 53 feet long, and 8.5 feet tall.
- **Substations.** One primary proposed substation will be situated on a 5-acre site at the Point of Interconnection. Seven collector substations will each be situated on a 2.5-acre site.
- **O&M Building.** The O&M building will be a one-story structure, approximately 2,000 square feet in size. A permanent, fenced, graveled parking and storage area for employees, visitors, and equipment will be located adjacent to the O&M building.

Exhibit C. Facility Location – OAR 345-020-0011(1)(c)

(c) Exhibit C. A description of the location of the proposed energy facility site and the proposed site of each related or supporting facility and all areas that might be temporarily disturbed during construction of the facility, including the approximate land area of each.

Response:

The proposed Facility is located south of I-84 in Morrow County, Oregon (see Figure 1). The Facility Site Boundary includes approximately 10,900 acres of private land (see Figure 2). The Facility Site Boundary encompasses part or all of the sections identified in Table C-1.

Table C-1. Township, Range, and Section within the Facility Site Boundary

Township and Range	Sections
1N 26E	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15
2N 26E	27, 28, 29, 30, 31, 32, 33, 34, 35, 36

The 10,900-acre Facility Site Boundary provides the limits of the area that may be temporarily or permanently disturbed during construction of the facility. The land area for full build-out of the Facility is not expected to exceed 10,000 acres.

Exhibit D. Alternative Locations – OAR 345-020-0011(1)(d)

(d) Exhibit D. If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, identification of at least two proposed corridors, as defined in OAR 345-001-0010, or identification of a single proposed corridor with an explanation of why alternate corridors are unlikely to better meet the applicant's needs and satisfy the Council's standards. The applicant shall include an explanation of the basis for selecting the proposed corridor(s) and, for each proposed corridor, the information described in subsections (e), (g), (i), (j), (k), (n) and (p) that is available from existing maps, aerial photographs, and a search of readily available literature.

Response:

The Facility is not a pipeline or a transmission line and does not include, as a related or supporting facility, a pipeline or transmission line that, by itself, is considered an energy facility under the definition in ORS 469.300(11)(a)(C). Therefore, this rule is not applicable.

Exhibit E. Permits Needed for Construction and Operation – OAR 345-020-0011(1)(e)

(e) Exhibit E. Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, address, email address and telephone number of the agency or office responsible for each permit. For each permit, the applicant shall provide a preliminary analysis of whether the permit should or should not be included in and governed by the site certificate.

Response:

Table E-1 identifies the federal, state, and local government permits required for construction and operation of the Facility.

Table E-1. Permits or Other Approvals Required for Construction and Operation of the Facility

Permit	Agency	Authority/Description
Federal Permits		
Clean Water Act, Section 404	U.S. Army Corps of Engineers Attn: Caila Heintz, Morrow County Project Manager P.O. Box 2946 Portland, OR 97208 (503) 808-5113 Caila.M.Heintz@usace.army.mil	Clean Water Act, Section 404 (33 USC § 1344); 33 Code of Federal Regulations (CFR) §§ 320, 323, 325-28, and 330 Description: A Section 404 Permit will be required if dredge or fill occurs in federally jurisdictional Waters of the United States, including wetlands. Impacts to jurisdictional wetlands and waters are anticipated to be avoided by design. If design cannot avoid the impacts, the permit should not be included in the site certificate because it is a federal permit, outside the jurisdiction of the Energy Facility Siting Council (Council).
Notice of Proposed Construction or Alteration (Form 7460-1)	Federal Aviation Administration (FAA) Attn: Dan Shoemaker, Airspace Specialist Seattle Obstruction Evaluation Group 1601 Lind Avenue SW Renton, WA 98057 (425) 227-2791 Dan.shoemaker@faa.gov	Federal Aviation Act of 1958 (14 USC § 44718); 14 CFR § 77 Description: The Applicant will use the FAA Notice Criteria Tool to identify if a Form 7460-1 is required. This federal process is not within the jurisdiction of the Council and therefore should not be included in the site certificate.

Permit	Agency	Authority/Description
Supplemental Notice of Actual Construction or Alteration (Form 7460-2)	FAA Attn: Dan Shoemaker, Airspace Specialist Seattle Obstruction Evaluation Group 1601 Lind Avenue SW Renton, WA 98057 (425) 227-2791 Dan.shoemaker@faa.gov	Federal Aviation Act of 1958 (14 USC § 44718); 14 CFR § 77 Description: If a Notice of Proposed Construction or Alteration with the FAA is required, then submission of the Supplemental Notice of Actual Construction or Alteration form must be filed within 5 days after construction reaches its greatest height as specified in the No Hazard Determination. This federal process is not within the jurisdiction of the Council and therefore should not be included in the site certificate.
State Permits		
National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit 1200-C	Oregon Department of Environmental Quality (ODEQ), Eastern Region Attn: Patty Isaak, Permit Coordinator 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 278-4600 Patty.Isaak@state.or.us	Clean Water Act, Section 402 (33 United States Code USC § 1342); 40 CFR § 122; ORS 468 and 468B; Oregon Administrative Rules (OAR) Chapter 340, Division 45 Description: An NPDES permit is required for construction activities that will disturb one or more acres of land. The Applicant will obtain this permit directly from ODEQ and it should not be included in and governed by the site certificate.
Basic Air Contaminant Discharge Permit	ODEQ, Eastern Region Attn: Linda Hayes-Gorman, Eastern Region Administrator 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 633-2018 Hayes-gorman.linda@deq.state.or.us	Clean Air Act (42 USC Section 7401 *et seq*.); 40 CFR Parts 50, 51, and 52; ORS Chapters 468 and 468A; OAR Chapter 340, Division 216 Description: A Basic Air Contaminant Discharge Permit authorizes the permittee to operate a stationary or portable concrete manufacturing plant that produces more than 5,000 but less than 25,000 cubic yards per year output. A temporary batch plant is not proposed for the Facility at this time. If a stationary or portable concrete manufacturing plant is required for Facility construction, the Applicant or its third-party contractor will obtain a Basic Air Contaminant Discharge Permit from ODEQ for concrete batch plants used during construction. This federal process is not within the jurisdiction of the Council and therefore should not be included in and governed by the site certificate.

Permit	Agency	Authority/Description
401 Water Quality Certification	ODEQ, Eastern Region Attn: Patty Isaak, Permit Coordinator 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 278-4600 Patty.Isaak@state.or.us	Clean Water Act, Section 401 (33 USC § 1341); OAR Chapter 340, Division 48 Description: Water quality certification is required for projects that are processed under the U.S. Army Corps of Engineers Section 404 Nationwide Permits. Impacts to wetlands and waters are anticipated to be avoided by design. If design cannot avoid the impacts, the Applicant will obtain this permit directly from ODEQ as it is outside the jurisdiction of the Council and should not be included in or governed by the site certificate.
Energy Facility Site Certificate	Oregon Department of Energy and Energy Facility Siting Council Attn: Todd Cornett, Division Administrator 550 Capitol Street NE Salem, OR 97301 (503) 378-8328 todd.cornett@oregon.gov	Oregon Revised Statutes (ORS) 469.300 et seq.; OAR Chapter 345, Divisions 1, 21-24 Description: This site certificate is the subject of this NOI.
Removal/Fill Permit	Oregon Department of State Lands, Eastern Region Attn: Bethany Harrington, Resource Coordinator 951 SW Simpson Avenue, Suite 104 Bend, OR 97702 (541) 388-6142 Bethany.Harrington@state.or.us	ORS 196.795-990; OAR Chapter 141, Division 85 Description: A removal-fill permit is required if 50 cubic yards or more of material is removed, filled, or altered within a jurisdictional water of the State. Impacts to wetlands and waters are anticipated to be avoided by design. If design can't avoid the impacts, the Removal-Fill Permit should be included in and governed by the site certificate under ORS 469.401(3).
On-site Sewage Disposal Construction-Installation Permit	ODEQ, Eastern Region Water Quality On-site Program Attn: Bob Baggett, Technical Assistance and Variances 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 633-2036 baggett.robert@deq.state.or.us	ORS 454 and 468B; OAR Chapter 340, Division 71 Description: Facilities with an on-site sewage disposal system must obtain a Construction-Installation Permit before construction. No on-site sewage disposal systems are anticipated, and any sanitary waste will be collected on-site in portable toilets that will be provided and maintained by a licensed subcontractor. This permit should not be included in and governed by the site certificate.

Permit	Agency	Authority/Description
Water Right Permit or Water Use Authorization	Oregon Water Resources Department Water Rights Section, District 5 Attn: Greg Silbernagel, District 5 Watermaster 116 SE Dorion Avenue Pendleton, OR 97801 (541) 278-5456 Greg.M.Silbernagel@oregon.gov	ORS 537 and 540.505-589; OAR 690, Divisions 310, 340, and 410 Description: As currently proposed, anticipated water sources may include (1) an on-site well or (2) water obtained from existing private or municipal water sources with valid water rights and trucked to the site. During construction, the construction contractor will be responsible for identifying off-site water sources, as needed, and ensuring that any needed permits or approval are obtained for construction water use.
General Water Pollution Control Facilities (WPCF) Permit, WPCF-1000, Gravel Mining and Batch Plant	ODEQ, Eastern Region Attn: Larry Brown, WPCF Assistance 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 276-4063 Brown.Larry@deq.state.or.us	ORS 468B; OAR Chapter 340, Divisions 40, 41, 44, 45, 52 Description: A WPCF-1000 authorizes the permittee to operate a wastewater collection, treatment, control, and disposal system for sand, gravel, and other nonmetallic mineral quarrying and mining operations, including asphalt-mix batch plants, concrete batch plants, and other related activities. A temporary batch plant is not proposed for the Facility at this time. If a temporary batch plant is required for Facility construction, the Applicant or its third-party contractor will obtain a WPCF-1000 permit directly from ODEQ, and therefore this permit should not be included in and governed by the site certificate.
Oversize Load Movement Permit/Load Registration	Oregon Department of Transportation (ODOT) Attn: Christy Jordan, Manager Motor Carriers Transportation Division 3930 Fairview Industrial Drive SE Salem, OR 97302 (503) 378-6192 Christy.A.Jordan@odot.state.or.us	ORS 818.030; OAR Chapter 734, Division 82 Description: Authorization for oversized loads. Movement of construction cranes and other equipment and materials may require this permit. If needed, the Applicant's third-party contractor will obtain this permit and load registration from ODOT and therefore this permit should not be included in and governed by the site certificate.

Permit	Agency	Authority/Description
Access Management Permit	ODOT Attn: ODOT Utility and Miscellaneous Permit Specialist ODOT District 12 1327 SE Third Street Pendleton, OR 97801 (541) 276-1241	OAR Chapter 734, Division 51 Description: Access from Oregon state highways will require an access permit, which may be issued by the local ODOT District Offices. If needed, the Applicant's third-party contractor will obtain this permit directly from ODOT and therefore this permit should not be included in and governed by the site certificate.
Permit to Occupy or Perform Operations Upon a State Highway	ODOT Attn: ODOT Utility and Miscellaneous Permit Specialist ODOT District 12 1327 SE Third Street Pendleton, OR 97801 (541) 276-1241	OAR Chapter 734, Division 55 (Pole Lines, Buried Cables, and Miscellaneous Operations) Description: Utility installations within the right-of-way of a state highway in Oregon require a permit issued by the ODOT. If needed, the Applicant's third-party contractor will obtain this permit directly from ODOT and therefore this permit should not be included in and governed by the site certificate.
Archaeological Excavation Permit	Oregon Parks and Recreation Department, State Historic Preservation Office Attn: John Pouley, State Archaeologist 725 Summer Street NE, Suite C Salem, OR 97301 (503) 986-0577 John.Pouley@oregon.gov	ORS Chapters 97, 358, and 390; OAR Chapter 736, Division 51 Description: Ground-disturbing activity that may affect a known or unknown archaeological resource on public or private lands requires a permit issued by the Oregon Parks and Recreation Department. If the permit is needed, the Applicant will obtain it from the State Historic Preservation Office and therefore this permit should not be included in and governed by the site certificate.
State Electrical Permit	Oregon Department of Consumer & Business Services, Building Codes Division 800 SE Emigrant Avenue, Suite 360 Pendleton, OR 97801 (541) 276-7814	OAR 918, Division 309 Description: A state electrical permit is required prior to the installation of electric, phone, or cable service to the O&M building or the Facility substation. Electrical permits may be obtained in person at the Building Codes Division Pendleton office, or online through the state's e-permitting system (available at: http://www.oregon-epermitting.info/). A state electrical permit will be obtained by the construction contractor prior to construction of each component for which electrical, phone, or cable service will be required and therefore should not be included in and governed by the site certificate.

