Cypress Creek Renewables EFSEC Application

High Top Solar, LLC
and
Ostrea Solar, LLC

April 7, 2022

Prepared For:

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April 7, 2022

Ami Hafkemeyer
EFSEC Manager
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Dear Ms. Hafkemeyer,

On behalf Cypress Creek Renewables, LLC, (CCR), TRC is submitting the enclosed streamlined Application for Site Certification (ASC) to the Washington Energy Facility Site Evaluation Council (EFSEC). The streamlined application is a combined application for the construction and operation of the High Top Solar, LLC Project and the Ostrea Solar, LLC Project (Projects), both located in Yakima County, Washington. An electronic transfer of fifty thousand dollars ($50,000) has been submitted to EFSEC's Financial Services in accordance with RCW 80.50.071.

The State of Washington was chosen for these two Projects due to the State of Washington's goal of 100% clean electricity supply as set forth in the CETA, passed by the Washington State legislature in 2019. Yakima County was chosen for the location of these two projects based on the available solar resources in the area, the suitable terrain, and access to existing transmission lines and substations. In addition, the Projects are consistent with the Horizon 2040 Environment Visioning Goal 5.F and the County goals to diversify regional agricultural economy.

The Projects seek to obtain site certifications pursuant to RCW 80.50.060(2). As defined in RCW 80.50.020(17). The Projects are an alternative energy facility. Each project would generate a maximum of 80 megawatts of alternating current energy per hour to be delivered to the electric power grid. Construction of both Projects would help Washington meet its goal of 100% clean electricity supply as set forth in the Clean Energy Transformation Act, passed by the Washington legislature in 2019 (SB 5116, 2019).

Letter requests for an expedited process for review and approval of the Projects are included with this submittal in accordance with both RCW80.50.075 and Ch. 463-43 WAC. The Projects will be submitting additional documentation that will include the following: Spring 2022 surveys for cultural and rare plants; wildlife corridors and connectivity analysis, and the habitat mitigation plan.

We look forward to working with EFSEC staff, the associated state and local agencies and the Council during the review of this ASC application. Please contact meat 970-549-0043 or ebergquist@trccompanies.com with questions or data requests regarding the enclosed ASC for the Projects.

Sincerely,

Erin Bergquist
Project Manager

cc: Tai Wallace (CCR Development Director)
Jess Mosleh (CCR Associate Project Developer)
Julie Alpert (CCR Environmental Manager – Western Region)
Jamelle Schlangen (TRC)
Patti Lorenz (TRC)

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Acronyms and Abbreviations

Notation	Definition
AADT	average annual daily trips
AC	alternating current
AG	Agriculture
amsl	above mean sea level
APE	Area of Potential Effects
APLIC	Avian Power Line Interaction Committee
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
ASOS	Automated Surface Observing Systems
ASTM	American Society for Testing and Materials
BCR	Bird conservation region
BESS	Battery Energy Storage System
bgs	below ground surface
BLM	Bureau of Land Management
BMPs	Best Management Practices
BPA	Bonneville Power Administration
CAA	Clean Air Act
CAO	Critical Areas Ordinance
CCR	Cypress Creek Renewables, LLC
CETA	Clean Energy Transformation Act
CFR	Code of Federal Regulations
CMP	Construction Management Plan
CO	Carbon monoxide
CSWGP	Construction Stormwater General Permit
CTWSRO	Confederated Tribes of the Warm Springs Reservation of Oregon
CUP	Conditional Use Permit
CWA	Clean Water Act
DAHP	Department of Archaeology and Historic Preservation
DC	direct current
DNR	Washington State Department of Natural Resources
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EERE	Energy Efficiency and Renewable Energy
EFSEC	State of Washington Energy Facility Site Evaluation Council
ESA	Endangered Species Act
ESCP	Erosion and Sedimentation Control Plan
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
GHG	Green House Gas
GM	gravel/cobbles

Notation	Definition
GMA	Growth Management Act
H	Horizontal
High Top Project	High Top Solar, LLC
HVAC	Heating, Ventilation, and Air Conditioning
IPaC	Information for Planning and Consultation
kW	kilowatt(s)
kV	kilovolt(s)
MPE	The Maximum Project Extent (MPE) is defined as the area that contains the Project Footprint and additional construction areas. The larger extent of the MPE will allow for the shifting of project components, known as micro-siting, based on a final approved project design.
ML	Silt
MW	megawatt(s)
NFPA	National Fire Protection Association
NO2	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
NWP	Nationwide Permit
O&M	Operations & Maintenance
O3	Ozone
Ostrea Project	Ostrea Solar, LLC
PHS	Priority Habitats and Species
PM-2.5	particulate matter less than or equal to 2.5 microns in diameter
PM-10	particulate matter less than or equal to 10 microns in diameter
POI	point of interconnect
Projects	High Top Solar, LLC and Ostrea Solar, LLC
psf	pounds per square foot
psi	pounds per square inch
PV	Photovoltaic
RCW	Revised Code of Washington
REC	recognized environmental condition
RICE	Reciprocating Internal Combustion Engines
ROW	Right of Way
SGCN	Species of Greatest Conservation Concern
SEPA	State Environmental Policy Act
SO2	sulfur dioxide
SPCC	Spill Prevention, Control and Countermeasures
SR	State Route
STP	shovel test probe
SWPPP	Stormwater Pollution Prevention Plan

Notation	Definition
SWMMEW	Stormwater Management Manual for Eastern Washington
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
V	Vertical
WAC	Washington State Administrative Code
WDFW	Washington Department of Fish and Wildlife
WHR	Washington Historic Register
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WOTUS	Waters of the U.S.
WRCC	Western Regional Climate Center
WSDA	Washington State Department of Agriculture
WSDOT	Washington State Department of Transportation
YCC	Yakima County Code
YCCP	Yakima County Comprehensive Plan
YRCAA	Yakima Regional Clean Air Agency

PART 1. Overview/Summary

A. Basic Information

A.1. Applicant

Name/Contact: High Top Solar, LLC and Ostrea Solar, LLC c/o Tai Wallace

Mailing address: 3402 Pico Blvd Santa Monica, CA 90405

Phone: (310) 581-6299

Email:

hightopsolar@ccrenew.com

ostreasolar@ccrenew.com

A.2. Preparer

The Applicant prepared this Application for Site Certification in conjunction with TRC Companies.

Name/Contact: TRC Companies, c/o Erin Bergquist

Mailing address: 123 N. College Ave, Suite 206/208, Fort Collins, CO 80524

Phone: 303-792-5555

Email: [redacted]

A.3. Property Owner

There is one property owner for both the High Top and Ostrea Projects, Zine & Najiba Badissy (Badissy). The Applicant has executed an Option to Lease with the landowner for both projects. CCR is not aware of any non-private ownership interest in the project site.

[redacted]

A.4. Location of Proposed Site

<u>High Top</u>

County: Yakima County

County Assessor's numbers: 231207-11001, 231208-11001, and 231217-1101

Section: T12N R23E Sections 7, 8, and 17

Legal description:

231207-11001

All of Section 7, Township 12 North, Range 23 East, W.M., in Yakima County, Washington.

231208-11001

The West Half, the West Half of the East Half and the Northeast Quarter of the Northeast Quarter of Section 8, Township 12 North, Range 23 East, W.M. in Yakima County, Washington.

231217-1101

All of Section 17 in Township 12 North, Range 23 East, W.M., in Yakima County, Washington. Except that Portion Lying within the State Highway Conveyed to the State of Washington by Deed Recorded under Recording No. 2498869.

Ostrea

County: Yakima County

County Assessor's numbers: 231203-31001, 231211-11001, 231209-11001, 231210-24001, 231210-23001, and 231210-22002, 231210-31001, and 231210-41002

Section: T12N R23E Sections 3, 9, 10, and 11

Legal description:

231203-31001

The South Half of Section 3, Township 12 North, Range 23 East, W.M., in Yakima County, Washington.

231211-11001

Section 11, Township 12 North, Range 23 East, W.M., in Yakima County, Washington; Except that Portion Conveyed to the State of Washington for SSH 11-A Under Auditor's file Number 1053656.

231209-11001

Section 9, Township 12 North, Range 23 East, W.M., in Yakima County, Washington.

231210-24001

The SE1/4 NW1/4 of Section 10 Township 12 North, Range 23 East, Situated in Yakima County, State of Washington.

231210-23001

The SW1/4 NW1/4 of Section 10 Township 12 North, Range 23 East, Situated in Yakima County, State of Washington.

231210-22002

The NW1/4 NW1/4 of Section 10 Township 12 North, Range 23 East, Situated in Yakima County, State of Washington.

231210-31001

The SW1/4 of Section 10 Township 12 North, Range 23 East, Situated in Yakima County, State of Washington.

231210-41002

The SE1/4 of Section 10 Township 12 North, Range 23 East LY N'LY of State Highway (SR)-24. Situated in Yakima County, State of Washington.

B. Project Summary

Cypress Creek Renewables, LLC (CCR) proposes to construct and operate the High Top Solar, LLC (High Top Project) and Ostrea Solar, LLC (Ostrea Project) Projects (collectively referred to as "Projects").

Each Project will utilize solar Photovoltaic (PV) panels organized in arrays and aggregated to an injection capacity limited to 80 megawatts (MW) of alternating current (AC) solar capacity at the point of interconnection to the electric power grid. Each Project will consist of single axis tracking PV modules and inverters, connected to the Project substation through an electrical collection system, which may include a combination of underground and aboveground cable trays, overhead direct current (DC) and AC electrical and communication cables. On each Project, the PV modules will be arranged strings of series of connected modules aligned on racks in rows. The spacing between rows will be at least eight feet when the orientation of the modules are at their closest point. These series of module strings will be connected into combiner boxes located adjacent to the module arrays. The combiner box output circuits will be routed to the inverters, located on concrete pads across the arrays, and terminated on the DC side of the inverters. The inverters utilize a high frequency insulated gate bipolar transistors bridge to create an AC waveform from the DC power source of the array.

The low voltage AC output of the inverter will be stepped up to a 34.5 kilovolt (kV) collection system voltage through an inverter step-up transformer located adjacent to each inverter. The medium voltage collection circuits will be routed throughout the array area to connect each inverter to a collection system feeder circuit. The collection system feeders terminate at the project collector.

The substation transformer steps the voltage from the 34.5 kV collector system voltage up to the 230 kV interconnection voltage in the case of the High Top Project and 115 kV interconnection voltage in the case of the Ostrea Project. The High Top Project will interconnect through a dedicated switchyard located on the High Top Project adjacent to PacifiCorp's Union Gap-Midway 230 kV transmission line that runs through the southern part of the Project. PacifiCorp's Union Gap-Midway 230 kV transmission line connects to PacifiCorp's shared Midway substation, which is approximately nine miles east and north of the Project and to PacifiCorp's Union Gap substation, which is approximately 25 miles west of the Project. The Ostrea Project will interconnect through a line tap to Bonneville Power Administration's (BPA's) Moxee to Midway115 kV transmission line that runs through the southern part of the Project. BPA's Moxee to Midway 115 kV transmission line connects to BPA's Moxee substation, which is approximately 23 miles west and north of the Project and BPA's shared Midway substation, which is approximately nine miles east and north of the Project.