Permit	Agency	Authority/Description
Local Permits		
Conditional Use Permit and Zoning Permit	Morrow County Planning Department Attn: Tamra Mabbott, Planning Director P.O. Box 40 205 Third Street NE Irrigon, OR 97844 (541) 922-4624 tmabbott@co.morrow.or.us	Morrow County Comprehensive Plan; Morrow County Zoning Ordinance Article 1, Section 1.050; Article 3, Section 3.010(C)-(D) and 3.010(K)(3); Article 6 Description: The Applicant elects to obtain a Council determination under Oregon Revised Statutes (ORS) Chapter 469.504(1)(b). Under ORS 469.401(3), following issuance of the site certificate, the County, upon the applicant's submission of the proper application and fee, shall issue the permits addressed in the site certificate, subject only to the conditions set forth in the site certificate and without hearings or other proceedings. Because the Council will make the land use determination, this permit should be included in and governed by the site certificate.
Building Permit	City of Boardman Building Department (provides services for building projects within Morrow County) Attn: Glenn McIntire, Building Official 200 City Center Circle P.O. Box 229 Boardman, OR 97818 (541) 481-9252 mcintireg@cityofboardman.com	ORS 455; Oregon Administrative Rules 734, Division 51 Description: A building permit is required prior to beginning construction of the Facility. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the construction contractor prior to construction of each component for which a building permit will be required; therefore, this permit should not be included in and governed by the site certificate.
Utility Crossing Permit and Access Approach Site Permit	Morrow County Public Works Attn: Eric Imes, Assistant Road Master Morrow County Public Works P.O. Box 428 Lexington, OR 97839 (541) 989-9500 eimes@co.morrow.or.us	ORS 374.305 to 374.325; Morrow County Zoning Ordinance Article 4, Section 4.010(B) Description: A Utility Crossing permit is required to install a utility within or across a County road right-of-way. Approach Site Permits will be required for new project access points with county roads, or for upgrades to existing county roads. Improvements to existing roads are not proposed for the Facility at this time. If required, these permits will be obtained by the construction contractor prior to construction. Therefore, this permit should not be included in and governed by the site certificate.

Permit	Agency	Authority/Description
Construction Permit to Build on Right-of-Way	Morrow County Public Works Attn: Eric Imes, Assistant Road Master Morrow County Public Works P.O. Box 428 Lexington, OR 97839 (541) 989-9500 eimes@co.morrow.or.us	Morrow County Zoning Ordinance Article 4, Section 4.010(B) Description: A construction permit is required to make improvements to access roads that intersect with county road rights-of-way or to make improvements to existing public roads. If road improvements are required, this permit will be obtained by the construction contractor prior to construction. Therefore, this permit should not be included in and governed by the site certificate.
Oversize Load Movement Permit	Morrow County Public Works Attn: Eric Imes, Assistant Road Master Morrow County Public Works P.O. Box 428 Lexington, OR 97839 (541) 989-9500 eimes@co.morrow.or.us	Morrow County Zoning Ordinance Section 4.010(B) Description: This permit will be required to transport loads that exceed standard size and/or weight limits on county roads. If required, this permit will be obtained by the construction contractor prior to construction. Therefore, this permit should not be included in and governed by the site certificate.

Exhibit F. Property Ownership – OAR 345-020-0011(1)(f)

(f) Exhibit F. A list of the names and mailing addresses of property owners, as described in this rule:

(A) The list must include all owners of record, as shown on the most recent property tax assessment roll, of property located:

(i) Within 100 feet of property which is the subject of the NOI, where the subject property is wholly or in part within an urban growth boundary;

(ii) Within 250 feet of property which is the subject of the NOI, where the subject property is outside an urban growth boundary and not within a farm or forest zone; and

(iii) Within 500 feet of property which is the subject of the NOI, where the subject property is within a farm or forest zone.

Response:

In accordance with OAR 345-020-0011(1)(f)(A), Attachment 2 lists the names and mailing addresses of all owners of record in Morrow County, where the Facility will be sited. An electronic list of property ownership will also be provided to the Oregon Department of Energy in a format suitable to produce mailing labels, as requested.

Exhibit G. Facility Maps – OAR 345-020-0011(1)(g)

(g) Exhibit G. A map or maps showing:

Response:

The Applicant has provided figures that show the required information, as follows:

(A) 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.

Response:

Figure 1 shows the location of the Facility Site Boundary in relation to major roads, cities and towns, important landmarks, topographic features.

Figure 2 identifies the Facility Site Boundary and shows the UEC 230-kV Blue Ridge Line that the Facility will connect with.

Figure 3 identifies the important landmarks, recreation and historic resources and scenic areas, and major topographic features.

(B) The proposed locations of the corridors the applicant has identified under subsection (d) in relation to major roads, water bodies, cities and towns, important landmarks and topographic features.

Response:

As noted above, the Facility is not a pipeline or transmission line and does not include a pipeline or transmission line that, by itself, would be considered an energy facility under ORS 469.300(11)(a)(C). Therefore, subsection (d) does not apply and no corridors have been identified.

(C) The study area(s) for the proposed facility as defined in OAR 345-001-0010.

Response:

Figure 4 shows the analysis areas as defined by OAR 345-001-0010(59) for land use (0.5 mile), fish and wildlife habitat (0.5 mile), recreational opportunities (5 miles), threatened and endangered species (5 miles), scenic resources (10 miles), and public services (10 miles), as well as for protected areas, as described in OAR 345-022-0040 (20 miles).

(D) The topography of the study area(s) including streams, rivers, lakes, major roads and contour lines.

Figure 5 details the Site Boundary in relation to nearby geographic features and illustrates the range of elevations within the vicinity of the Facility.

(E) All protected areas in the study area as defined in OAR 345-001-0010 for impacts to protected areas.

Response:

Figure 6 displays and labels all protected areas in the analysis area as defined by OAR 345-001-0010(59).

(F) The location of any potential waters of the state or waters of the United States that are on or adjacent to the site.

Response:

Figures 7 and 8 show National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD) features respectively, display potential waters of the State or potential waters of the United States within the vicinity of the Facility.

(G) For energy generation facilities, the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.

Response:

Figure 9 shows approximate locations of proposed and existing energy facilities known to the Applicant within 10 miles of the Site Boundary, in accordance with OAR 345-001-0010(59) for impacts to public services. These include five wind projects: the recently operational Wheatridge Renewable Energy Facilities I and II (both adjacent to the Facility), the approved Wheatridge Renewable Energy Facility East, and the operational Echo Wind Project. Additionally, Wheatridge Renewable Energy Facility III, an under construction solar project, is also adjacent to the Facility. A total of 15 in-service transmission lines and one proposed transmission line are within 10 miles. Two in-service transmission lines run along roads that form the boundaries of the Facility Site Boundary, including Oregon Route 207, which passes through the site. In addition, a proposed transmission line passes through parts of the Facility Site Boundary. Lastly, the proposed Wagon Trail Solar Project (adjacent to the Facility), Harp Solar Project, Boardman Coal Plant, Carty Generating Station (natural gas plat/solar), and Finley Butte Renewable Energy Facility are all within 10 miles.

Exhibit H. Non-generating Energy Facility – OAR 345-020-0011(1)(h)

(h) Exhibit H. If the proposed facility is a non-generating energy facility for which the applicant must demonstrate need under OAR 345-023-0005, identification of the rule in division 23 of this chapter under which the applicant intends to demonstrate need and a summary statement of the need and justification for the proposed facility.

Response:

The Facility is not a non-generating energy facility. Therefore, this rule is not applicable.

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

(i) Exhibit I. A statement indicating whether the applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by obtaining local land use approval under ORS 469.504(1)(a) or by seeking a Council determination under ORS 469.504(1)(b).

Response:

The Applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by seeking a Council determination under ORS 469.504(1)(b).

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

(j) Exhibit J. Identification of significant potential environmental impacts of construction and operation of the proposed facility on the study areas, including those impacts affecting air quality, surface and ground water quality and availability, wildlife and wildlife habitat, threatened and endangered plant and animal species, historic, cultural and archaeological resources, scenic and aesthetic areas, recreation, and land use.

Response:

This exhibit addresses the potential environmental impacts of Facility construction and operation on air quality; surface and groundwater quality and availability (including wetlands and waters of the State or of the United States); wildlife and wildlife habitat; threatened and endangered plant and animal species; historic, cultural, and archaeological resources; scenic and aesthetic areas (including protected areas); recreation; protected areas; and land use. The following discussions are based on the analysis area for each resource, as defined in OAR 345-001-0010(59) and shown in Figure 4. The analysis area and related regulatory requirements for each resource are identified in Table J-1.

Table J-1. Analysis Areas for Environmental Impacts

Resource	Analysis Area	Regulatory Requirement
Air Quality	Site Boundary	Not applicable
Surface and Groundwater Quality and Availability (includes Wetlands and Waters of the United States)	Site Boundary	Not applicable
Wildlife and Wildlife Habitat	0.5 mile from Site Boundary	OAR 345-001-0010(59)(c)
Threatened and Endangered Plant and Animal Species	5 miles from Site Boundary	OAR 345-001-0010(59)(a)
Historic, Cultural and Archaeological Resources	Site Boundary	Not applicable
Scenic Resources and Public Services	10 miles from Site Boundary	OAR 345-001-0010(59)(b)
Recreation	5 miles from Site Boundary	OAR 345-001-0010(59)(d)
Protected Areas	20 miles from Site Boundary	OAR 345-001-0010(59)(e)
Land Use	0.5 mile from Site Boundary	OAR 345-001-0010(59)(c)

Air Quality

Air quality has the potential to be affected during construction, as well as during the operation and maintenance of the Facility, primarily due to vehicle emissions and fugitive dust generation. The

solar modules, collector lines, and associated facilities, themselves, will not emit air contaminants or have a negative impact on air quality.

During construction, air quality impacts will be associated with gasoline and diesel engine exhaust from construction equipment and other vehicles, fugitive dust resulting from vehicles driving on dirt and gravel roads, land clearing, and other construction-related activities. Post-construction impacts on air quality will be limited to vehicle exhaust emissions and from dust emissions associated with vehicular traffic on dirt and gravel roads. Vehicle trips during operations will be limited to occasional maintenance trips and deliveries. The Applicant will implement dust control measures during construction, which will be detailed in the ASC.

Vehicle exhaust and dust generated during construction and operations are considered mobile, temporary, and non-point sources, and are not subject to air quality permitting. All Facility-related vehicles, workers' vehicles, and vehicles used for delivery of construction supplies and equipment, or operational supplies, will be subject to ODOT and United States Department of Transportation regulations for registration and emissions. Facility construction equipment will be subject to the federal non-road engine standards in 40 CFR Part 89. These standards establish the maximum allowable emission rates for compression ignition non-road engines based on the model year of the engine.

Surface and Groundwater

Surface and Groundwater Quality

The Facility will not discharge pollutants to surface water or groundwater. Temporary impacts due to construction stormwater runoff will be controlled in accordance with a NPDES 1200-C permit to be issued by the ODEQ, which will include an Erosion and Sediment Control Plan. During facility operation, domestic wastewater will be handled in an on-site permitted septic system, and no surface or groundwater quality impacts are anticipated.