A Battery Energy Storage System (BESS) is required for the Ostrea Project and may be required for the High Top Project. The BESS will consist of individual battery modules organized in racks and housed in containers or cabinets with integrated thermal management systems and controls. The BESS will be located on concrete pads. The BESS system will store energy from the Projects or grid, which will be supplied to the electrical grid when needed. If required, the BESS will be located

next to the High Top Project substation (for AC coupled) or as smaller battery cabinets collocated throughout the site at the inverter pad locations (for DC coupled). The BESS on the Ostrea Project will be located to the west of the substation.

For both Projects, an Operations and Maintenance (O&M) trailer, and employee parking will be located just west of each Project substation. The trailer will be permanently located during the life of the Project and will include a bathroom. During construction, employee parking areas and O&M trailer footprints will be used as a construction laydown yard. Access to the High Top Project will be from Washington State Route 24 (SR-24) on the east side of the Project. Access to the Ostrea Project will be from SR-24 on the west side of the eastern most parcel of the Project.

C. Site Summary

The Projects are situated north of SR-24, south of the Yakima Training Center, and approximately 20 and 22 miles east of the town of Moxee, in Yakima County, Washington (Figure 2-1). The Project Site Control Boundary is defined as the total of the leased areas and easements for each Project (Figure 2-3 and 2-4). Within the Project Site Control Boundary, a smaller Study Area was defined for biological, cultural, and physical resource surveys (Figure 2-2 and 2-3). For both Projects, a Maximum Project Extent (MPE) boundary was defined. The MPE contains the Project Footprint and additional construction areas but allows for the shifting of project components, known as micro-siting, based on a final approved project design (Figure 2-3 and 2-4).

The Projects have signed agreements with the landowner for the development of the Projects on portions of 11 parcels (Figure 2-4 and 2-5). Integral to the development of the Projects, PacifiCorp's Union Gap-Midway 230 kV and BPA's Moxee – Midway 115 kV transmission line runs through the southcentral portion of both Projects. Both Projects have a Comprehensive Plan land use designation of Agricultural Resource and are zoned Agriculture (AG) District. Although not an agricultural use of land on the property zoned AG District, power generating facilities and utility services are listed in Yakima County Code (YCC) Title 19 as a conditionally permitted use in the AG District. The proposed use is consistent with the necessary findings that would be required for approval of a Type 3 Conditional Use Permit (CUP).

Both Projects are currently active rangeland. Aerial photographs show changes in land use from the 1940's to the 1960's, with areas in both Projects appearing to be used for agricultural purposes. Farmland of unique importance is approximately 69 percent of the High Top MPE and 30 percent of the Ostrea MPE. Farmland of statewide importance is approximately 11 percent of the High Top MPE, and 17 percent of the Ostrea MPE (USDA NRCS 2021). One percent of the Ostrea MPE is prime farmland if irrigated. Crop production has been absent from both Projects for over 25 years, and cheatgrass (*Bromus tectorum*) and other weedy species not well suited for year-round livestock grazing are dominant in the previously plowed areas.

Three vegetation communities were identified as occurring in the High Top and Ostrea MPEs: cheatgrass dominated pasture and mixed environs, shrub-steppe, and disturbed/reclaimed. A fourth vegetation community found within the Ostrea MPE is crested wheatgrass dominated pasture and mixed environs. The majority of the High Top MPE will be located in the cheatgrass dominated pasture and mixed environs. For the Ostrea MPE, the majority of the MPE is in the shrub-steppe, and cheatgrass dominated pasture and mixed environs habitats. Populations of the Washington State sensitive Columbia milkvetch (*Astragalus columbianus)* [redacted] No surface disturbance is proposed within or adjacent to these populations and these populations will be outside of the MPEs for each Project.

Neither Project is located in an area mapped by the Federal Emergency Management Agency (FEMA) as a floodplain. Wetland delineations were performed within the Project Site Control Boundaries for each Project. Two isolated wetlands and several ephemeral channels are found in the Project Site Control Boundaries for each Project. The wetland and ephemeral channels are located outside the High Top MPE and a No Permit Required letter has been obtained from the U.S. Army Corps of Engineers (USACE). The Ostrea MPE construction and operation access roads cross five of the ephemeral channels. For the Ostrea Project, a Clean Water Act, Section 404 Nationwide Permit 14 will be acquired from the USACE as part of the Project permitting effort. A separate 401 permit will be obtained from Ecology if required. Yakima County does not have any buffer requirements for Ns streams. The Phase I Environmental Site Assessment documented a drill rig, an abandoned (engine removed) vehicle-mounted crane, several vehicles, abandoned equipment, and miscellaneous materials and trash outside of the High Top MPE.

D. Screening Summary

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information must match with the information in Part 3.
- This information is very important in the pre-application stages.

[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	1. Does screening trigger a Part 4 analysis?	2. Is it clear what analysis or study is called for?	3. Is the analysis sufficiently complete for SEPA determination?	4. Is the analysis fully complete for application review?	5. Is the proposed mitigation (if any) adequate?
1. Earth	Yes	Yes	Yes	Yes	Yes
2. Air Quality	Yes	Yes	Yes	Yes	Yes
3. Water Quality – Wetlands and Surface Waters	Yes	Yes	Yes	Yes	Yes
4. Water Quality – Wastewater Discharges	No	Yes	Yes	Yes	Yes
5. Water Quality – Stormwater Runoff	Yes	Yes	Yes	Yes	Yes
6. Water Quantity – Water Use	No	Yes	Yes	Yes	Yes
7. Water Quantity – Runoff, Stormwater, Point Discharge	No	Yes	Yes	Yes	Yes
8. Plants	Yes	Yes	Yes	Yes	Yes
9. Animals	Yes	Yes	Yes	Yes	Yes
10. Energy and Other Natural Resources	No	Yes	Yes	Yes	Yes
11. Waste Management	No	Yes	Yes	Yes	Yes
12. Environmental Health – Existing Site Contamination	No	Yes	Yes	Yes	Yes
13. Environmental Health – Hazardous Materials	Yes	Yes	Yes	Yes	Yes

[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	1. Does screening trigger a Part 4 analysis?	2. Is it clear what analysis or study is called for?	3. Is the analysis sufficiently complete for SEPA determination?	4. Is the analysis fully complete for application review?	5. Is the proposed mitigation (if any) adequate?
14. Land Use, Nat. Resource Lands & Shoreline Compatibility	Yes	Yes	Yes	Yes	Yes
15. Housing	No	Yes	Yes	Yes	Yes
16. Noise, Light, Glare, and Aesthetics	Yes	Yes	Yes	Yes	Yes
17. Recreation	No	Yes	Yes	Yes	Yes
18. Archaeological and Historical Resources	Yes	Yes	Yes	Yes	Yes
19. Cultural Resources	Yes	Yes	Yes	Yes	Yes
20. Traffic and Transportation	Yes	Yes	Yes	Yes	Yes
21. Public Services and Facilities	Yes	Yes	Yes	Yes	Yes
22. Utilities	Yes	Yes	Yes	Yes	Yes

E. List of Studies

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information must match with the information in Part 3.
- This information is critical to the pre-application stage.

High Top

Topic	Name of Report	Location for Review	Status (e.g., scoping, contracting for, started)	Date of Completion (past or expected)
Land Use	High Top Land Use Consistency Review	Attachment A	Complete	March 2022
Rare Plants	High Top Rare Plants Report	Attachment B	Complete	March 2022
Rare Plants	High Top Rare Plants Report Addendum (Summarize March 2020 survey results)	TBD	Pending	May 2022
Habitat Mapping	High Top General Wildlife Surveys Report	Attachment C	Complete	March 2022
Wildlife	High Top General Wildlife Surveys Report	Attachment C	Complete	March 2022
Wildlife Connectivity Analysis	High Top General Wildlife Surveys Report Addendum	TBD	Started	May 2022
Habitat Restoration and Mitigation Plan	High Top Habitat Restoration and Mitigation Plan	TBD	Started	May 2022
Wetlands	High Top Wetland Delineation Report	Attachment D	Complete	October 2021
Hydrology and Hydraulics Analysis	High Top Preliminary Hydrologic and Hydraulic Assessment High Top Project, Yakima County Washington	Attachment E	Complete	October 2020
Cultural Resources	High Top Cultural Resources Report	Attachment F	Complete	March 2022
Cultural Resources	High Top Cultural Resources Report Addendum (summarize Spring 2022 surveys)	TBD	Started	May 2022
Earth	High Top Draft Geotechnical Report	Attachment G	Complete	January 2020
Glare	High Top Glint and Glare Analysis and Solar Glare Reports	Attachment H	Complete	March 2022
Airspace	High Top FAA Determination of No Hazard Letters	Attachment I	Complete	July 2020
Socioeconomics	High Top Socioeconomics Analysis	Attachment J	Complete	March 2022

Ostrea

Topic	Name of Report and Location for Review	Location for Review	Status (e.g., scoping, contracting for, started)	Date of Completion (past or expected)
Land Use	Ostrea Land Use Consistency Review	Attachment A	Complete	March 2022
Rare Plants	Ostrea Rare Plants Report	Attachment B	Complete	March 2022
Rare Plants	Ostrea Rare Plants Report (Summarize March 2020 survey results)	TBD	Pending	May 2022
Habitat Mapping	Ostrea General Wildlife Surveys Report	Attachment C	Complete	March 2022
Wildlife	Ostrea General Wildlife Surveys Report	Attachment C	Complete	March 2022
Wildlife Connectivity Analysis	Ostrea General Wildlife Surveys Report Addendum	TBD	Started	May 2022
Habitat Restoration and Mitigation Plan	Ostrea Habitat Restoration and Mitigation Plan	TBD	Started	May 2022
Wetlands	Ostrea Wetland Delineation Report	Attachment D	Complete	March 2022
Hydrology and Hydraulics Analysis	Ostrea Preliminary Hydrologic and Hydraulic Assessment Ostrea Project, Yakima County Washington	Attachment E	Complete	October 2020
Cultural Resources	Ostrea Cultural Resources Report	Attachment F	Complete	March 2022
Cultural Resources	Ostrea Culutral Resources Report Addendum (summarize Spring 2022 surveys)	TBD	Started	May 2022
Earth	Ostrea Draft Geotechnical Report	Attachment G	Complete	January 2020
Glare	Ostrea Glint and Glare Analysis and Solar Glare Reports	Attachment H	Complete	March 2022
Airspace	Ostrea FAA Determination of No Hazard Letters	Attachment I	Complete	July 2020
Socioeconomics	Ostrea Socioeconomics Analysis	Attachment J	Complete	March 2022

F. List of Stakeholders

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information is critical to the pre-application stage.