Surface and Groundwater Availability

During Facility construction, approximately 30 million gallons of water will be required, mostly for dust suppression and road and earthwork compaction. The Applicant will confirm the estimated amount of water required for construction and operation and will provide additional detail on water sourcing and use in the ASC.

As currently proposed, anticipated water sources may include (1) an on-site well or (2) water obtained from existing private or municipal water sources with valid water rights and trucked to the site. Under the first proposal, a water rights transfer will be requested for the Project. If approved, a well will be drilled on-site to provide an on-site source of water that will be used for dust suppression during construction and in case of fire. Under the second proposal, nearby private water rights holders or cities will be contacted to confirm that an existing right can provide enough

water to meet the Facility requirements during construction and operation. Additional information will be provided in the ASC.

During construction, the construction contractor will be responsible for identifying off-site water sources, as needed, and ensuring that any needed permits or approval are obtained for construction water use. Water will either be used immediately or stored in a tank or holding pond.

During operations, up to 10 permanent staff, along with 6 to 15 occasional temporary or seasonal staff, will be based at the O&M building and will require water for domestic use, which will be supplied from an on-site permit-exempt well. No more than 5,000 gallons per day will be used at the O&M building. Water from this well will not be used to wash panels or as an on-site water supply for fire suppression.

Wetlands and Waters of the United States

NWI and NHD locations and feature types are shown on Figures 7 and 8, respectively. Review of the NWI identified one riverine wetland and one freshwater emergent wetland in the Facility Site Boundary and the NHD data showed multiple intermittent streams within the Facility Site Boundary. Wetland and water resource surveys will be conducted to verify the extent of jurisdictional wetlands and waterbodies within the Project Site Boundary, including other potential wetlands or streams that are not mapped by NWI or NHD, and this information will be included as part of the ASC.

The ASC will provide more detail on the wetland and waters delineation and assessment and contain a detailed discussion of the potential impacts to potentially jurisdictional wetlands and waters, including required mitigation (if any), and will identify necessary permits. Where impacts may occur, they will be mitigated in accordance with state and federal law.

Wildlife and Wildlife Habitat

A desktop analysis using data provided by the National Land Cover Database (NLCD 2019) was conducted to identify preliminary habitat types within the Facility Site Boundary. Most of the land within the Facility Site Boundary is dominated by cultivated croplands (approximately 94 percent), with scrub/shrub and grassland/herbaceous habitats found along the riverine and emergent wetlands near the center of the Facility Site Boundary. These cover types likely provide habitat for a variety of wildlife species, including raptors and predatory mammals and their prey, such as small mammals, reptiles, and amphibians. Based on Oregon Department of Fish and Wildlife (ODFW) range maps, the Facility is outside of winter ranges for big game, including mule deer, elk, and pronghorn (ODFW 2013). Therefore, impacts to big game winter ranges are not expected to occur due to the proposed Facility.

Biological reconnaissance surveys will be conducted and incorporated into the ASC. This information will be used to analyze and minimize potential impacts to wildlife and wildlife habitat during construction and operation. The results of these surveys, including a site-specific habitat

analysis and measures for avoiding, minimizing, and mitigating impacts, will be presented in the ASC.

Sensitive, Threatened, and Endangered Species

As noted above, biological reconnaissance surveys will be conducted for the proposed Facility Site Boundary. The Applicant will consider a variety of publicly available resources to determine the threatened, endangered, and sensitive species that may occur within the Site Boundary and surrounding area. The Applicant will also conduct habitat and general wildlife pedestrian surveys, as well as raptor nest surveys within the Facility Site Boundary and a 0.5-mile buffer. Wildlife observations and wildlife sign (e.g., scat, tracks, burrows, stick nests, etc.) of both special status wildlife and all wildlife in general (e.g., big game) will be documented. An analysis of potential impacts to sensitive, endangered, and threatened species will be provided in the ASC including minimization and mitigation measures developed as necessary in coordination with the ODFW.

Historic, Cultural, and Archaeological Resources

The Applicant will complete a cultural resources field inventory and submit the results of this study with the ASC. This inventory will evaluate the presence or absence of historic properties and other cultural resources that may not meet the threshold of significance necessary to qualify them as historic properties. The study methodology will follow applicable Oregon State Historic Preservation Office regulations and will be consistent with U.S. Secretary of Interior standards for cultural resource surveys and documentation under Section 106 of the National Historic Preservation Act (Public Law 89-665). The analysis area for this field inventory will consist of the entire Facility Site Boundary (see Figure 3).

Any archaeological or historic sites discovered during the field investigation will be officially recorded and filed with the Oregon State Historic Preservation Office. If an archaeological or historic site is identified, the Applicant will undertake the appropriate avoidance or mitigation actions to avoid significant impacts.

Scenic and Aesthetic Areas

The analysis area for scenic and aesthetic resources consists of the area within the Facility Site Boundary plus a 10-mile buffer around the Site Boundary in accordance with OAR 345-001-0010(59)(b) (see Figure 3). Pursuant to OAR 345-021-0010(1)(r) and 345-022-0080(1), scenic resources to be considered are those "identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area…"

Local land use plans to be considered include the Morrow County Comprehensive Plan. Federal plans include those relating to nearby parcels managed by the U.S. Bureau of Land Management,

National Park Service management of the Oregon Trail and its significant sites, U.S. Forest Service and ODOT management of the Blue Mountain Scenic Byway, and Department of Defense management of the Boardman Bombing Range. Requirements of these plans will be reviewed as part of the ASC. There are no tribal management plans for lands within the analysis area.

Potential impacts to identified scenic resources in the analysis area will likely be negligible because the Facility structures will be of the same height of similar agricultural structures in the surrounding area, screened by vegetation and topography, will be near existing agricultural use and other renewable energy developments, and will be viewed from long distances. The visual assessment that will be included in the ASC will include proposed mitigation measures, if necessary.

Recreation

The analysis area for recreational opportunities consists of the Site Boundary plus a surrounding 5-mile buffer in accordance with OAR 345-001-0010(59)(d) (see Figure 3). In general, recreational activities in the analysis area may include hiking, dispersed camping, bicycling, photography, game and bird hunting, and sightseeing. Specific recreational opportunities within the analysis area include the Blue Mountain Scenic Byway, a portion of the Oregon Trail, and the Wells Springs Interpretive Site for the trail (Figure 3). Exhibit T of the ASC will include a detailed analysis of the potential impacts to these recreational resources.

Protected Areas

The analysis area for protected areas is the Facility Site Boundary plus a surrounding 20-mile buffer in accordance with OAR 345-001-0010(59)(e). Protected areas are defined and listed in OAR 345-022-0040. Table J-2 lists all protected areas within the analysis area, which are shown on Figure 6. No protected areas are located within the Facility Site Boundary. The Facility is not anticipated to significantly affect any protected area due to the distance and topography between the Facility and the nearest protected area. Exhibit L of the ASC will include more detailed analysis of the potential impacts to protected areas.

Table J-2. Protected Areas[1] within the Analysis Area

Type	Area Name	Approximate Closest Distance to Site Boundary (Miles)	Direction from Facility
(a) National Parks	None	NA	NA
(b) National Monuments	None	NA	NA
(c) Wilderness Areas	None	NA	NA
(d) National and State Wildlife Refuges	Umatilla National Wildlife Refuge	14.7	Northwest

Type	Area Name	Approximate Closest Distance to Site Boundary (Miles)	Direction from Facility
(e) National Coordination Areas	None	NA	NA
(f) Fish Hatcheries	Irrigon Hatchery	18.7	North
	Umatilla Hatchery	19.9	North
(g) National Recreation and Scenic Areas	None	NA	NA
(h) State Parks and Waysides	None	NA	NA
(i) State Natural Heritage Areas	Lindsay Prairie Preserve	1.3	West
(j) State Estuarine Sanctuaries	None	NA	NA
(k) Scenic Waterways/Wild and Scenic Rivers	None	NA	NA
(l) Experimental Areas (Rangeland Resources Program)	None	NA	NA
(m) Agricultural Experimental Stations	Oregon State University Agriculture Research and Extension Center, Hermiston	17.7	Northeast
(n) Research Forests	None	NA	NA
(o) Bureau of Land Management Areas of Critical Environmental Concern	Oregon Trail Area of Critical Environmental Concern, Echo Meadows	11.5	Northeast
	Horn Butte Curlew Area of Critical Environmental Concern	19.2	West
(o) Bureau of Land Management Research Natural Areas and Outstanding Natural Areas	Boardman Research Natural Area	3.7	Northwest
	Boardman/Willow Creek Natural Area	6.1	Northwest
(p) State Wildlife Areas and Management Areas (per OAR 635, Div. 8)	Columbia Basin-Irrigon ODFW Wildlife Refuge	18.6	North
	Columbia Basin-Coyote Springs ODFW Wildlife Refuge	14.2	North

[1] Protected Areas are defined and listed in OAR 345-022-0040.

NA – not applicable

Land Use

The analysis area for land use consists of the area within the Facility Site Boundary plus a surrounding 0.5-mile buffer in accordance with OAR 345-001-0010(59)(c) (see Figure 4). All land within the analysis area is zoned for Exclusive Farm Use by Morrow County. The Facility will use and occupy more than 12 acres of high value farmland and 20 acres of arable land and will require an exception to Oregon Statewide Planning Goal 3, Agricultural Lands. The Goal 3 exception and other land use requirements will be evaluated in the ASC as required by OAR 345-022-0030.

Exhibit K. Community Service Impacts – OAR 345-020-0011(1)(k)

(k) Exhibit K. Information about significant potential adverse impacts of construction and operation of the proposed facility on the ability of communities in the study area to provide the services listed in OAR 345-022-0110.

Response:

Pursuant to OAR 345-001-0010(59)(b), the analysis area for impacts to the public services listed in OAR 345-022-0110 includes the Site Boundary plus a surrounding 10-mile buffer. Public services that will be evaluated for potential impacts from the construction and operation of the Facility are listed in OAR 345-020-0011(1)(k) and outlined below:

- Sewers and sewage treatment;
- Water;
- Stormwater drainage;
- Solid waste management;
- Housing;
- Traffic safety;
- Police and fire protection;
- Health care; and
- Schools.

Sewers and Sewage Treatment

Sewage treatment in this rural area is limited to on-site septic systems. During construction, sanitary waste will be collected on-site in portable toilets that will be provided and maintained by a licensed subcontractor. During operation, there will approximately 10 permanent employees on-site and the Facility will have an on-site septic system to handle routine domestic waste. The nearest developed sewer system is located in the city of Heppner, approximately 14 miles south of the Facility. The Applicant does not anticipate requiring connection to sewers. Septic waste will be handled by a licensed contractor for treatment and disposal at a municipal water treatment facility. Therefore, community sewer systems will not be adversely affected by construction or operation of the Facility.

Water

During Facility construction, approximately 30 million gallons of water will be required, mostly for dust suppression and access road and earthwork compaction. Actual daily water use will vary depending on weather and the final construction schedule. The need for water for dust control, for example, will be far greater in dry, windy summer conditions than at other times of year.

As currently proposed, anticipated water sources may include (1) an on-site well or (2) water obtained from existing private or municipal water sources with valid water rights and trucked to the site. The Applicant will confirm the anticipated amount of water required for construction and operation and will provide additional detail on water sourcing and use in the ASC. Water will only be obtained from permitted sources with adequate water rights. Therefore, public water systems will not be adversely affected by construction or operation of the Facility.

Stormwater Drainage

The proposed Facility will have no significant adverse impact on stormwater drainage services or infrastructure. Developed stormwater infrastructure in the vicinity of the Facility Site Boundary is limited to minimal facilities associated with public roads maintained by Morrow County. There are no communities located within or near the Facility Site Boundary and the Facility is not within a designated drainage district or urban area; therefore, the Facility will have no impact on stormwater drainage services provided in urban areas.

Construction of the proposed Facility will add new impervious surfaces to a small fraction of the total Facility acreage. Stormwater runoff generated in areas disturbed by Facility construction 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. Most of the area within the Facility Site Boundary is vegetated, which will serve as a buffer to promote infiltration and minimize erosion. No impact on stormwater drainage is expected from the Facility.

Stormwater management infrastructure put in place during construction will be left in place as needed, to continue functioning throughout the life of the Facility where impermeable or semi-impermeable surfaces (e.g., access roads) remain to support O&M activities. Such features may include roadside ditches, infiltration swales, or retention basins. These facilities will be located on private land and will not affect the provision of stormwater management services by any public agency.

Solid Waste Management

Potential impacts on the ability of communities to provide solid waste management services could occur if the solid waste management needs from the proposed Facility during construction or operations cannot be met through existing facilities or if meeting those demands interferes with the

ability of service providers to meet other community waste management needs (e.g., if local landfill capacity is inadequate to handle the needs of the proposed Facility).

Most waste generated by the Facility will be removed from the site and reused, recycled, or disposed of at the nearby Finley Buttes Regional Landfill if necessary. Little construction waste will require off-site disposal, and only small amounts of solid waste will be generated during Facility operations. Solid waste disposal for the Facility during construction and operations will be provided through a private contract with a local, licensed commercial hauler or haulers and is not anticipated to disrupt services already being provided in any incorporated communities or in the larger Morrow County area. Further, the Applicant will coordinate with waste and recycling franchisees servicing the Facility to maintain required records, as mandated by Morrow County's Solid Waste Management Ordinance. The proposed Facility will, therefore, not have any significant adverse impact on the ability of any community in the area to provide solid waste management services.

Housing

Construction

An average of approximately 400 employees will be present on-site during construction, with an anticipated on-site peak of up to 1,200 employees on-site at one time. The construction workforce will include a combination of local and non-local workers. Local workers are those who normally reside within daily commuting distance of the Facility; non-local workers normally reside further away and will in most cases require temporary housing while they are employed on the project. The share of the construction workforce that is hired locally will depend on the availability of workers with appropriate skills. The size of the skilled local workforce is continually growing as more solar energy projects are built in eastern Oregon and a number of larger communities (e.g., Hermiston and Pendleton) are located within daily commuting distance of the Facility Site Boundary. Note that these and other communities within commuting distance are located outside the 10-mile analysis area for public services.

Non-local workers are expected to seek a range of temporary accommodations, including rental housing (houses, apartments, mobile homes), hotel/motel rooms, and RV parks/campgrounds, as well as other special living situations such as Airbnb units and spare bedrooms. Temporary accommodation is generally available in the communities within daily commuting distance of the Site Facility Boundary. Exhibit K of the ASC will include a detailed analysis of potential construction-related impacts to local housing resources,

Operations

The Applicant expects that the Facility will be in operation for at least 40 years. Approximately 10 permanent employees will be required on-site for Facility operations. In addition, from about 6 to 15 vegetation maintenance personnel may be required, depending on the season. Some outside

contractors may be required from time to time for specialized maintenance tasks, such as solar module inspections, electrical system maintenance, or the repair of solar panel and tracker equipment. Additional, infrequent delivery workers will need access to the site. Based on these anticipated levels of staffing, operation of the Facility is not expected to affect local housing resources.

Traffic Safety

The primary transportation corridors used to access the Facility will include I-84 and Oregon Route 207. These corridors will be used by delivery vehicles, as well as some workforce traffic. Heavy-duty trucks will be used to transport facility components, as well as gravel, concrete, and other heavier materials. Lighter-duty trucks will be required to deliver water, electrical equipment, and other materials. Other roads in the vicinity of the Facility include Bombing Range Road, Doherty Road, Sand Hollow Road, Melville Road, and Grieb Lane. A traffic management plan will be developed in cooperation with Morrow County to minimize impacts to traffic safety. In addition, the Applicant will enter into road use agreements with Morrow County to ensure that public roads impacted by construction will be left in "as good or better" condition than that which existed prior to the start of construction.

During operation, significant traffic impacts from the Facility are not anticipated. Approximately 10 permanent on-site employees will be required for Facility operations, along with 6 to 15 seasonal vegetation maintenance personnel. Specialized personnel responsible for occasional inspections of the solar array may be hired from outside the area and may travel in light-duty trucks to the Facility. Delivery trucks may also access the Facility during operation on an infrequent basis. A detailed analysis of traffic generation resulting from both construction and operation of the Facility will be included in the ASC.

Police and Fire Protection

The Morrow County Sheriff's Office, located in Heppner, serves the Facility area. The Applicant will provide on-site security and effective communications will be established between on-site security personnel and the Morrow County Sheriff's Office. As necessary, back-up law enforcement will be available from the Oregon State Police, with offices in Hermiston and Pendleton. Construction and operation of the Facility is not anticipated to place significant new demands on the provision of law enforcement in the vicinity of the Facility Site Boundary or in nearby communities.

The Facility Site Boundary falls mainly within the jurisdiction of the Ione Rural Fire Protection District (RFPD) and also extends into the area covered by the Boardman RFPD. The Applicant will work with the appropriate RFPDs to address any potential needs for a construction phase fire prevention and management plan. The Applicant will also develop First Aid and Emergency Response procedures for the construction and operation phases for the Facility. Development of these plans will involve consultation with local emergency response agencies. The Applicant will notify the fire protection districts of construction plans and identify the location of and access to

Facility facilities. The Facility will be equipped with fire protection equipment in accordance with the Oregon Fire Code. Fire danger during construction will be reduced through implementation of safe working practices, such as maintaining adequate firefighting equipment and water supplies on hand during operations that carry a high fire risk, conducting welding within a cleared or graveled area, and preventing parking of vehicles in areas with high, dry grass. Fire danger during the operational phase of the Facility will be minimal. Therefore, significant new demands on the fire protection forces that serve the area are not anticipated.

Health Care

The nearest hospitals to the Facility are the Pioneer Memorial Hospital, located approximately 14 miles south in Heppner, and the Good Shepherd Medical Center, located approximately 18 miles northeast in Hermiston. The nearest Level III trauma center is the Mid-Columbia Medical Center in The Dalles, approximately 100 miles west of the Facility (Oregon Rural Health Association 2022). Ambulance service in the area is provided by the Morrow County Health District's Emergency Medical Services (Oregon Licensed Ambulance Service Providers 2022). Some of the nearby fire districts also have First Response Vehicles, with equipment and crew trained to stabilize a patient until the arrival of an ambulance for transport. In the event of a serious injury during construction or operation of the Facility, the patient may be flown by helicopter (operated by Life Flight) to one of the two Level 1 hospitals located in Portland: Oregon Health & Science University Hospital or Legacy Emmanuel Medical Center.

As per the Occupational Safety and Health Administration's regulations for sites with greater than 100 workers on-site, the Applicant anticipates that a safety manager will be on-site during Facility construction. Having site-specific procedures and a dedicated individual on-site to deal with health and safety matters ensures appropriate oversight and timely response to potential incidents that may occur during Facility construction.

Impacts on health care could occur if Facility construction activities or increases in temporary residents during construction were to result in an increase in the use of routine and emergency health care services exceeding the capacity of local providers. Impacts on local health care services will be minimized by careful management of on-site health and safety risks. The small number of new temporary residents is not expected to place significant new demands on the health care facilities that serve the area.

Schools

Construction work for the proposed Facility will be short term and few, if any, workers temporarily relocating to the area are expected to be accompanied by family members. In addition, much of the peak construction work period will occur during the summer months when school is not in session. Therefore, little to no construction-related impacts on schools are expected. Operation of the Facility will require approximately 10 permanent employees. Some employees may be hired locally and others may relocate from outside the region with their families. Conservatively estimating that

all 10 employees are hired from outside the region and on average, each brings two school-age children, up to approximately 20 children could enroll at area schools. Because employees are unlikely to all live in the same area, and because children would be different ages, the number of children at any one school or grade level will be very low in comparison to current enrollment. As a result, construction and operation of the Facility is not expected to substantially affect local school enrollment. Additional information will be provided in the ASC.

Exhibit L. Water Sources and Use – OAR 345-020-0011(1)(l)

(l) Exhibit L. Information about anticipated water use during construction and operation of the proposed facility, including:

(A) A description of each source of water and the applicant's estimate of the amount of water the facility will need from each source.

Response:

Construction

During construction, approximately 30 million gallons of water will be required, mostly for dust suppression and access road and earthwork compaction. Actual daily water use will vary depending on weather and the final construction schedule. The need for water for dust control, for example, will be far greater in dry, windy summer conditions than at other times of year. As currently proposed, anticipated water sources may include (1) an on-site well or (2) water obtained from existing private or municipal water sources with valid water rights and trucked to the site. The Applicant will confirm the anticipated amount of water required for construction and operation and will provide additional detail on water sourcing and use in the ASC. Water will only be obtained from permitted sources with adequate water rights.

Operation

During Facility operations, up to 10 permanent staff, along with 6 to 15 occasional temporary or seasonal staff, will be based at the O&M building and will require water for domestic use, which will be supplied from an on-site permit-exempt well. No more than 5,000 gallons per day will be used at the O&M building.

(B) If a new water right is required, the approximate location of the points of diversion and the estimated quantity of water to be taken at each point.

Response:

At this time, it is not anticipated that the Facility will require new water rights. However, as discussed above, the Facility may seek a transfer of existing water rights. Additional information will be provided in the ASC.

(C) For operation, the source of cooling water and the estimated consumptive use of cooling water, based on annual average conditions.

Response:

The Facility is a solar energy facility. No cooling water is required for operation. Therefore, this rule is not applicable.

Exhibit M. Carbon Dioxide Emissions – OAR 345-020-0011(1)(m)

(m) Exhibit M. If the proposed facility would emit carbon dioxide, an estimate of the gross rate of carbon dioxide emissions, a table listing all the factors that form the basis for calculating the estimate, and a statement of the means by which the applicant intends to comply with the applicable carbon dioxide emissions standard under OAR 345-024-560, 345-024-600, or 345-024-630.

Response:

The Facility will not emit carbon dioxide. Therefore, this rule is not applicable.

Exhibit N. Evaluation of Statutes, Rules, and Ordinances – OAR 345-020-0011(1)(n)

(n) Exhibit N. Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant shall analyze and describe any problems the applicant foresees in satisfying the requirements of any such statute, rule or ordinance.

Response

Table N-1 identifies state statutes, administrative rules, and local government ordinances containing standards or criteria that the Applicant must meet for the Council to issue a site certificate beyond the statutes, rules, and ordinances identified in Exhibit E. The Applicant does not anticipate difficulty in meeting specific requirements.