Type	Specific*	Contact (name, program)	Areas of Discussion	Status of Engagement**
Local Government	Yakima County	Dinah Reed, Judy Pozarich, Thomas Carroll, and Jason Earles, Planning Department	Land use, permitting	Ongoing
Local Government	Yakima County	Hasan Tahat, Yakima Regional Clear Air Agency (YRCAA)	Air quality, permitting	Contacted
Local Government	City of Yakima	Joe Stump, Yakima County Public Services	Water availability options	Contacted
Local Government	City of Yakima	Dave Brown, City of Yakima Water and Irrigation Division	Water availability	Contacted
Local Government	Yakima County Fire Marshal	Andrea Ely	Fire roads, etc.	Contacted
Local Government	Yakima County	Jeff Knutson, Yakima County Weed Board	Noxious weeds	Contacted
State Government	Washington Department of Fish and Wildlife (WDFW)	Michael Ritter	Wildlife	Ongoing
State Government	WDFW	Scott Downes	Wildlife	Ongoing
State Government	Washington State Department of Ecology (Ecology)	Lori White	Wetlands	Contacted
State Government	Department of Archaeology and Historic Preservation (DAHP)	Annie Strader, WA DAHP/State Historic Presevation Office	Cultural Resources	Ongoing
State Government	DAHP	Sydney Hanson, WA DAHP/State Historic Preservation Office	Cultural Resources	Ongoing
Tribal Government	Confederated Tribes and Bands of the Yakama Nation	Jessica Lally	Cultural Resources	Ongoing

Type	Specific*	Contact (name, program)	Areas of Discussion	Status of Engagement**
Tribal Government	Confederated Tribes and Bands of the Yakama Nation	Delano Saluskin	Cultural Resources	Contacted
Tribal Government	Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)	Christian Nauer	Cultural Resources	Ongoing
Federal Government	Department of Defense	Kim Peacher, Yakima Training Center	Airspace, Glint and Glare	Ongoing
Federal Government	Department of Defense	Bob Bright, Yakima Training Center	Airspace, Glint and Glare	Contacted
State Government	Washington State Department of Transportation (WSDOT)	Jacob Prilucik	Access	Ongoing
Federal Government	United States Army Corp of Engineers	David Moore, Biologist/Soil Scientist	Wetlands	Ongoing
Federal Government	U.S. Fish and Wildlife Service	Stephen Lewis	Threatened and Endangered Species (T&E)	Contacted
Federal Government	Bonneville Power Administration	Roderick Morris	Interconnection	Contacted

* Entities typically consulted include Ecology, WDFW, DNR, DAHP, tribal governments, the Department of Defense, neighboring landowners, local government, etc. Not all of these may be required for each project but should serve as a starting point for applicant contacts for coordination.
** for example: Intend to contact, contacted, ongoing engagement, engagement complete

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PART 2. Core Information

A. Project Core Information

A.1. Project Name

High Top Solar, LLC Project

Ostrea Solar, LLC Project

A.2. Project Description

A.2.a. Describe Proposal

Each Project will generate a maximum of 80 MW of AC energy per hour to be delivered to the electric power grid. Construction of both Projects would help Washington meet its goal of 100% clean electricity supply as set forth in the Clean Energy Transformation Act (CETA), passed by the Washington legislature in 2019 (SB 5116, 2019).

The High Top Project will interconnect through a dedicated switchyard located on the High Top Project adjacent to PacifiCorp's Union Gap-Midway 230 kV transmission line that runs through the southern part of the Project. PacifiCorp's Union Gap-Midway 230 kV transmission line connects to PacifiCorp's shared Midway substation, which is approximately nine miles east and north of the Project and to PacifiCorp's Union Gap substation, which is approximately 25 miles west of the Project.

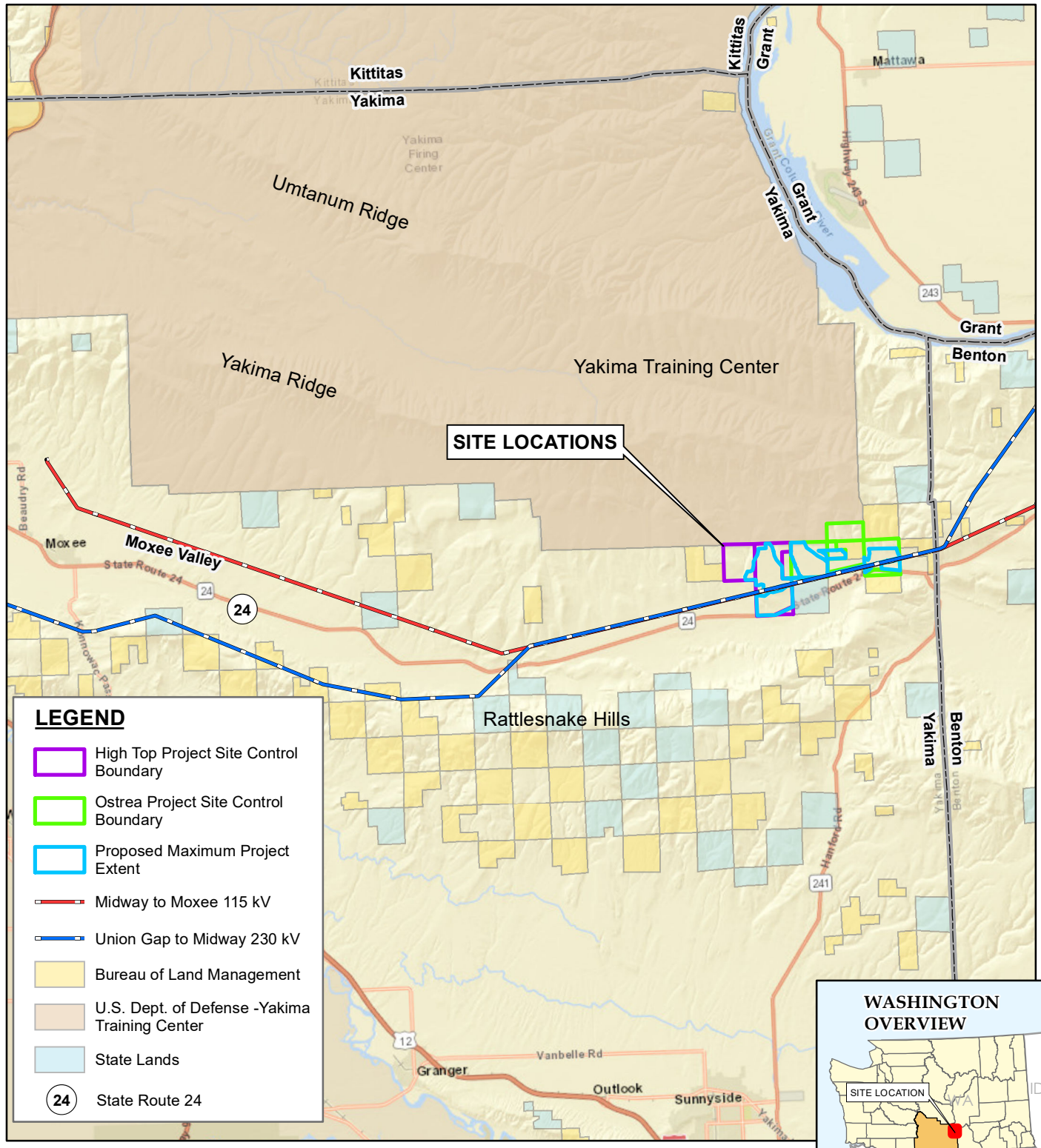
The Ostrea Project will interconnect through a line tap to BPA's Moxee to Midway 115 kV transmission line that runs through the southern part of the Project. BPA's Moxee to Midway 115 kV transmission line connects to BPA's Moxee substation, which is approximately 23 miles west and north of the Project and BPA's shared Midway substation, which is approximately nine miles east and north of the Project.

A.2.a.1. Project Boundary Definitions

For this application, the entirety of the parcel boundaries that make up each Project will be referred to as the Project Site Control Boundary (Figure 2-1 and 2-2). For both Projects, for the purposes of wildlife, cultural, rare plants, and habitat surveys, a survey Study Area (Study Area) was identified that encompassed the portions of the Project Site Control Boundary where the proposed facilities and panels would most likely be located (Figure 2-1 and 2-2). Wetland delineations were performed within the Project Site Control Boundary of both Projects.

Within the Study Area, contained within the Project Site Control Boundary, there is an MPE. The MPE contains the Project footprint but allows for the shifting of project components, known as micro-siting, based on the final approved project design. Micro-siting will incorporate precise locations of Project components and facilities to include but not be limited to solar module spacing, collector lines, inverters, staging areas, fence line placement, construction footprints, and O&M. Micro-siting will allow the Projects to minimize potential impacts and still meet the output goals of the Project. The final facility and panel locations will be provided in an updated site plan prior to

construction. Acreages for each the Project Site Control Boundary, Study Area, and MPE areas are provided in Table 2-1. Figure 2-4 shows how the project boundaries relate to each other.



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PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP AND OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

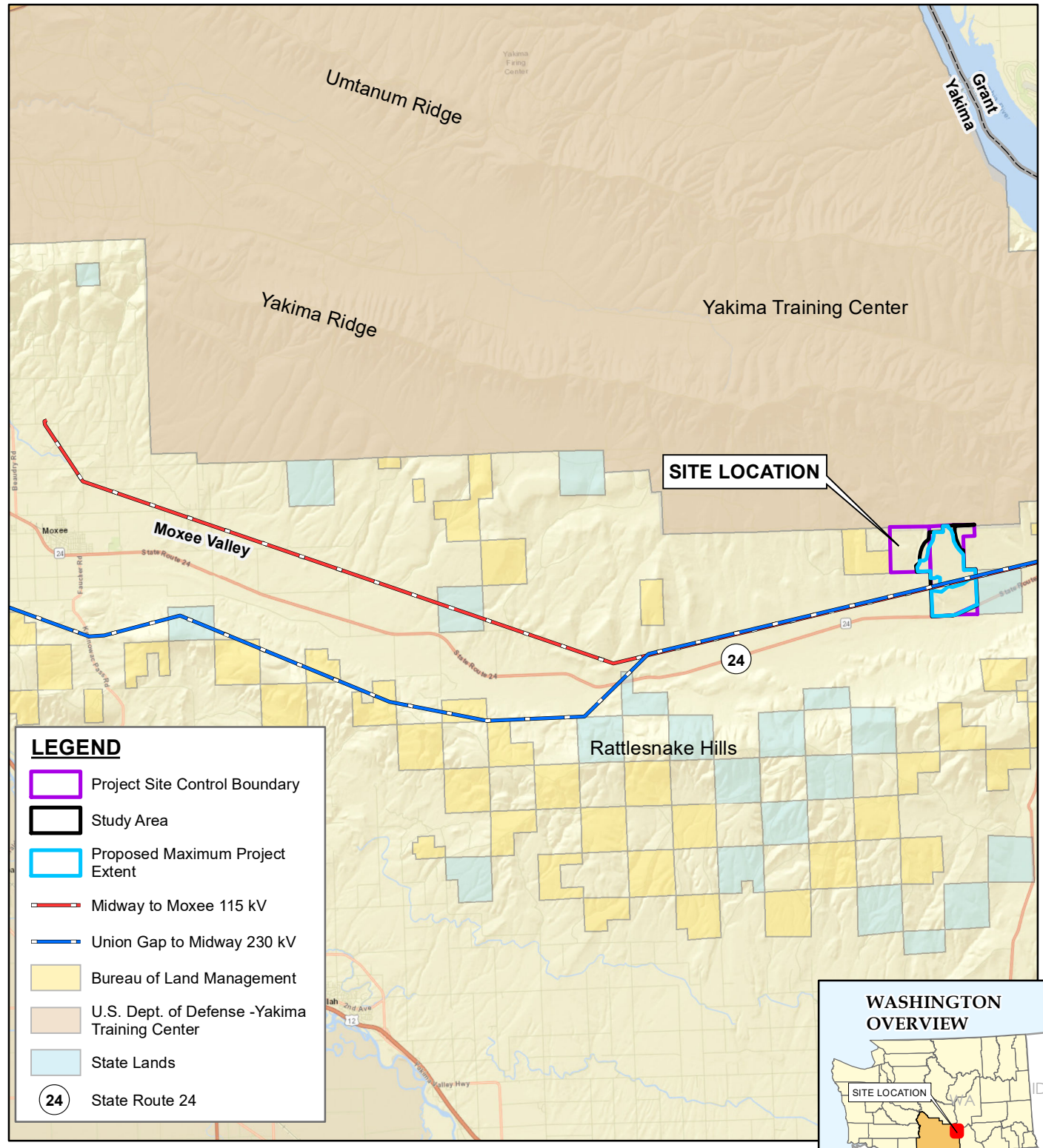
TITLE:

HIGH TOP AND OSTREA PROJECT LOCATION MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	APRIL 2022
PROJ. NO.:	422984
FILE:	Fig 2-1_High Top_and Ostrea Project Location Map EFSEC.mxd

FIGURE 2-1

S:\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 2-1_High Top_and Ostrea Project Location Map EFSEC.mxd -- Saved By: BTRACY on 4/4/2022, 13:36:51 PM



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

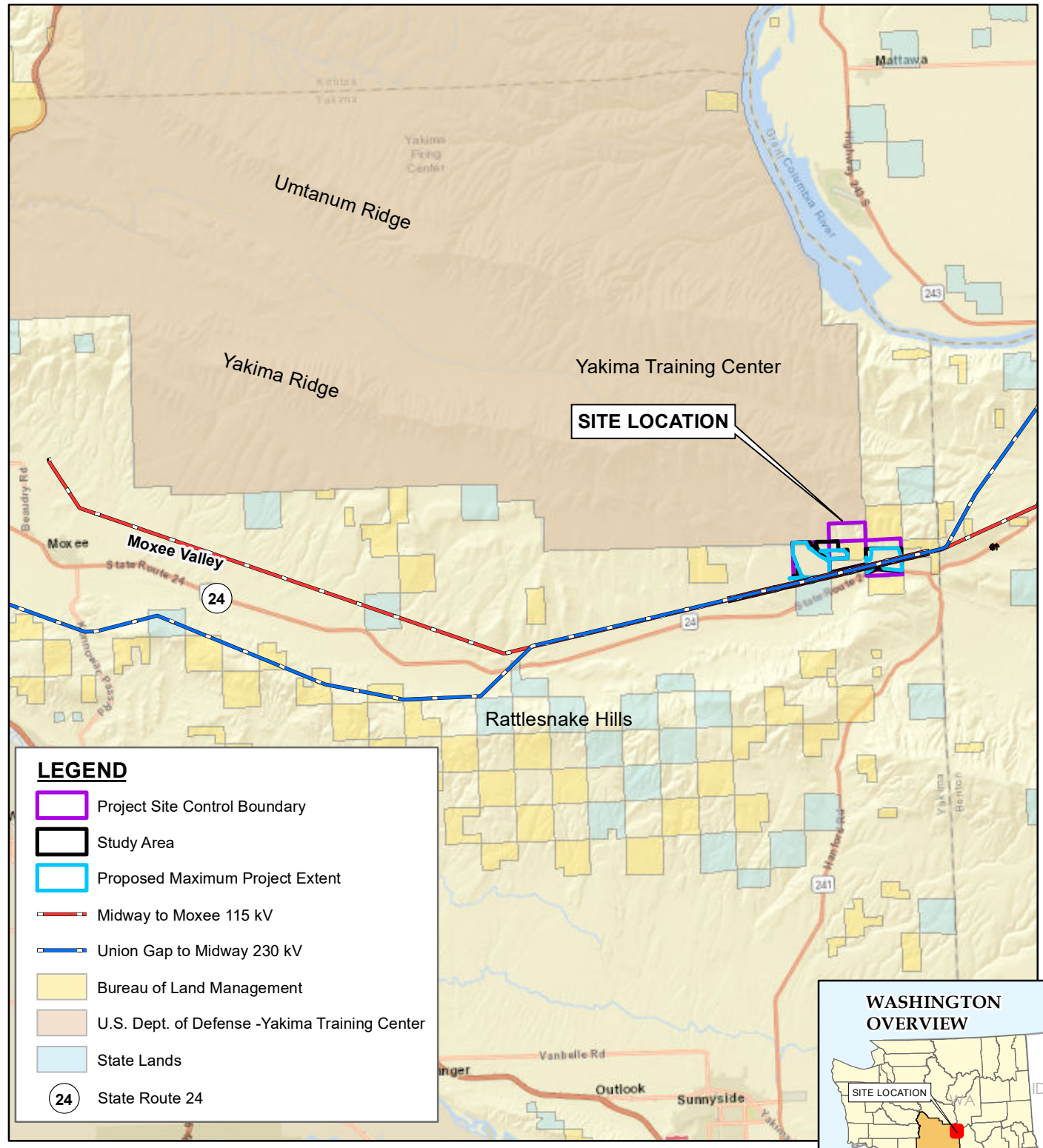
TITLE:

HIGH TOP PROJECT OVERVIEW MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	MARCH 2022
PROJ. NO.:	422984
FIG #:	Fig 2-2_High Top_Project Overview Map EFSEC.mxd

FIGURE 2-2

S:\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 2-2_High Top_Project Overview Map EFSEC.mxd -- Saved By: BTRACY on 3/14/2022, 13:21:39 PM



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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PROJECT:

CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

OSTREA PROJECT OVERVIEW MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	MARCH 2022
PROJ. NO.:	422984
Fig2-3_Ostrea_Project Overview Map EFSEC.mxd	

FIGURE 2-3

S:\GIS\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 2-3_Ostrea_Project Overview Map EFSEC.mxd -- Saved By: RBLAKE on 3/11/2022, 16:06:23 PM

Changes within the MPEs could include refinement of solar modules spacing, associated access roads, collector lines, staging areas and above-ground facilities.

Table 2-1. Project Acreage

Site Name	Project Site Control Boundary (acres)*	Project Study Area (acres)	MPE (acres)
High Top	~1,564	1,114	926.6
Ostrea	~1,699	1,123	811.3

* Acres are based on the project leases

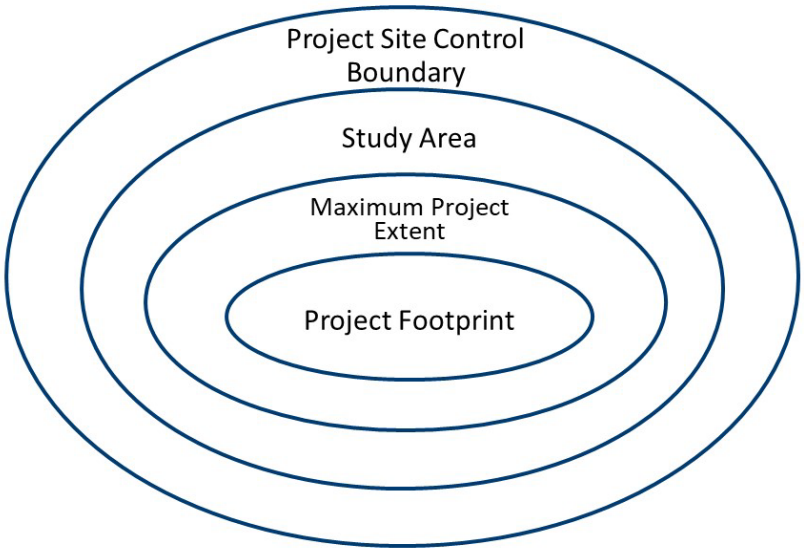


Figure 2-4 Project Boundary Definitions

A.2.a.2. Siting

The State of Washington was chosen for these two Projects due to the State of Washington's goal of 100% clean electricity supply as set forth in the CETA, passed by the Washington State legislature in 2019. Yakima County was chosen for the location of these two projects based on the available solar resources in the area, the suitable terrain, and access to existing transmission lines and substations. In addition, the Projects are consistent with the Horizon 2040 Environment Visioning Goal 5.F and the County goals to diversify regional agricultural economy. As part of the conceptual development and siting of the Projects, the following criteria were used to select these two sites:

- Property size and terrain
- Proximity to the existing transmission facilities and grid capacity
- Proximity to existing customer energy loads
- Site access from existing roadways
- Land use zoning

- Solar insolation
- Previous site disturbance including grazing, previous farming, and existing transmission line
- Slope and aspect
- Proximity or lack thereof of surrounding neighbors

A.2.a.3. Projects Location

The Projects are adjacent to each other and situated north of SR-24 and south of the Yakima Training Center. The High Top Project is located approximately 20 miles east of the town of Moxee, while the Ostrea Project is approximately 22 miles east of the town of Moxee. Landowner information, Yakima County assessor parcel numbers and township, range, and section information for each Project are listed in Table 2-2 and shown in Figure 2-5 and 2-6. The Projects have signed definitive lease option and easement agreements with the landowner for the development of each Project.

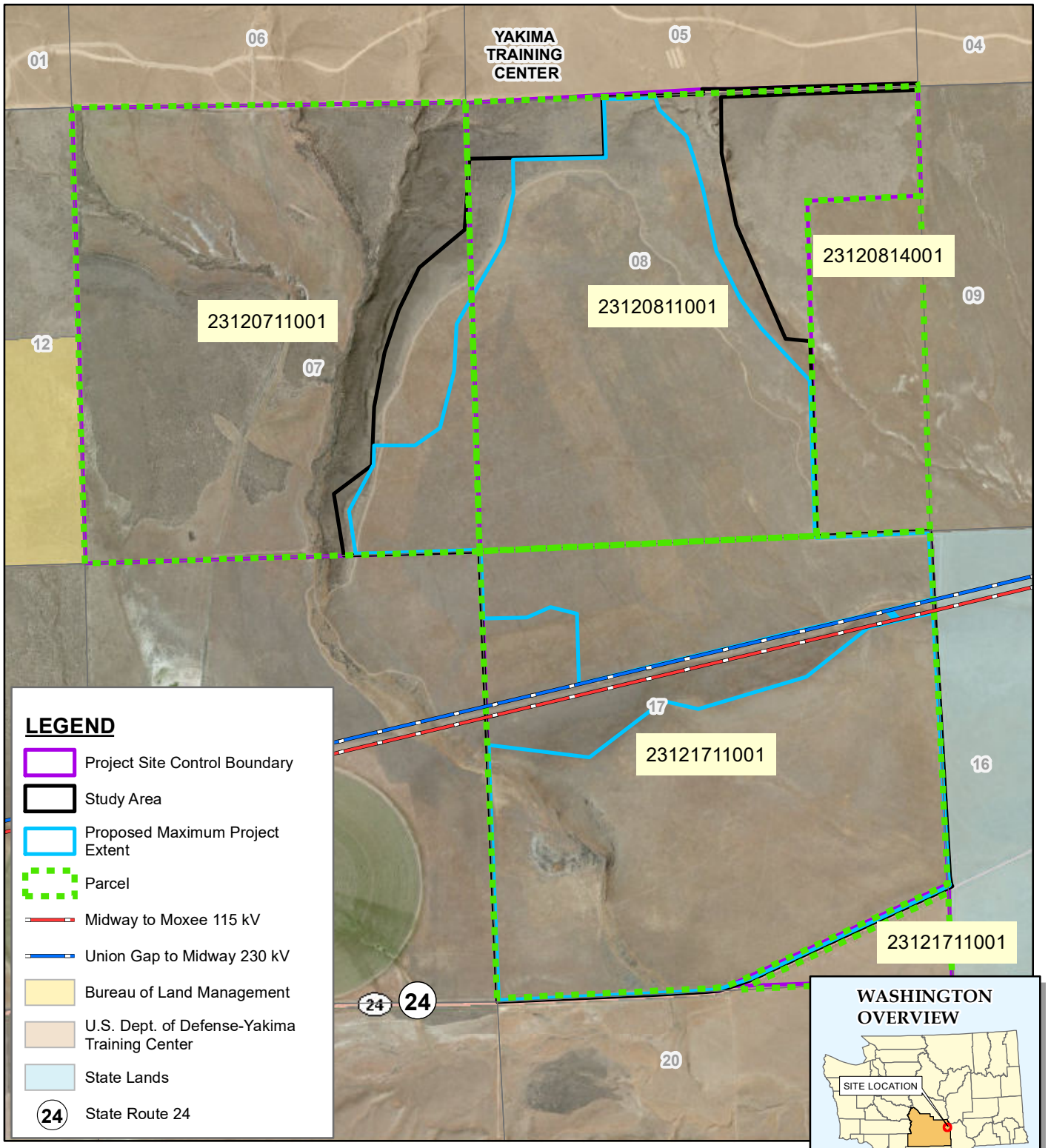
Table 2-2. Project Location Information

Site Name	Landowner	Parcel No	Public Land Survey System (PLSS)
High Top	Zine & Najiba Badissy	231207-11001, 231208-11001, 231217-11001	T12N R23E, Sections 7, 8, and 17
Ostrea	Zine & Najiba Badissy	231203-31001, 231211-11001, 231209-11001, 231210-24001, 231210-23001, 231210-22002, 231210-31001, 231210-41002	T12N R23E Sections 3, 9, 10, and 11