Table N-1. Statutes, Rules, and Ordinances Containing Relevant Standards or Criteria

Department	Legal Citation	Agency Address
Oregon Department of Agriculture	Plant Conservation Biology Program—ORS 564; OAR Chapter 603, Division 73	Oregon Department of Agriculture 635 Capitol Street, NE Salem, OR 97301 (503) 986-4550
Oregon Water Resources Department – Water Rights Division	ORS Chapters 537, 540; OAR Chapter 690	Oregon Water Resources Department 725 Summer Street NE, Suite A Salem, OR 97301 (503) 986-0900
ODEQ – Water Quality	ORS 468 and 468B; OAR Chapter 340, Divisions 41, 45, 52, and 55	ODEQ 475 NE Bellevue Drive, Suite 110 Bend, OR 97701 (541) 388-6146
ODEQ – Noise	ORS 467; OAR Chapter 340, Division 35	ODEQ 475 NE Bellevue Drive, Suite 110 Bend, OR 97701 (541) 388-6146
ODEQ – Hazardous Waste Management	ORS 465 and 466; OAR Chapter 340, Divisions 100-122	ODEQ 475 NE Bellevue Drive, Suite 110 Bend, OR 97701 (541) 388-6146

Department	Legal Citation	Agency Address
ODEQ – Solid Waste	ORS 459; OAR Chapter 340, Division 93	ODEQ 475 NE Bellevue Drive, Suite 110 Bend, OR 97701 (541) 388-6146
ODFW – Habitat Conservation Division	ORS 496-497, and ORS 506, Divisions 109 and 119; OAR Chapter 635, Divisions 100 and 415	ODFW 2042 SE Paulina Highway Prineville, OR 97754 (541) 447-5111
Oregon Department of Geology and Mineral Industries	OAR Chapter 632, Division 1	Oregon Department of Geology and Mineral Industries 800 NE Oregon Street, Suite 965 Portland, OR 97232 (971) 673-1555
Oregon Parks and Recreation Department, State Historic Preservation Office —Archaeological	Native American Graves and Protected Objects—ORS 97.740-97.760 Archaeological Objects and Sites—ORS 358.90-358.955 Permit and Conditions for Excavation or Removal of Archaeological or Historical Materials on Private Lands (OAR 736-051-0090)	Oregon Heritage/State Historic Preservation Office 725 Summer Street NE, Suite C Salem, OR 97301 (503) 986-0690
Oregon Office of State Fire Marshal – Emergency Planning and Community Right to Know Act	ORS 453; OAR Chapter 837, Divisions 85 and 95; Fire and Life Safety Regulations, OAR 837, Division 40	Oregon Office of State Fire Marshal 3565 Trelstad Avenue SE Salem, OR 97317 (503) 378-3473
Oregon Office of State Fire Marshal	2014 Oregon Fire Code; OAR Chapter 837, Division 40	Oregon Office of State Fire Marshal 3565 Trelstad Avenue SE Salem, OR 97317 (503) 378-3473
Oregon Biodiversity Information Center	ORS 564.105; OAR 603-73-0070 and 345-022-0070	Oregon Biodiversity Information Center Oregon State University Institute for Natural Resources Portland State University PO Box 751 Portland, OR 97207 (503) 725-9950
Oregon Department of State Lands	OAR Chapter 141	Oregon Department of State Lands 775 Summer Street NE. Suite 100 Salem, OR 97301 (503) 986-5200
Oregon Department of Land Conservation and Development	Comprehensive Land Use Planning Coordination - ORS Chapter 197; Oregon Department of Land Conservation and Development Administrative Rules - OAR Chapter 660	Department of Land Conservation and Development 635 Capitol Street NE, Suite 150 Salem, OR 97301 (503) 373-0050

Department	Legal Citation	Agency Address
Oregon Department of Aviation	Code of Federal Regulations Title 14, Part 77; ORS 836.530 and 836.535; OAR Chapter 738, Division 70	Oregon Department of Aviation 3040 25th Street, SE Salem, OR 97302 (503) 378-4880
Morrow County Planning Department – Land Use[1/]	Morrow County Zoning Ordinance	Morrow County Planning Department Irrigon Annex P.O. Box 40 205 NE Third Street Irrigon, OR 97844 (541) 922-4624

1. As stated in Exhibit I: The Applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by seeking a Council determination under ORS 469.504(1)(b). The Applicant seeks a determination by the Council of compliance with land use standards from Morrow County.

Exhibit O. Schedule for Application for Site Certificate – OAR 345-020-0011(1)(o)

(o) Exhibit O. A schedule stating when the applicant expects to submit a preliminary application for a site certificate.

Response:

The Applicant intends to submit the NOI and Preliminary ASC according to the schedule shown in Table O-1.

Table O-1. Proposed Schedule for ASC Submittal

Activity	Anticipated Date
Applicant submits the NOI to Oregon Department of Energy	May 2022
Oregon Department of Energy reviews the NOI, distributes public notice, conducts public information meeting, facilitates comment period, and issues Project Order	May – August 2022
Applicant submits Preliminary ASC to Oregon Department of Energy	February 2023

Exhibit P. Evidence of Consultation with State Commission on Indian Services – OAR 345-020-0011(1)(p)

(p) Exhibit P. Evidence of consultation with the Legislative Commission on Indian Services to identify each appropriate tribe to consult with regarding the proposed facility's possible effects on Indian historic and cultural resources.

Response:

The Applicant submitted a letter to the Oregon Legislative Commission on Indian Services to identify appropriate tribes to contact regarding possible effects of the Facility on Indian historic and cultural resources. On January 20, 2022, the Legislative Commission provided a letter identifying the Burns Paiute Tribe, Confederated Tribes of Warm Springs, and Confederated Tribes of the Umatilla Indian Reservation as the appropriate tribal governments (Attachment 3).

References

NLCD (National Land Cover Dataset). 2019. Land Cover Conterminous United States, 2019. U.S. Geological Survey, Sioux Falls, SD. Accessed at: https://doi.org/10.5066/P9KZCM54.

ODFW (Oregon Department of Fish and Wildlife). 2013. ODFW Winter Range for Eastern Oregon. Accessed at: https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=885.xml.

Oregon Licensed Ambulance Service Providers. 2022. Accessed at: http://www.morrowcountyhealthdistrict.org/emergency-medical-services/.

Oregon Rural Health Association. 2022. ORHA Website. Accessed at: https://orha.wildapricot.org/.

Figures

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Echo Solar Project

Figure 1
Vicinity Map

MORROW COUNTY, OR

- Site Boundary
- City/Town
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway

TETRA TECH

PINEGATE RENEWABLES

Reference Map

Benton County
Klickitat County
Gilliam County
Morrow County
Umatilla County
WASHINGTON
OREGON
Roosevelt
Arlington
Boardman
Umatilla
Hermiston
Stanfield
Heppner
Lexington
Ione
Irrigon
Umatilla National Wildlife Refuge
Crow Butte Park
Columbia River
Umatilla Ordnance Depot
Cold Springs Natl Wildlife Refuge
Boardman Bombing Range
ALDER RIDGE
HURLBURT FLATS
FINLEY BUTTES
JUNIPER CANYON
SOCIAL RIDGE
HUTLER FLAT
Willow Creek
Hinton Creek
Rhea Creek
Little Butter Creek
Butter Creek
East Fork Butter Creek
Bear Creek
Baseline Ln
14
221
730
37
82
84
30
74
320
207
19
206
395

1:300,000

WGS 1984 UTM Zone 11N

0 2.5 5 10 15 20 Miles

NOT FOR CONSTRUCTION

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Echo Solar Project

Figure 2
Facility Layout

MORROW COUNTY, OR

- Site Boundary
- Proposed Substation
- State Highway
- Local Roads
- Existing Substation
- Existing UEC 230-kV Blue Ridge Transmission Line

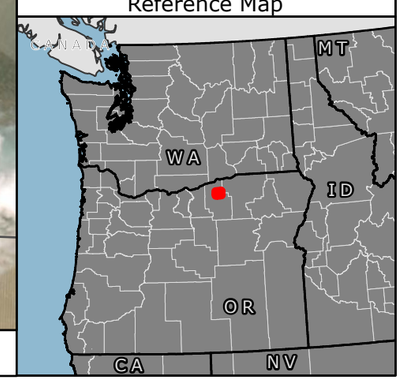
Land Ownership

- Department of Defense
- Private

TETRA TECH

PINEGATE RENEWABLES

Reference Map



Alpine Ln
Wagon Trail Rd
Grieb-Wood Rd
Little Juniper Ln
Grieb Ln
Doherty Rd
Lexington-Echo Hwy
Lower Sand Hollow Rd
Melville Rd
207
Barak Martin Rd N
Bombing Range Rd
Strawberry Ln
Strawberry East Rd
Barak Martin Rd
Kilkenny Rd
Kemp Rd
Sand Hollow Rd
Barclay Ln

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WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

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Echo Solar Project

Figure 3
Recreation, Historic and Scenic Areas

MORROW COUNTY, OR

Morrow County

Umatilla County

Stanfield

Oregon Trail, Wells Springs Segment

84

30

395

74

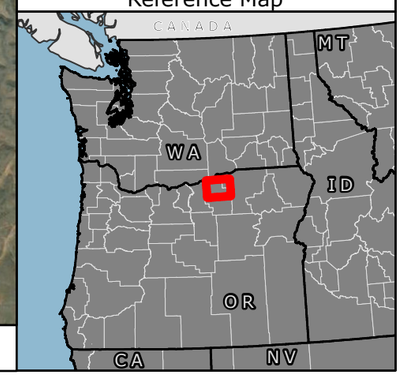
207

- Site Boundary
- Analysis Area (5-mile Buffer)
- Analysis Area (10-mile Buffer)
- Blue Mountain Scenic Byway
- Historic Oregon Trail
- National Register Historic Place
- County Boundary
- City/Town
- Interstate Highway
- US Highway
- State Highway

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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Echo Solar Project

Figure 4
Analysis Area Boundaries

MORROW COUNTY, OR

- Site Boundary
- City/Town
- Interstate Highway
- US Highway
- State Highway
- County Boundary
- State Boundary

Analysis Area

- 0.5 miles, Land Use and Fish and Wildlife Habitat
- 5 miles, Recreation and Threatened and Endangered Species
- 10 miles, Scenic Resources and Public Services
- 20 miles, Protected Areas

TETRA TECH

PINEGATE RENEWABLES

Reference Map

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WGS 1984 UTM Zone 11N

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Echo Solar Project

Figure 5
Topography

MORROW COUNTY, OR

Site Boundary
State Highway
Local Roads

TETRA TECH
PINEGATE RENEWABLES

Reference Map

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WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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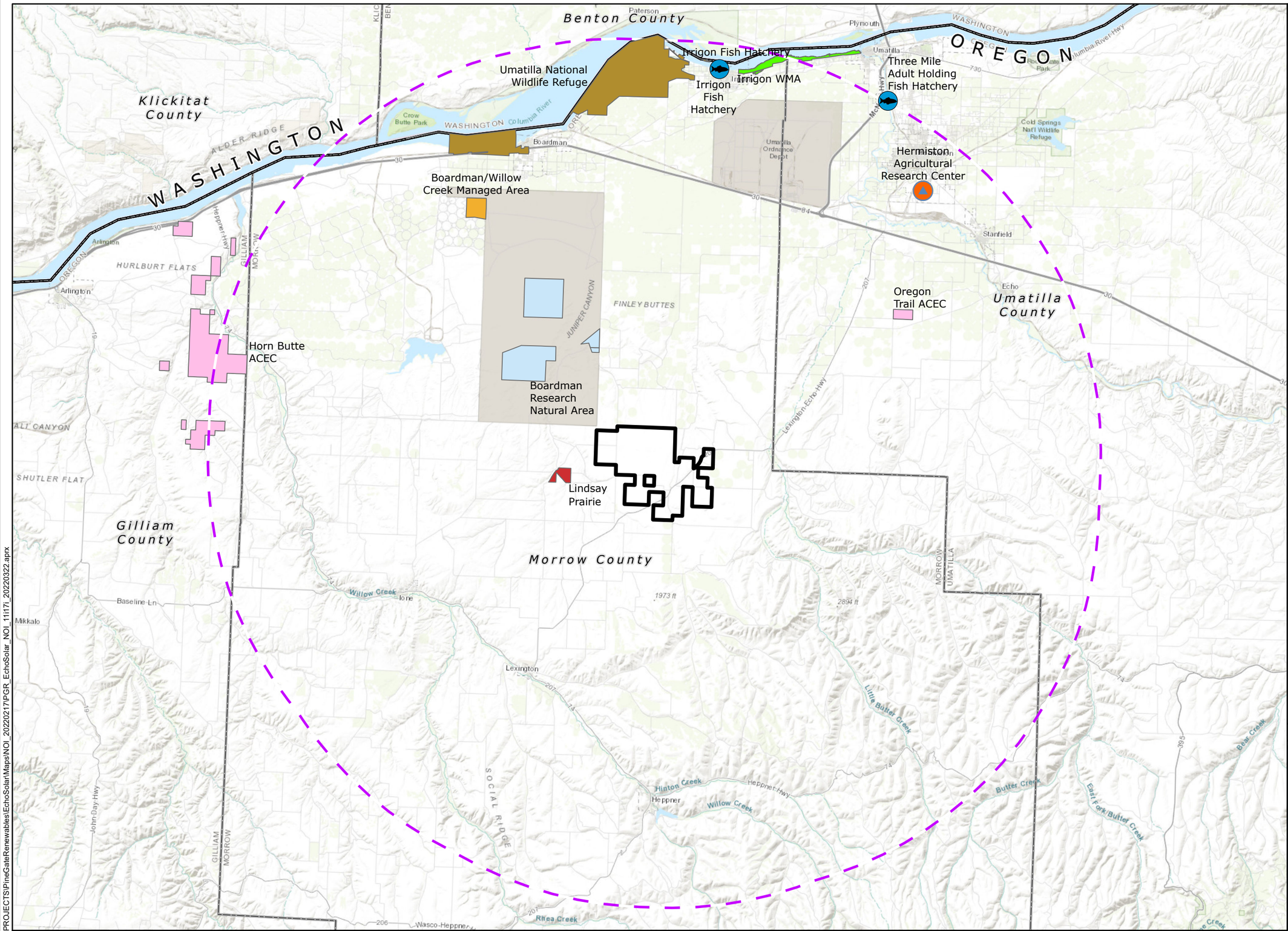
Echo Solar Project