Both MPEs are currently grazed. Historic land use on both Projects has included crop production. Habitat types on High Top include cheatgrass dominated pasture and mixed environs, shrub-steppe, and disturbed/reclaimed. Habitat types on the Ostrea MPE include crested wheatgrass dominated pasture and mixed environs, cheatgrass dominated pasture and mixed environs, shrub-steppe, and disturbed/reclaimed. The cheatgrass dominated pasture and mixed environs in both MPEs appears to have been plowed historically. Crested wheatgrass dominance is also typically associated with plowing and crops, and the crested wheatgrass dominated pasture and mixed environs may have also been historically plowed or cultivated. Project facilities for High Top will be predominately located in the cheatgrass dominated pasture and mixed environs area, while for Ostrea they will be located in the cheatgrass dominated pasture and mixed environs and crested wheatgrass dominated pasture and mixed environs habitats.

Dominant vegetation in the cheatgrass dominated pasture and mixed environs is weedy invasive species including cheatgrass, flixweed (*Descurainia sophia*), tumblemustard (*Sisymbrium altissimum*), blue mustard (*Chorispora tenella*), bindweed (*Convolvulus arvensis),* and Russian thistle (*Salsola tragus*). The disturbed/reclaimed habitat type is found along the overhead transmission line right of way and the associated access road for the transmission line right of way in both MPEs. These areas are dominated by crested wheatgrass, cheatgrass, flixweed, and

bulbous blue grass (*Poa bulbosa*). This area appears to have been reclaimed after installation of the transmission line. In the crested wheatgrass dominated pasture and mixed environs dominant species include crested wheatgrass, cheatgrass, rubber rabbitbrush, and Sandberg bluegrass



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PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

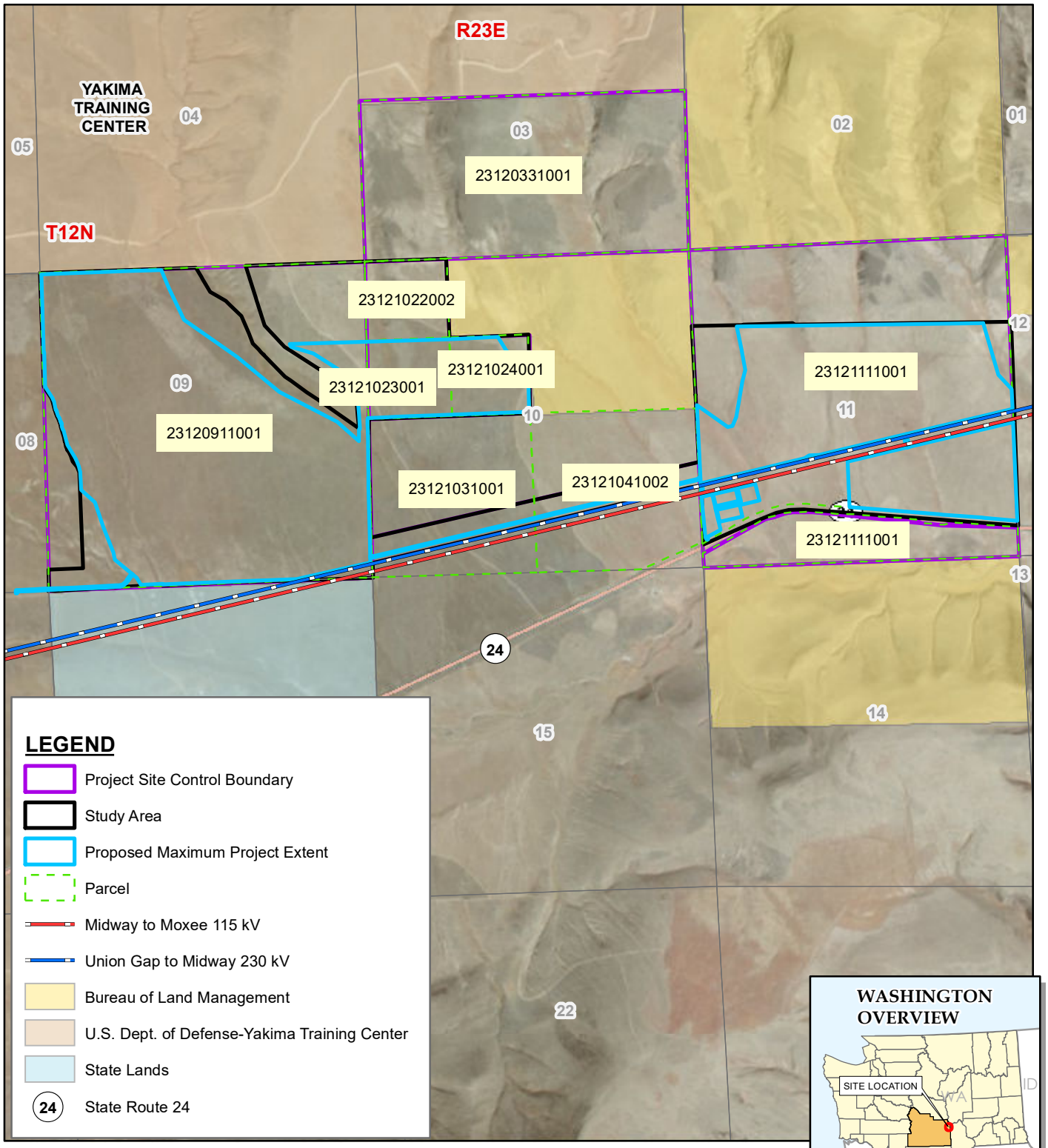
TITLE:

HIGH TOP PARCEL MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	MARCH 2022
PROJ. NO.:	422984
FILE:	Fig 2-5 High Top Project Location Parcel Map EFSEC.mxd

FIGURE 2-5

S:\GIS\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 2-5 High Top Project Location Parcel Map EFSEC.mxd -- Saved By: RBLAKE on 3/18/2022, 17:17:29 PM



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PROJECT:

CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

OSTREA PARCEL MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	MARCH 2022
PROJ. NO.:	422984
FILE:	Fig 2-6 Ostrea Project Parcel Map EFSEC.mxd

FIGURE 2-6

S:\GIS\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 2-6 Ostrea Project Parcel Map EFSEC.mxd -- Saved By: RBLAKE on 3/11/2022, 16:06:29 PM

(*Poa secunda*). The crested wheatgrass is fairly evenly distributed in this habitat type. The shrub-steppe habitat type is found on the generally hillier northern portions of both Projects and outside the areas that have been historically plowed. These areas have higher cover of native grass, forb, and shrub species. Both Projects were designed to minimize impacts to the shrub-steppe habitat.

One population of Columbia milkvetch, a State sensitive species, was [redacted] (Attachment B). Both Projects were designed to avoid impacts to the Columbia milkvetch populations. Additional rare plant surveys are being conducted in April 2022. April surveys results will be summarized in an addendum to the Rare Plants Reports and submitted to EFSEC.

No Federally- listed species are likely to occur within the Project Site Control Boundary, nor does the Project Site Control Boundary contain USFWS designated critical habitat for these species. State-listed threatened, endangered, and sensitive wildlife species observed within the Study Areas include: sagebrush sparrow, a state candidate species and SGCN, recorded in the [redacted], Rocky Mountain elk, a state PHS, [redacted], American badger, a state SGCN, [redacted]

Initial cultural surveys were conducted in the Study Areas for each Project in areas with high probability for known or unknown archaeological resources based on the DAHP's archaeological predictive model and a field assessment of site geomorphology. Additional cultural field surveys are planned in Spring 2022 for the unsurveyed areas in the Study Area. The results of the spring 2022 surveys will be summarized in an addendum to the Cultural Resource reports and submitted to the State of Washington Energy Facility Site Evaluation Council (EFSEC) once complete.

No archaeological resources were identified from archival research or field surveys in the High Top Study Area. Three cultural resource sites were identified within the Ostrea Study Area during archival research and field surveys. One previously recorded archaeological site, one historic property site, and one newly recorded archaeological site were identified within the Ostrea Study Area. The Ostrea MPE was designed to avoid impacts to these areas and within a 100-foot buffer around these cultural sites.

The northern boundary property lines of two Project parcels for High Top and two Project parcels for Ostrea adjoin the southeastern property line of the Yakima Training Center. Preliminary communications with representatives of the Yakima Training Center did not result in notable land use conflicts with the Projects. The results of the glint and glare studies were shared with the Yakima Training Center for confirmation that there are no impacts to the Yakima Training Center from the Projects.

The Phase I Environmental Site Assessment documented a drill rig, an abandoned (engine removed) vehicle-mounted crane, several vehicles, abandoned equipment, and miscellaneous materials and trash outside of the High Top MPE. No RECs were detected on the Ostrea Project Site.

PacifiCorp's Union Gap-Midway 230 kV transmission line and BPA's Moxee-Midway 115 kV transmission line runs through the southcentral part of the High Top MPE and the southern part of the Ostrea MPE.

A.2.a.4. Project Components

The preliminary site plans for both Projects are included in Attachment K. Project components for both Projects include solar modules, tracking systems, inverters and transformers, cables, collector lines, fences/gates, and lighting. Facilities on each site include a Project substation and O&M trailer. A BESS may be required for High Top and would be required for Ostrea. Transportation components include internal and external access roads and employee parking.

The arrays will consist of rows of PV modules mounted to single-axis tracking racking equipment mounted on steel posts (piles) driven into the ground. The system will rotate east to west tracking the sun throughout the day in order to maximize generation. The piles will be installed at a depth of eight to 10 feet into the ground based on site specific pile load testing that accounts for the shallow-depth basalt bedrock found in the area. Final determination of pile depth and spacing will be site-specific and determined by final module selection, racking manufacturer pile load specifications, completed geotechnical analysis, and pile load testing of multiple pile types as part of the detailed design process necessary to pull construction permits.

On each Project, there will be 27 modules per string, and each string of panels is arranged in rows with at least eight feet of space between the rows. Electric cables will be installed both above and below ground between the solar arrays and the inverters and transformers. Final depth of buried cables will be determined in late-stage design, but typically wouldn't be deeper than 48 inches.

The inverters and transformers will be mounted on concrete pads. The inverters will transform the electricity from the arrays from DC to AC at the collector line voltage level. To increase the voltage to meet the voltage of the transmission line, medium voltage collector lines will run to the generator step up transformer, which will increase the voltage to 230 kV for High Top and 115 kV for Ostrea. kilovolt collector lines will transmit the electricity to the Project substations.

The Project substations will have a generator step-up transformer to increase the voltage from 34.5 kV to 230 kV for the High Top Project point of interconnect (POI) and 115 kV for the Ostrea Project POI. The control house for each project will be located adjacent to the POIs of each project. The control house will include communication equipment, circuit breakers, disconnect switches, and relays. The O&M trailer and associated employee parking will be located next to the POI on each Project. The O&M trailer will have office space, storage areas, and a bathroom.

The employee parking area will be gravel with six spaces. The employee parking lots will operate as laydown yards during construction. Required permits for the O&M trailer include a Yakima County building permit, Yakima County Health District permit for an onsite septic system, and the Land Use Consistency review. A security fence will be installed within 20 feet of the final approved locations of the panel arrays. The exact fence line will be located within the MPE and its location will be micro-sited based on the final approved design for each Project. The security fence will measure six feet in height with an additional one foot of barbed wire along the top. Security lighting will be installed as well as lights for nighttime O&M activities. Lights will be shielded to minimize visual impacts.

For the Ostrea Project, the BESS will be located on the site. For High Top, a BESS may be required. For both Projects, the BESS will consist of self-contained storage modules placed in racks. The BESS will not exceed the 80 MW capacity of each Project. On Ostrea, the BESS will be located next to the Project substation (for AC coupled) and in the north central portion of the Project Footprint (for DC coupled). The BESS, if required for High Top, would be in the same locations. The BESS system would collect energy from the project which would be supplied to the electrical grid when needed.

All roads including the access road will be built to fire code standards as set by the Yakima County Fire Marshal's Office (YCC 13.10,19.18). A full road turnout pavement section consisting of geotextile fabric, a nine-inch-deep crushed gravel base course, with a six-inch Hot Mix Asphalt surfacing from the highway shoulder to the site property line will be installed. The minimum road width is assumed to be 30 feet wide at the property line flared to accommodate truck turning radii. The access road from SR-24 for each Project will require a WSDOT General Permit and will also need to adhere to the Yakima County public road entrance requirements. Gates will be installed at the entrances to each Project and will be locked.

During construction, a main and two spur material delivery road will be utilized for each Project. The roads will consist of a nine-inch depth of crushed gravel over geotextile fabric placed on proof-rolled subgrade. The crushed gravel will be at the recommended gradation listed in the Draft Geotechnical Report for each Project (Attachment G). During O&M, inverter maintenance roads on each Project will provide all weather access to the solar panel inverter locations. Internal site maintenance access roads will be subject to County private road development criteria as well as for road geometry and all-weather access criteria. The internal maintenance roads will consist of a six-inch depth of crushed gravel at the recommended gradation provided in the Draft Geotechnical Report for each Project over geotextile fabric placed on proof-rolled subgrade. The Yakima County Fire Marshal will review the proposed road plans for compliance with Yakima County fire equipment related road standards for maneuvering on public and private roads.

A.2.a.5. Construction

Project construction is estimated to take nine to 18 months per Project. Construction would employ 150 to 300 temporary construction workers per Project. If the Projects are constructed concurrently, the total construction time and temporary construction workers estimate could decrease. Construction activities will be consistent with State of Washington and Yakima County regulations. Initial construction activities will include clearing and grubbing of vegetation and grading. Grading will be restricted to access roads (as needed), concrete pads, and facility footprints. Vegetation clearing will occur in construction areas, areas that are graded, and access roads. Vegetation clearing will be minimized to extent feasible to minimize surface disturbance and maintain existing vegetation communities. A Yakima County grading permit will be obtained prior to beginning grading or excavation work. In the Ostrea Project, construction traffic will cross ephemeral channels at set crossings locations where timber mats, or other similar types of temporary products to limit impacts will be placed. Once the site is prepped, the piles will be drilled, the panels installed, and the facilities constructed. Once the facilities and panels are in place, the electrical work and interconnection will occur. After construction is complete, the substation will be initiated and tested.

Construction equipment would include, but not be limited to heavy-duty trucks, such as semi-trailer dump trucks and 40-foot container trucks, that would be carrying gravel and other materials required to improve or construct new access roadways. These heavy-duty trucks will also provide concrete for component foundations and materials for the solar modules themselves. In addition to concrete and gravel, single-unit water-tank trucks delivering water to the Project will be required. Trucks will deliver water during construction. Semi-trailer flat beds carrying electrical equipment and materials required for solar panel construction and power transmission equipment also will be necessary.

Graveling, watering or other fugitive dust-abatement measures will be used as needed to control fugitive dust generated during construction. The construction contractor will use water or environmentally safe water-based or polymer additive dust palliative such as lignin sulfonate for dust control. All products will be acceptable for use by Ecology.

Construction will likely add an average of 900 to 1,000 truck trips, over nine to 18 months along SR-24 predominantly from the west. The primary source of construction traffic will be worker commutes to the sites, originating from nearby communities including Yakima, Sunnyside, and Richland. During construction, site laydown areas will be constructed to allow heavy trucks to drop their trailers, containers, and lowboy-transported oversize loads to be unloaded and further distributed within the MPEs.

The Projects shall develop a Construction Management Plan (CMP) to govern construction operations on site for the duration of the Construction Phase of each Project. The CMP will address the primary site preparation and construction phases and construction related best management practices (BMPs). The CMPs will be submitted to EFSEC at least 90 days prior to site preparation. The construction schedule will be provided to EFSEC at least 90 days prior to site preparation. The final set of construction plans, specifications, drawings, and design documents that demonstrate the Project is in compliance with conditions of the Site Certificate Agreement will be provided to EFSEC 90 days prior to construction.

A Fire Control Plan will be developed for both Projects in coordination with the Yakima County Fire Marshal 90 days prior to construction. A SWPPP, outlining the different construction activity phases and the related material/equipment staging areas, decontamination areas, areas of land disturbance, roadways, access points, and any related BMPs, will be submitted to Yakima County and Ecology and approved prior to construction.

Additional detail regarding suggested BMPs are included in Part 4 of this document and the attachments with this application. Proposed mitigation measures are included in Attachment O.

A.2.a.6. Operations and Maintenance (O&M)

The life of each Project is anticipated to be 25 to 40 years. O&M activities would include, but not be limited to, vegetation management, equipment monitoring, and equipment repairs. The sites will be continuously monitored with active O&M personnel on-site regularly**.** Vegetation maintenance is outlined in the Vegetation Management Plan (Attachment L) and will include mowing and weed management. Culverts will be placed at permanent road crossings of ephemeral channels in the Ostrea Project. The permanent placement of fill, most likely gravel, will be placed in the ephemeral channels.

With up to five full-time employees for each Project during O&M, traffic volumes during the life of the Project would be minimal and could be accommodated within the existing capacity of SR-24 from which the site has access. Noise from Project O&M will be limited to occasional employee and maintenance worker vehicle trips to, from, and around the site.

Water use during O&M will consist of domestic uses in the O&M trailer. Water will be trucked on-site. Fire suppression protocols and BMPs would be determined in consultation with the Yakima County Fire Marshal and outlined in the Fire Control Plan for each Project.

A.2.a.7. Site Restoration

An Initial Site Restoration Plan will be developed and submitted to EFSEC at least 90 days prior to the beginning of site preparation. Per Washington State Administrative Code (WAC) 463-72-040, the plan would identify, evaluate, and resolve all major environmental and public health and safety issues reasonably anticipated. The plan would describe the process used to evaluate the options and select measures that would be taken to restore or preserve the site or otherwise protect all segments of the public against risks or danger resulting from the site. The plan would include a discussion of economic factors regarding the costs and benefits of various restoration options versus the relative public risk and would address provisions for funding or bonding arrangements to

meet the site restoration or management costs. The provision of financial assurances shall include evidence of pollution liability insurance coverage in an amount justified for the project, and a site closure bond, sinking fund, or other financial instrument or security in an amount justified in the Initial Site Restoration plan.

The Initial Site Restoration Plan will concur with the decommissioning plan prepared for the site. The Initial Site Restoration Plan shall detail restoration goals for site reclamation which will include mitigation measures to be employed, the Project components to be removed, and restoration of soil and vegetation as applicable. It is anticipated that the site will be able to return to agricultural use following decommissioning of the Project, at the landowner's discretion.

A.2.a.8. Socioeconomic Review

Per WAC 463-60-535 and instruction from EFSEC, the Applicant prepared a Socioeconomic Analysis (Attachment J). The analysis touches upon the socioeconomic study area population, population forecasts, race and ethnicity, local area income and poverty, employment characteristics, and housing characteristics. The temporary nature of construction and the limited number of permanent workers required would not result in negative impacts to the local available labor force from the proposed Project. As the number of non-local hires will be limited and temporary in nature and would not result in negative impacts to local area accommodations.

A.2.b. Project Schedule, Employees and Public Access

Phase	Duration	Employee numbers on site & frequency
Site Preparation and Construction	9 to 18 months	150-300 for each project
Operation/Use	25 to 40 years	Up to five full-time employees for each Project
Closure/Reclamation	1 year	To be determined upon submission of closure/reclamation plan prior to construction

General public access to the Project Sites is not anticipated during construction, O&M, and decommissioning. Access to the Project Sites is described in Part 4 Traffic and Transportation for general contractors, deliveries, and other approved entrants.

A detailed Construction Schedule will be submitted to EFSEC at least 90 days prior to start of site preparation.

A.3. Phased and Future Projects

Is this project an addition, continuation, or expansion of a previous proposal or are there other related actions planned?	
☒ **No**	☐ **Yes**
	Describe past or future projects that relate to this proposal, including expected timing. (Include additional sheets as needed).

A.4. Site Maps and Plans

Site maps and figures are listed in Table 2-3. Site Plans and resource documents are listed in Table 2-4.