Figure 6
Protected Areas

MORROW COUNTY, OR



Legend

- Site Boundary
- Analysis Area (20-mile Buffer)
- County Boundary
- State Boundary
- Research Center (OSU)
- Fish Hatchery
- Area of Critical Environmental Concern (BLM)
- US Fish and Wildlife Service Refuge (USFWS)
- Oregon Department of Fish and Wildlife Refuge (ODFW)

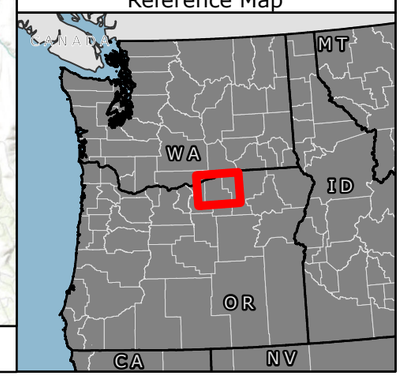
Natural Areas

- Department of Defense
- Department of Defense and Private
- The Nature Conservancy

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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Echo Solar Project

Figure 7
National Wetlands Inventory

MORROW COUNTY, OR

Site Boundary

State Highway

NWI Wetland Type

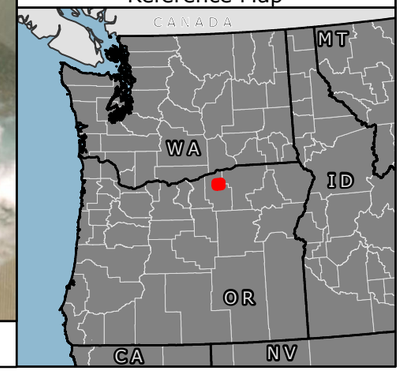
Freshwater Emergent Wetland

Riverine

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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Echo Solar Project

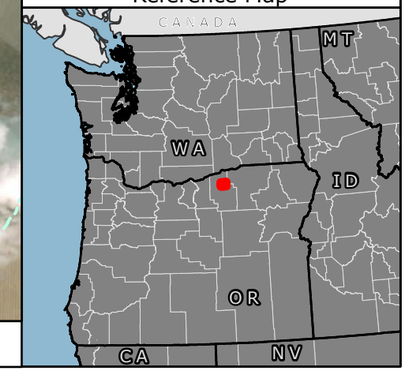
Figure 8
National Hydrography Data

MORROW COUNTY, OR

Site Boundary
State Highway
NHD Waters
Lake/Pond
Intermittent Stream
Perennial Stream

TETRA TECH
PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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Echo Solar Project

Figure 9
Energy Facilities

MORROW COUNTY, OR

- Site Boundary
- Analysis Area (10-mile Buffer)
- Interstate Highway
- US Highway
- State Highway
- Substation
- Wind Power Plant
- Natural Gas Power Plant
- Boardman Coal Plant (Closed)
- Finley Butte Renewable Energy Facility
- Carty Generating Station, Solar and Natural Gas, Operating
- Harp Solar Project, Proposed
- Echo Windfarm, Operating
- Threemile Canyon Wind, Operating
- Wagon Trail Solar Project, Proposed
- Wheatridge Renewable Energy Faciltiy I, Operating
- Wheatridge Renewable Energy Faciltiy II, Operating
- Wheatridge Renewable Energy Facility III, Under Construction
- Wheatridge Renewable Energy Facility East, Approved

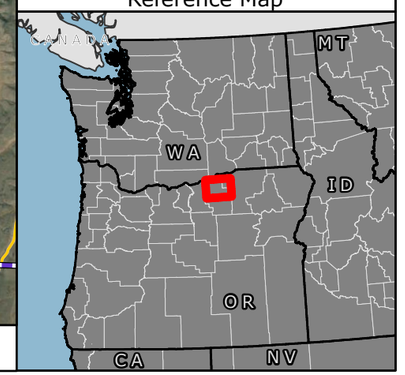
Transmission Line

- In Service
- Proposed

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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Attachment 1. Articles of Incorporation and Authorization

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Secretary of State
Corporation Division
255 Capitol Street NE, Suite 151
Salem, OR 97310-1327

Phone: (503) 986-2200
FAX: (503) 378-4381
sos.oregon.gov/business

REGISTRY NUMBER: 182167891
TYPE: DOMESTIC LIMITED LIABILITY COMPANY

Next Renewal Date: 5/10/2022

ECHO SOLAR, LLC
130 ROBERT ST
ASHEVILLE, NC 28801

Acknowledgment Letter

The document you submitted was recorded as shown below. Please review and verify the information listed for accuracy.

DOCUMENT
ARTICLES OF AMENDMENT

FILED ON
9/21/2021

STATUS
ACTIVE

NAME
ECHO SOLAR, LLC

JURISDICTION
OREGON

PRINCIPAL PLACE OF BUSINESS
130 ROBERTS ST
ASHEVILLE, NC 28801

REGISTERED AGENT
REGISTERED AGENT SOLUTIONS, INC.
8130 SW BEAVERTON-HILLSDALE HWY
PORTLAND, OR 97225

MAILING ADDRESS
130 ROBERT ST
ASHEVILLE, NC 28801

MANAGER
MMA 2021 DEV HOLDCO, LLC
130 ROBERTS ST
ASHEVILLE, NC 28801

ERIAGU
ACK - AMDART
09/21/2021

Articles of Amendment/Dissolution - Limited Liability Company

Secretary of State - Corporation Division - 255 Capitol St. NE, Suite 151 - Salem, (...business - Phone: (503) 986-2200

FILED: SEP 21, 2021
OREGON SECRETARY OF STATE
182167891-22590526
ECHO SOLAR, LLC
AMDART

- (•) ARTICLES OF AMENDMENT (Complete only 1, 2, 3, 4, 5, 8)
- ( ) ARTICLES OF DISSOLUTION (Complete 6,7, 8)

REGISTRY NUMBER: 1821678-91

In accordance with Oregon Revised Statute 192.410-192.490, the information on this application is public record. We must release this information to all parties upon request and it will be posted on our website.

Please Type or Print Legibly in **Black** Ink. Attach Additional Sheet if Necessary.

ARTICLES OF AMENDMENT ONLY

1. **ENTITY NAME:** BOMBING RANGE SOLAR I, LLC

2. **THE FOLLOWING AMENDMENT(S) TO THE ARTICLES OF ORGANIZATION IS MADE HEREBY:** (State the article number(s) and set forth the article(s) as it is amended to read.)

Article First, relating to the entity name, is hereby amended to read as follows:

1. The Entity Name is: ECHO SOLAR, LLC

3. **PLEASE CHECK THE APPROPRIATE STATEMENT:**

- ( ) This amendment was adopted by the manager(s) without member action. Member action was not required.

  Date of adoption of each amendment: _____

- (•) This amendment(s) was approved by the members. 100 percent of the members approved the amendment(s).

  Date of adoption of each amendment: 09/15/2021

4. **PRINCIPAL PLACE OF BUSINESS** (Physical Street Address)

130 Roberts Street
Asheville, NC 28801

5. **INDIVIDUAL WITH DIRECT KNOWLEDGE** (Name and Address)
List the name and address of at least one individual who is a member or manager of the LLC or an authorized representative with direct knowledge of the operations and business activities of the LLC.

Ranna Lowber, Authorized Person
130 Roberts Street
Asheville, NC 28801

ARTICLES OF DISSOLUTION ONLY

6. **NAME OF LIMITED LIABILITY COMPANY:** _____

7. **DATE DISSOLUTION OCCURRED:** _____
Future date not allowed.

8. **EXECUTION:** I declare, under penalty of perjury, that this document does not fraudulently conceal, fraudulently obscure, fraudulently alter or otherwise misrepresent the identity of the person or any members, managers, employees or agents of the limited liability company. This filing has been examined by me and is, to the best of my knowledge and belief, true, correct, and complete. Making false statements in this document is against the law and may be penalized by fines, imprisonment or both.

Signature:	Printed Name:	Title:
Ranna Lowber	Ranna Lowber	Authorized Person

CONTACT NAME: (To resolve questions with this filing)

PHONE NUMBER: (Include area code)

FEES

Required Processing Fee $100

Processing Fees are nonrefundable. Please make check payable to "Corporation Division".

Free copies are available at sos.oregon.gov/business using the Business Name Search program.