Table 2-3. Project Site Maps and Figures

Location/ Figure No	Map Name	Purpose and Description	Status
Attachment K	Preliminary Site Plans	Provide detail on existing site structures and roads, and proposed facility design	Draft
Attachment K	Topographic Maps	Identify the existing slope and grade	Complete
Section A.2.a.1 Figure 2-1	High Top and Ostrea Project Location Map	Project Location	Complete
Section A.2.a.1 Figures 2-2; Attachments A, B, C, D, F, H, L	High Top Project Overview Map	Overview of Project Boundaries	Complete
Section A.2.a.1 Figure 2-3; Attachments A, B, C, D, F, H, L	Ostrea Project Overview Map	Overview of Project Boundaries	Complete
Section A.2.a.3 Figure 2-5; Attachment A	High Top Parcel Map	Parcels located in the Project Site Control Boundary	Complete
Section A.2.a.3 Figure 2-6; Attachment A	Ostrea Parcel Map	Parcels located in the Project Site Control Boundary	Complete
Section 4.B Figure 4-1	High Top Solar Project Geology Map	Regional geology	Complete
Section 4.B Figure 4-2	Ostrea Solar Project Geology Map	Regional geology	Complete
Part 4 Earth Figure 4-3	High Top Geological Hazards and Critical Aquifer Recharge Areas Map	The Yakima County map of county identified geological hazards and critical aquifer recharge areas.	Complete
Part 4 Earth Figure 4-4	Ostrea Geological Hazards and Critical Aquifer Recharge Areas Map	The Yakima County map of county identified geological hazards and critical aquifer recharge areas.	Complete
Part 4 Water Quality Stormwater Runoff Figure 4-5	High Top Hydrologic Velocity	Preliminary Hydrologic & Hydraulic Assessment against the proposed landscaping and construction changes	Complete
Part 4 Water Quality Stormwater Runoff Figure 4-6	Ostrea Hydrologic Velocity	Preliminary Hydrologic & Hydraulic Assessment against the proposed landscaping and construction changes	Complete

Location/ Figure No	Map Name	Purpose and Description	Status
Part 4 Traffic and Transportation Figure 4-7	High Top Proposed Solar Panel Fields and Roads	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-8	High Top North Proposed Solar Panel Field Road Access	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-9	High Top Proposed South Solar Panel Field Road Access	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-10	High Top Proposed Substation and Material Laydown Area	Proposed Substation and Material Laydown Area	Draft
Part 4 Traffic and Transportation Figure 4-11	High Top Proposed SR-24 Entrance Road	Entrance roads	Draft
Part 4 Traffic and Transportation Figure 4-12	Ostrea Proposed Solar Panel Fields and Roads	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-13	Ostrea West Proposed Solar Panel Field Road Access	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-14	Ostrea East Proposed Solar Panel Field Road Access	Solar panel fields and access roads	Draft
Part 4 Traffic and Transportation Figure 4-15	Ostrea Proposed SR-24 Entrance, Substation, BESS, and Material Laydown Area	Proposed Substation and Material Laydown Area	Draft
Part 4 Traffic and Transportation Figure 4-16	Recommended Gradation of Crushed Stone	Recommended crushed stone gradations	Complete
Attachment A	High Top Project Zoning Map		Complete
Attachment A	Ostrea Study Area Zoning Map		Complete
Attachments B, F	High Top Soil Map Units in the Study Area		Complete

Location/ Figure No	Map Name	Purpose and Description	Status
Attachment B	High Top Rare Plant Survey Results		Complete
Attachments B, F	Ostrea Soil Map Units in the Study Area		Complete
Attachment B	Ostrea Rare Plant Survey Results		Complete
Attachment C	High Top Elk Wintering Area.		Complete
Attachment C	High Top Wildlife Observations.		Complete
Attachment C	High Top Wildlife Survey Results		Complete
Attachments C, L	Habitats Present in the High Top Study Area		Complete
Attachment C	Ostrea Elk Wintering Area		Complete
Attachment C	Ostrea Wildlife Observations		Complete
Attachment C	Ostrea Wildlife Survey Results		Complete
Attachments C, L	Habitat Types Present in the Ostrea Study Area		Complete
Attachment D	Survey Area		Complete
Attachment D	Hydric Soils, NWI/NHD Data, and FEMA Floodplains		Complete
Attachment D	Survey Results		Complete
Attachment D	Ostrea Survey Area		Complete
Attachment D	Ostrea Hydric Soils, NWI/NHD Data, and FEMA Floodplains		Complete
Attachment D	Ostrea Survey Results		Complete
Attachment D	Ostrea Permanent Wetland Crossings		Complete
Attachment F	High Top DAHP Predictive Model Map of High Top Study Area.		Complete
Attachment F	High Top Cultural Resources Field Results for the High Top Study Area		Complete
Attachment F	DAHP Predictive Model Map of Ostrea Study Area.		Complete
Attachment F	Cultural Resources Field Results for the Ostrea Study Area		Complete

Table 2-4. Project Plans

Plan	Description	Submittal Timing	Agency
CMP	The CMP governs construction operations on site for the duration of the Construction Phase of the Project. The CMP addresses the primary site preparation and construction phases and is based generally on identified mitigation measures.	90 days prior to site preparation	EFSEC
Construction Schedule	The Construction Schedule will outline construction phasing and timing.	90 days prior to site preparation	EFSEC
Erosion and Sedimentation Control Plan (ESCP)	The ESCP will manage construction related ground disturbances and will include applicable BMPs to control and minimize erosion and sedimentation.	90 days prior to discharging stormwater from construction activities	EFSEC and Ecology
Vegetation Management Plan	The Vegetation Management Plan outlines vegetation management activities during construction and operation and identifies noxious weed control methods to be employed during construction and O&M.	90 days prior to site preparation; With ASC	Yakima County Noxious Weed Board
Habitat Restoration and Mitigation Plan	The Habitat Restoration and Mitigation Plan will identify the required mitigation and reclamation goals, implementation plans, reclamation for temporary and long-term disturbance, the timing for restoration and the monitoring plan. The plan will address the requirements of YCC 16C.11.070 and WAC 463-60-332(3).	90 days prior to site preparation	Consultation with EFSEC staff and WDFW
Initial Site Restoration Plan	Per WAC 463-72-040, the Applicant will develop an Initial Site Restoration Plan. The plan will address site restoration occurring at the conclusion of the Projects' operating life, or in the event the project is suspended or terminated during construction or before it has completed its useful operating life. The plan shall parallel a decommissioning plan, if such a plan is prepared for the project. The plan will identify, evaluate, and resolve all major environmental and public health and safety issues reasonably anticipated. The plan will describe the process used to evaluate the options and select measures that will be taken to restore or preserve the site or otherwise protect all segments of the public against risks or danger resulting from the site. The plan will include a discussion of economic factors regarding the costs and benefits of various restoration options versus the relative public risk and will address provisions for funding or bonding arrangements to meet the restoration or management costs. The objective of the plan will be to restore the site to	90 days prior to site preparation	EFSEC and Ecology

Plan	Description	Submittal Timing	Agency
	approximate pre-Project condition or better. The plan will include provisions for removal of the solar panels and racking system, foundations, cables, and other facilities to a depth of four feet below grade, and restoration of any disturbed soils to the pre-construction condition.		
Discovery of Archaeological Resources and Inadvertent Discovery Plan	This plan describes protocols to be implemented if, during the course of construction, cultural resources (i.e., precontact sites, historic sites, or shell or bone, isolated artifacts or other features) are discovered. This plan will include protocols for notification, evaluation, and treatment of any archaeological or human remains that might be discovered during construction.	Prior to site preparation	DAHP
Preconstruction Survey and Cultural Resources Avoidance Plan	This Plan outlines survey methodology for pre-construction cultural surveys, if required, in portions of the MPEs not yet surveyed (e.g., new or modified staging areas, or other work areas). The plan will also outline avoidance mechanisms for Environmentally Sensitive Areas, if applicable, for the duration of the Project.	90 days prior to site preparation	DAHP
Construction Stormwater General Permit (CSWGP)	The CSWGP is required for construction activities that result in the disturbance of one or more acres, as well as disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb one acre or more. Permit application is in the form of a Notice of Intent. The CSWGP requires an ESCP and a SWPPP.	The NOI must be submitted at least 90 days before discharging stormwater from construction activities and prior to the date of the first public notice as outlined in S2.B of the CSWGP.	Ecology
Construction Stormwater Pollution Prevention Plan (SWPPP)	The construction SWPPP will outline planned BMPs to mitigate, reduce, and remove the potential for stormwater runoff from construction discharging from the site. The SWPPP will meet federal, state, and local requirements. Chapter 7 of the 2019 Stormwater Management Manual for Eastern Washington (SWMMEW) will be used to provide guidance for planning, designing, and implementation of stormwater management practices tailored specifically for construction projects.	90 days prior to discharging stormwater from construction activities	Ecology
O&M SWPPP	The O&M SWPPP will outline protocols and BMPs for stormwater runoff, flooding, and erosion during O&M. The O&M SWPPP will follow Ecology's SWPPP template and ensure compliance with state and federal water quality standards. The	90 days prior to discharging stormwater from construction activities	Ecology

Plan	Description	Submittal Timing	Agency
	2019 SWMMEW will be used for guidance for planning, designing, and implementation of stormwater management practices.		
Traffic Control Plan	The Traffic Control Plan will be prepared in consultation with WSDOT for traffic management during improvement of highway access. This plan will contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and will be in accordance with 23 CFR §655 Subpart F.	90 days prior to site preparation	WSDOT
Construction Fire Control Plan/Operation Fire Control Plan	The Fire Control Plan will be developed in consultation with the Yakima County Fire Marshal. The plan will include site specific BMPs for fire control and prevention during construction and O&M.	90 days prior to site preparation	Consultation with the Yakima County Fire Marshal
Construction/O&M Emergency Plan	The Construction/O&M Emergency Plan will include consideration of the following, in a level of detail that is commensurate with the nature and probability of risk: a) medical emergencies, b) O&M emergencies, c) site evacuation, d) fire protection and prevention, e) flooding, f) extreme weather abnormalities, g) earthquakes, h) volcanic eruption, i) facility blackout, j) hazardous materials spills, k) terrorism, sabotage, or vandalism; and l) bomb threats.	90 days prior to site preparation	Consultation with Yakima County Sheriff's Office and the Yakima County Fire Marshal
Construction/O&M Health and Safety Plan	The Construction/O&M Health and Safety Plan will describe the health and safety hazards at the Project during O&M, preventative measures, and procedures to take when accidents occur.	90 days prior to site preparation	Consultation with Yakima County Sheriff's Office and the Yakima County Fire Marshal
Environmental Health Plan	The Environmental Health Plan will address on-site temporary and permanent sanitary wastes during construction and during O&M of the Projects. In addition, the Environmental Health Plan will focus on the identification, removal, and off-site transportation and disposal of any hazardous material contamination and residuals on the property of the proposed Project site.	90 days prior to construction	Yakima County Health District

Plan	Description	Submittal Timing	Agency
Construction and O&M Spill Prevention, Control and Countermeasures (SPCC) Plan	Per WAC 463-60-205, a construction and O&M SPCC will be developed for each Project. The SPCC will be consistent with requirements of 40 CFR Part 112 as well as WAC 463-60-205. The SPCC will describe spill prevention and control measures to be employed regarding accidental and/or unauthorized discharges or emissions. Preventive procedures and rapid response measures will address/prevent potential water quality issues.	Prior to site preparation	Ecology
Master Dust Control Plan	The Master Dust Control Plan will outline methods to mitigate fugitive dust emissions from any work that would disturb soil stability or cover, or otherwise cause fugitive dust emissions. within the MPEs.	The plan will be submitted 15 days prior to commencement of any work that would disturb soil stability or cover, or otherwise cause fugitive dust emissions. Within 5 days of receipt of a dust control plan, the YRCAA will review the plan and notify the submitting party of its adequacy, request additional information, or propose modifications to the plan.	YRCAA

B. Federal and State Requirements

Table 2-5 lists the applicable federal and state statutes, rules and permits as required by WAC 463-60-297. Relevant local statutes and requirements are discussed in Parts 3 and 4, and the individual attachments.