Attachment 2. Tax Lot IDs of Morrow County Landowners

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MapTaxlot	OWNER1	OWNER3	MAIL1	MAILCITY	MAILST	MAILCTRY	ZIP	ZIPPLUS	SITUSSTR	SITUSCITY
02N25E000000400	KILKENNY LAND COMPANY, LLC	HALE, KELLY	1124 SW MYRTLE DR	PORTLAND	OR		97201	2271		
02N26E000002600	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063		
02N26E000001700	GRIEB, KEN & CARRI		72540 ALPINE LN	LEXINGTON	OR		97839	4222		
02N26E000002400	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
02N26E000002301	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063		
02N26E000001103	MATHENY, STEFAN & MATHENY, CHELSEA		71151 DOHERTY RD	LEXINGTON	OR		97839	4218	151 DOHERTY RD	
02N26E000001105	MATHENY PROPERTY LLC		74596 ALPINE LN	LEXINGTON	OR		97839	4220	74596 ALPINE LN	
02N26E000001600	GRIEB, KEN & CARRI		72540 ALPINE LN	LEXINGTON	OR		97839	4222		
02N26E000001900	GRIEB, KEN & CARRI		72540 ALPINE LN	LEXINGTON	OR		97839	4222		
02N26E000002302	SANDHOLLOW LAND, LLC		PO BOX 307	LEXINGTON	OR		97839	307		
02N26E000002303	UNIVERSITY OF PORTLAND		5000 WILLAMETTE BLVD	PORTLAND	OR		97200	5743		
02N26E000002500	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063		
02N26E000002300	SAINT PATRICK CATHOLIC CHURCH OF HEPPNER		PO BOX 633	HEPPNER	OR		97836	633		
02N26E000001102	IVAR & LINA LLC		958 W CODY AVE	HERMISTON	OR		97838	7451		
02N26E000001101	MATHENY PROPERTY LLC		74596 ALPINE LN	LEXINGTON	OR		97839	4220		
02N26E000001100	BEAM, ALVIN A & BEAM, RITA MARIE WHITE		74681 ALPINE LN	LEXINGTON	OR		97839	4219	74681 ALPINE LN	
02N26E000000600	BAKER PRODUCE SOUTH, INC		PO BOX 4063	PASCO	WA		99302	4063	71916 BOMBING RANGE RD	BOARDMAN
02N26E000000300	SANDHOLLOW LAND, LLC		PO BOX 307	LEXINGTON	OR		97839	307		
02N26E000000800	IVAR & LINA LLC		958 W CODY AVE	HERMISTON	OR		97838	7451	73755 ALPINE LN	LEXINGTON
02N26E000000603	BAKER PRODUCE SOUTH, INC		PO BOX 4063	PASCO	WA		99302	4063		
02N26E000000500	BAKER PRODUCE SOUTH, INC		PO BOX 4063	PASCO	WA		99302	4063		
02N27E000002100	N & C LAND, LLC		71062 PERKINS RD	ECHO	OR		97826	9036	71083 PERKINS RD	
02N27E000002000	STATE OF OREGON		417 TRANSPORTATION BLDG	SALEM	OR		97310			
02N27E000000300	IVAR & LINA LLC		958 W CODY AVE	HERMISTON	OR		97838	7451		
01N26E000002602	HEIDEMAN, LOREN A & DELLA K, TRUSTEES		22948 FAIRVIEW LN	IONE	OR		97843	4306		
01N26E000002500	MONAGLE, JOHN B & PATRICIA ANNE ETAL		517 NW 7TH	PENDLETON	OR		97801	1327		
01N26E000002700	NORTH LEX POWER AND LAND, LLC		73114 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N26E000002804	KARYL SMITH, INC		8825 N ORCHARD PR RD	SPOKANE	WA		99217	9368		
01N26E000002400	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
01N26E000002200	SANDHOLLOW RANCH LLC		PO BOX 1587	HERMISTON	OR		97838	3587	75150 BARCLAY LN	
01N26E000002100	SANDHOLLOW RANCH LLC		PO BOX 1587	HERMISTON	OR		97838	3587		
01N26E000002000	SANDHOLLOW RANCH LLC		PO BOX 1587	HERMISTON	OR		97838	3587		
01N26E000000404	STATE OF OREGON		STATE HIGHWAY COMMISSION				0			
01N26E000000402	COLUMBIA BASIN ELECTRIC CO-OP		PO BOX 398	HEPPNER	OR		97836	398		
01N26E000001500	NORTH LEX POWER AND LAND, LLC		73114 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N26E000000405	DOHERTY, BRIAN W & DOHERTY, PEGGY A		70516 HIGHWAY 207	LEXINGTON	OR		97839		70516 HWY 207-ECHO	
01N26E000001300	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
01N26E000001700	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
01N26E000000401	SANDERSON, TERESA ANN 50% ETAL		78262 HWY 97	WASCO	OR		97065	3041		
01N26E000001900	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063	76250 MELVILLE LN	
01N25E000000100	KILKENNY LAND COMPANY, LLC	HALE, KELLY	1124 SW MYRTLE DR	PORTLAND	OR		97201	2271		
01N26E000000700	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
01N26E000000800	NORTH LEX POWER AND LAND, LLC		73114 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N26E000000403	WILLIAM J DOHERTY TRUST ET AL		70644 DOHERTY RD	LEXINGTON	OR		97839	4217	70644 DOHERTY RD	
01N26E000000302	SAINT PATRICK CATHOLIC CHURCH OF HEPPNER		PO BOX 633	HEPPNER	OR		97836	633		
01N26E000000100	N & C LAND, LLC		71062 PERKINS RD	ECHO	OR		97826	9036		
01N26E000002600	TURNER-LINDSAY FARMS, LLC		75655 BASELINE RD	HEPPNER	OR		97836	7286		
01N26E000000301	CUTSFORTH, KRAIG ALLEN		415 SW SECOND ST	IRRIGON	OR		97844	7052		
01N26E000000300	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217		
01N26E000000200	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063		
01N26E000000500	ASHBECK, TONY R & ASHBECK, GERALD T		71384A HIGHWAY 207	ECHO	OR		97826	9063		
01N26E000000400	WILLIAM J DOHERTY RANCH, LLC		70644 DOHERTY RD	LEXINGTON	OR		97839	4217	70518 HWY 207-ECHO	
01N26E000001301	NORTH LEX POWER AND LAND, LLC		73114 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N26E000000701	NORTH LEX POWER AND LAND, LLC	RAUCH, CHRISTIAN K	72967 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N26E000000600	GRIEB FARMS, INC		72540 ALPINE LN	LEXINGTON	OR		97839	4222	73245 GRIEB LN	LEXINGTON
01N26E000001100	NORTH LEX POWER AND LAND, LLC		73114 STRAWBERRY LN	LEXINGTON	OR		97839	4242		
01N27E000001200	SANDHOLLOW RANCH LLC		PO BOX 1587	HERMISTON	OR		97838	3587		
01N27E000000600	N & C LAND, LLC		71062 PERKINS RD	ECHO	OR		97826	9036		
02N26E000001500	GRIEB, KEN & CARRI		72540 ALPINE LN	LEXINGTON	OR		97839	4222		
02N26E000001201	GAS TRANSMISSION NORTHWEST LLC		700 LOUISIANA ST SUITE 1300	HOUSTON	TX		77002	2700		
02N26E000001200	GRIEB FARMS, INC		72540 ALPINE LN	LEXINGTON	OR		97839	4222	72540 ALPINE LN	
02N26E000001200	GRIEB FARMS, INC		72540 ALPINE LN	LEXINGTON	OR		97839	4222	72540 ALPINE LN	
02N26E000001200	GRIEB FARMS, INC		72540 ALPINE LN	LEXINGTON	OR		97839	4222	72540 ALPINE LN	

Echo Solar Project

Figure 1
Taxlots
Index Map

MORROW COUNTY, OR

Figure 1.1

Figure 1.2

Figure 1.3

Figure 1.4

Figure 1.5

207

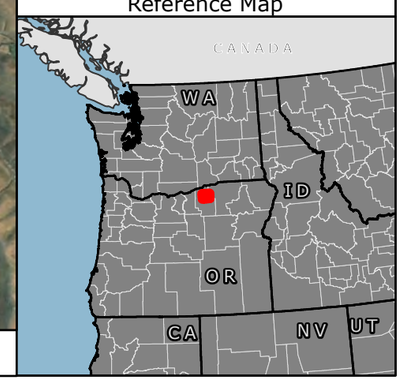
- Site Boundary
- County Boundary
- State Highway
- Map Index
- Taxlot Boundary

Data received from Morrow County on 3/25/2022

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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Echo Solar Project

Figure 1.1
Taxlots

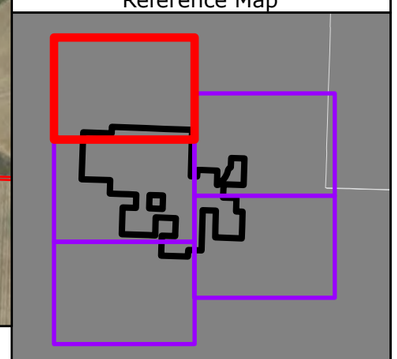
MORROW COUNTY, OR

Site Boundary
Taxlot
County Boundary

Data received from Morrow County on 3/25/2022

TETRA TECH
PINEGATE RENEWABLES

Reference Map



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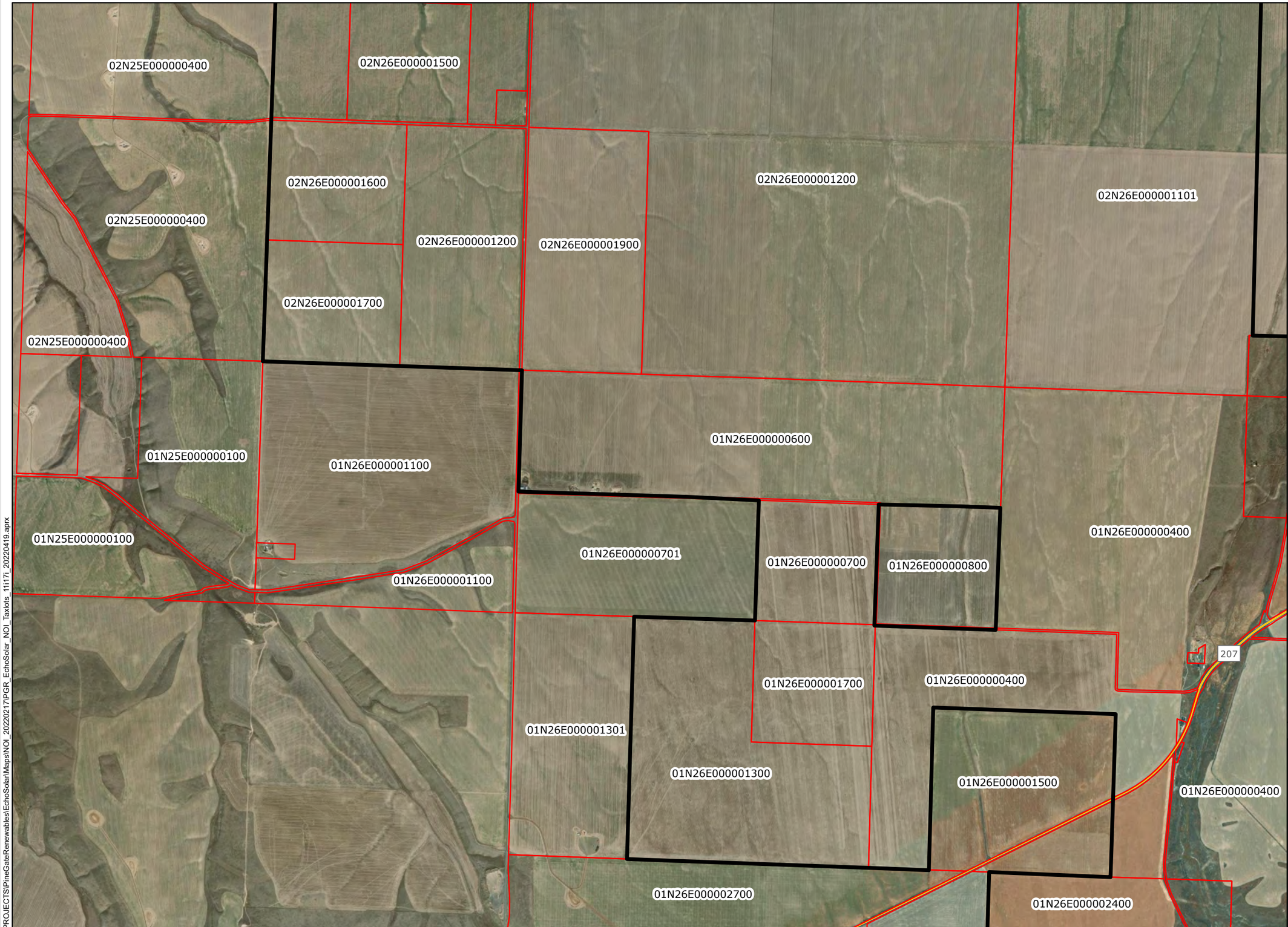
NOT FOR CONSTRUCTION

P:\GIS_PROJECTS\PineGateRenewables\EchoSolarMaps\NOI_20220217\PGR_EchoSolar_NOI_Taxlots_11117i_20220419.aprx

Echo Solar Project

Figure 1.2
Taxlots

MORROW COUNTY, OR



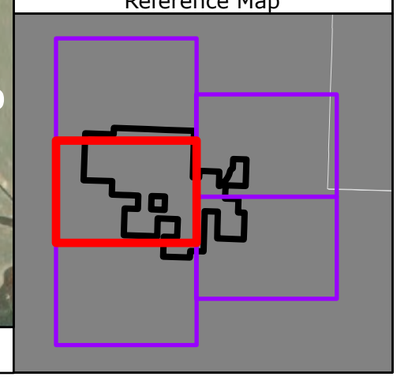
Site Boundary
Taxlot
County Boundary
State Highway

Data received from Morrow County on 3/25/2022

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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NOT FOR CONSTRUCTION

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Echo Solar Project

Figure 1.3
Taxlots

MORROW COUNTY, OR

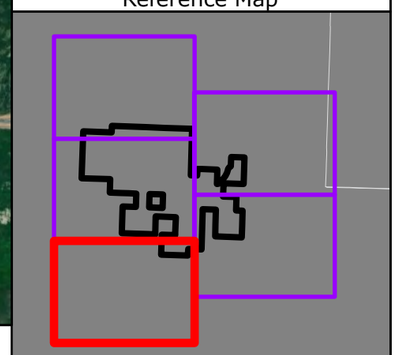
- Site Boundary
- Taxlot
- County Boundary
- State Highway

Data received from Morrow County on 3/25/2022

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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NOT FOR CONSTRUCTION

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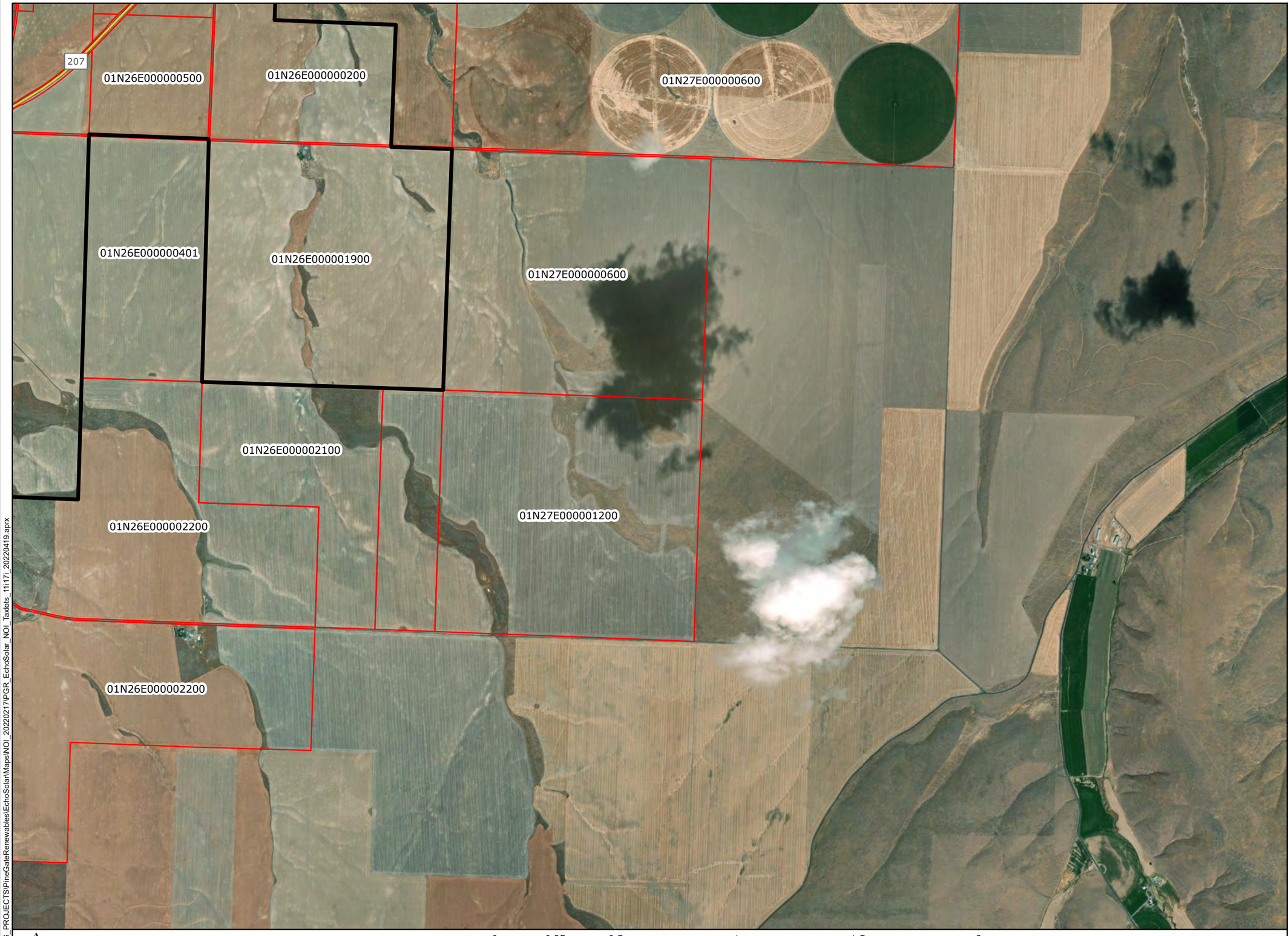
Echo Solar Project

Figure 1.4
Taxlots

MORROW COUNTY, OR



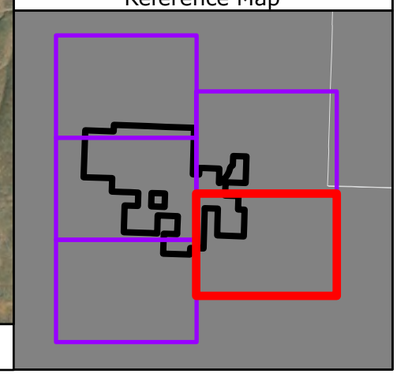
- Site Boundary
- Taxlot
- County Boundary
- State Highway

Data received from Morrow County on 3/25/2022

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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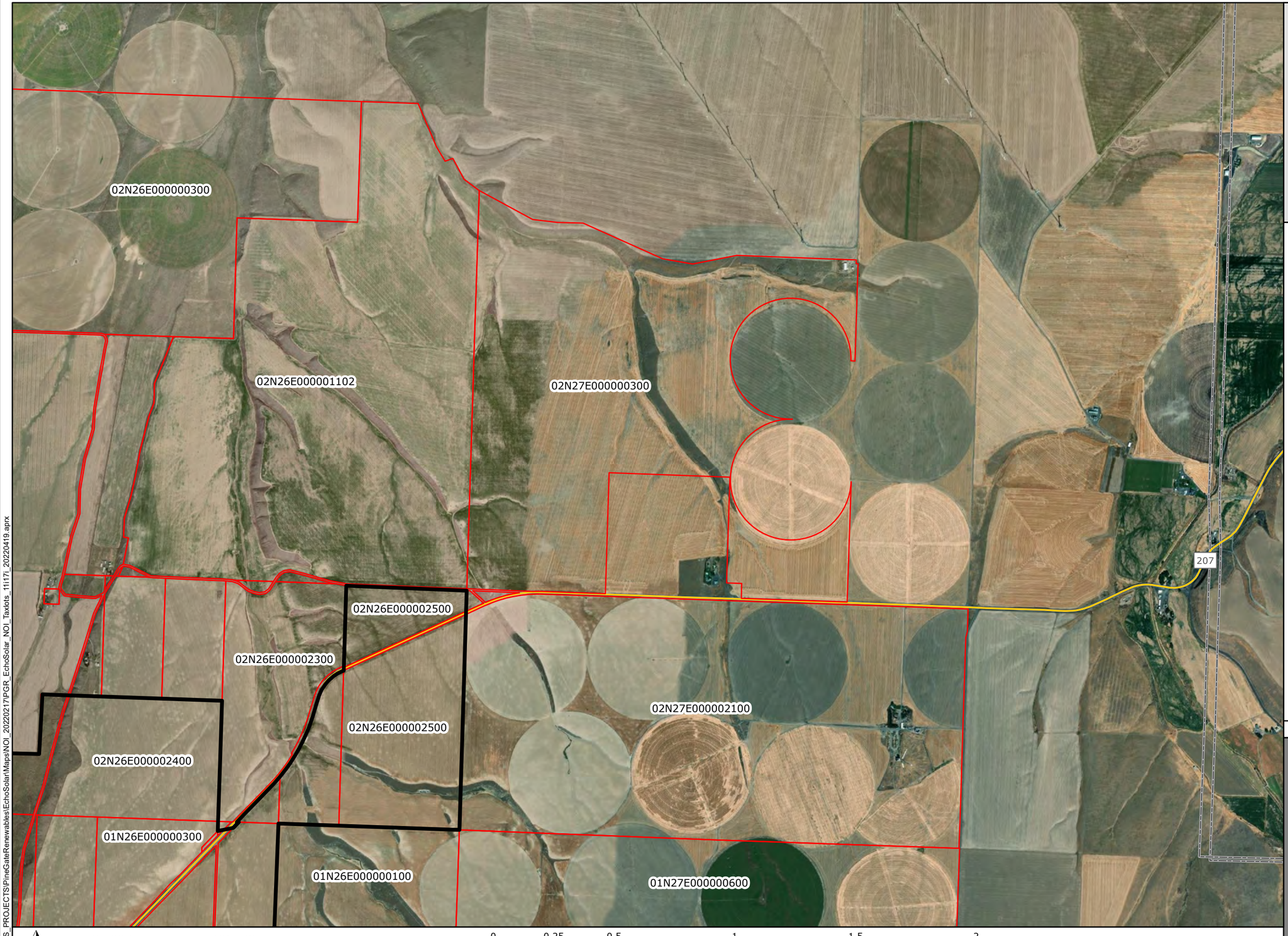
Echo Solar Project

Figure 1.5
Taxlots

MORROW COUNTY, OR



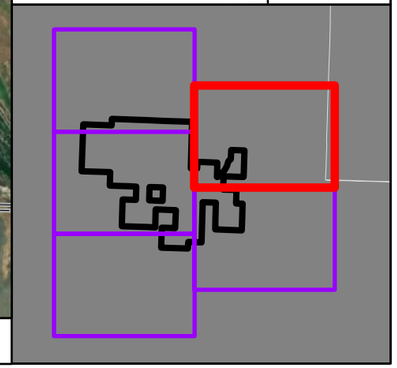
Site Boundary
Taxlot
County Boundary
State Highway

Data received from Morrow County on 3/25/2022

TETRA TECH

PINEGATE RENEWABLES

Reference Map



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NOT FOR CONSTRUCTION

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Attachment 3. Correspondence with Legislative Commission on Indian Services

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From: LCIS
To: King, Erin
Subject: RE: Consultation List for Echo Solar Project, Morrow County
Date: Thursday, January 20, 2022 10:51:18 AM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png

Please consult with:

- Burns Paiute Tribe
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of Warm Springs Reservation

Thank you –

Patrick Flanagan
Executive Director
Legislative Commission on Indian Services
Oregon State Capitol, Room 167
(503)986-1067

From: King, Erin <Erin.King@tetratech.com>
Sent: Monday, January 17, 2022 8:35 AM
To: LCIS <LCIS@oregonlegislature.gov>
Cc: Fossum, Linnea <Linnea.Fossum@tetratech.com>
Subject: Consultation List for Echo Solar Project, Morrow County

Hello –

I am assisting a client that is beginning the permitting process for a solar power generation project 16 miles southeast of Boardman in Morrow County, Oregon (Township 2 North/Range 16 East, Sections 26-36 and Township 1 North/Range 26 East, Sections 1-5, 8-12, and 14-15). I have attached a preliminary map of the project area for your review which shows the general evaluation area under consideration. The project is subject to EFSC review for renewable energy facilities. Cultural resource file searches through SHPO are in the process of being conducted and field surveys within the proposed project area will be conducted. I respectfully request your assistance in identifying appropriate tribes to consult with regarding tribal historic and cultural resources in the vicinity of

this proposed project.

Thank you very much for your assistance.
Erin

Erin King, MA, RPA | Principal Archaeologist – Pacific Northwest
Direct **+1 (612) 643-2227** | Mobile **+1 (916) 502-6044** | erin.king@tetratech.com
Pronouns: she, her, hers

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