Table 2-5 List of Applicable Federal and State Permits and Regulations

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	Application Section
Federal		

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	Application Section
Air Quality	U.S. Environmental Protection Agency (EPA) Clean Air Act (CAA) (40CFR 111)	Part 4 Air Quality
Threatened or Endangered Species	USFWS Endangered Species Act (ESA) of 1973 (16 USC, Section 1531, et seq.) Section 7, 9, and 10 Consultation under the ESA	Attachment B and C
Migratory Birds	USFWS Migratory Bird Treaty Act (16 USC, 703-711)	Attachment C
Eagles	USFWS Bald and Golden Eagle Protection Act (16 CFR 668-668c) Eagle permit regulations (50 CFR 22)	Attachment C
Waters of the U.S. (WOTUS)	USACE, Seattle District Clean Water Act (CWA) of 1972 (40 CFR 230) Section 404	Attachment D
State of Washington		
State Environmental Policy Act (SEPA)	Revised Code of Washington (RCW) 43.21C, Washington Environmental Policy Act WAC 197-11, Washington Department of Ecology (Ecology) SEPA Rules, which establish uniform requirements for compliance with SEPA	ASC and Attachments
Energy Site Certification	Energy Facility Site Evaluation Council RCW 80.50 Energy Facilities – Site Locations	Site Certification Agreement
Air Operations Permit	Yakima Regional Clean Air Agency (YRCAA) (in partnership with Ecology) WAC 173-400-040(3) Fallout WAC 173-400-040(4–4a) Fugitive emissions WAC 173-400-040(9)(a) Fugitive Dust WAC 173-400 General Regulations for Air Pollution Sources WAC 463-62-070 requires that energy facilities meet all federal and state air quality laws and regulations mentioned above, and WAC 463-78 establishes adoption of these requirements by EFSEC WAC 173-460 Diesel Engine Exhaust Particulate A Master Dust Control Plan must be submitted to and approved by the YRCAA in advance of any construction activities.	Part 4 Air Quality

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	Application Section
Noise Control	Ecology RCW 70.107, Noise Control; WAC 173-58, Sound Level Measurement Procedures WAC 173-60, Maximum Environmental Noise Levels; WAC 463-62-030, Noise Standards	Part 4 Noise, Light, Glare, and Aesthetics
Odor Regulations	WAC 173-400-040	Part 4 Noise, Light, Glare, and Aesthetics
Electrical Construction Permit	Washington Department of Labor and Industries WAC 296-746A, Washington Department of Labor and Industries Safety Standards—Installing Electrical Wires and Equipment—Administration Rules	Section 2.A
Land Use	Growth Management Act of the State of Washington (RCW Chapter 36.70A)	Part 4 Land Use, Natural Resource Lands and Shoreline Compatibility, Attachment A
Fish and Wildlife	WDFW WAC 220-610, defines State species status and protections WAC 232-12, WDFW Permanent Regulations	Part 4 Animals, Attachment C
Water Quality Storm Water Discharge	Ecology RCW 90.48, Water Pollution Control Act, establishes general stormwater permits for the Ecology National Pollutant Discharge Elimination System Permit Program WAC 173-201A, Ecology Water Quality Standards for Surface Waters of the State of Washington, which regulates water quality of surface waters CWA of 1972 (40 CFR 230) Section 404	Part 4 Water Quality (Stormwater Runoff)
Archaeology and Historic Preservation	Washington State Departments of Archaeology and Historic Preservation RCW 27.53, Archaeological Sites and Resources	Part 4 Archaeological and Historical Resources and Cultural Resources, Attachment F

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	Application Section
Transportation	WSDOT WSDOT General Permit Oversize and Overweight Permit	Part 4 Traffic and Transportation

B.1. Earth and Ground Disturbance

B.1.a. Soils and Slopes

Soil types	**High Top** Bakeoven very cobbly silt loam 0 to 30 percent slopes Finley cobbly fine sandy loam, 0 to 5 percent slopes Harwood-Burke-Wiehl very stony silt loams, 15-30 percent slopes Kiona stony silt loam, 15 to 45 percent slopes Moxee silt loam, 2 to 15 percent slopes Moxee cobbly silt loam, 0 to 30 percent slopes Ritzville silt loam, basalt substratum, 0 to 5 percent slopes Ritzville silt loam, basalt substratum, 5 to 15 percent slopes Selah silt loam, 8 to 15 percent slopes Willis silt loam, 2 to 5 percent slopes Willis silt loam, 8 to 15 percent slopes **Ostrea** Finley fine sandy loam, 0 to 5 percent slopes Kiona stony silt loam, 15 to 45 percent slopes Moxee silt loam, 2 to 15 percent slopes Scooteney cobbly silt loam, 0 to 5 percent slopes Selah silt loam, 8 to 15 percent slopes Shano silt loam, 2 to 5 percent slopes Starbuck silt loam, 2 to 15 percent slopes Starbuck-Rock outcrop complex, 0 to 45 percent slopes Warden silt loam, 8 to 15 percent slopes Willis silt loam, 2 to 5 percent slopes Willis silt loam, 8 to 15 percent slopes
Steepest slope	**High Top** 35 percent **Ostrea** 43 percent
Range of Slopes	**High Top** Project Site Control Boundary 0 to 35 percent MPE 1 to 16 percent **Ostrea** Project Site Control Boundary 0 to 43 percent MPE 1 to 21 percent

B.1.b. Demolition, Grade and Fill

Would any demolition or renovation occur during construction?	
☒ **No**	☐ **Yes**
	Method:
	Waste Use or Disposal site:

Would any demolition or renovation occur during operation?	
☒ **No**	☐ **Yes**
	Method:
	Waste Use or Disposal Site:

Would any grade, fill, or excavation in upland areas occur during construction?		
☐ **No**	☒ **Yes**	
	☒ Grading High Top	Cubic yards proposed: 165,000
	☒ Grading Ostrea	Cubic yards proposed: 225,000
	☒ Filling (import material to site)	Source of fill: If required, the source of fill would be detailed in the Construction Plans and Specifications which would be provided to EFSEC for approval at least 90 days prior to site preparation.
	☐ Excavating (Export material off site)	Cubic yards proposed: N/A
		Disposal site or use: N/A

Would any grade, fill, or excavation in upland areas occur during operation?		
☒ **No**	☐ **Yes**	
	☐ Grading	Cubic yards proposed:
	☐ Filling (import material to site)	Cubic yards proposed:
		Source of fill:
	☐ Excavating (Export material off site)	Cubic yards proposed:
		Disposal site or use:

Is fill or excavation proposed within surface waters, wetlands, or frequently flooded areas?		
☐ **No**	☒ **Yes (Ostrea only)**	
	☒ Fill (Ostrea only)	Cubic yards: approximately 0.1 cubic yards for the permanent placement of culverts at ephemeral channel crossings of the east-west access road in the Ostrea MPE
	☐ Excavation/ Dredging	Cubic yards: N/A
	Describe area(s) where this would occur: Ostrea: The east-west access road that parallels the existing transmission line right-of-way crosses five ephemeral channels that run north-south. See Attachment D, Ostrea Wetland Delineation Report. The Project will apply for a Nationwide Permit (NWP) for these crossings.	

B.2. Surface Types and Acreage

Project Site Areas		Acreage		
		Current[a]	**Disturbed During Construction[b]**	**Post Construction[c]**
Roads, buildings, and other impervious surfaces		0	TBD	High Top Facilities: 5.0 Concrete Pads: TBD Ostrea Facilities: 8.2 Concrete Pads: TBD
Wetlands	Emergent wetland	0	0	0
	Scrub Shrub wetland	0	0	0
	Forested wetland	0	0	0
	Open Water *do not include any area already listed in previous categories*	0	0	0
Vegetated Uplands	Agricultural	0	0	0
	Cheatgrass dominated pasture and mixed environs	High Top 856.7 Ostrea 391.5	High Top 797.7 Ostrea 363.2	High Top 551.3 Ostrea 292.1
	Crested wheatgrass dominated pasture and mixed environs	High Top 0 Ostrea 318.3	High Top 0 Ostrea 215.3	High Top 0 Ostrea 128.5-
	Disturbed/Reclaimed	High Top 29.3 Ostrea 12.7	High Top 8.0 Ostrea 0.2	High Top 0.6 - Ostrea 0.1
	Shrub-steppe	High Top 225.5 Ostrea 398.2	High Top 119.4 Ostrea 231.2	High Top 6.8 - Ostrea 115.0
	Other Vegetated	High Top 0 Ostrea 0	High Top 0 Ostrea 0	High Top 0 Ostrea 0

Project Site Areas	Acreage		
	Current[a]	Disturbed During Construction[b]	Post Construction[c]
Unvegetated *such as rock, earth, or fill*	NA	NA	NA
Other:	NA	NA	NA
Ephemeral Channels	High Top 2.5 Ostrea 2.3	High Top 1.3 Ostrea 1.3	High Top 0 Ostrea < 0.1
TOTAL:	High Top 1,114.0 Ostrea 1,123.0	High Top 926.2 Ostrea 811.3	High Top 563.7 Ostrea 535.7

[a] Current equals the area in the Study Area.
[b] Disturbed During Construction equals the area in the Maximum Project Extent. The final Project Footprint will be smaller than the MPE.
[c] Post Construction equals the long-term disturbance areas (panels, access roads, and facilities)

B.3. Plants and Habitats

Are there any plants or habitats present on the site?			
☐ **None**	☒ **Yes** See the Rare Plants Survey Report (Attachment B) for each Project for a more detailed summary of the plants observed within the Study Area. See Appendix A of each Rare Plants Survey Report for a detailed list of species observed in each Project Study Area. The habitats observed within the Study Area are described in the General Wildlife Surveys Report (Attachment C).		
	Deciduous trees: *such as alder, maple, aspen*		
	☒ **No**	☐ **Yes**	
		Specify:	
	Evergreen trees: *such as fir, cedar, pine:*		
	☒ **No**	☐ **Yes**	
		Specify:	
	Shrubs, grass, pasture		
	☐ **No**	☒ **Yes**	
		Specify: Cheatgrass, tumble mustard, flixweed, blue mustard, crested wheatgrass, western wheatgrass, squirreltail, bindweed, and redstem stork's bill.	
	Shrub-steppe: *such as sage brush, native grasses*		
	☐ **No**	☒ **Yes**	
		Specify: Dominant species observed on site include native species including Indian ricegrass, needle and thread grass, Sandberg bluegrass, yellow rabbitbrush, big sagebrush, longleaf phlox, Carey's balsamroot, and slender hawksbeard and non-native species including cheatgrass, blue mustard, and bindweed.	
	Wet soil plants: *such as cattail, buttercup, bulrush, skunk cabbage*		
	☐ **No**	☒ **Yes**	

		Specify: Wetlands are located outside of MPE. Wet soil plants observed outside the MPEs include reed canary grass and cattails. See the Wetland Delineation Report for each Project (Attachment D) for more details on wetland species.
	Water plants: *such as water lily, eelgrass, milfoil*	
	☒ **No**	☐ **Yes**
		Specify:
	Other vegetation types:	
	☐ **No**	☒ **Yes**
		Specify: Along the transmission line route and the associated access road is a disturbed/reclaimed vegetation community. Dominant vegetation includes crested wheatgrass, cheatgrass, flixweed, and bulbous blue grass. This area appears to have been reclaimed after installation of the transmission line.
	Other habitat types:	
	☒ **No**	☐ **Yes**
		Specify:
	Do you know of any at-risk plant species on the site*:* • *Threatened or endangered* • *Species of local importance* • *Federal or state listed* • *Federal or state priority* • *Tribal-specific plant resources present on the site where abundance is limited elsewhere*	
	☐ **None known**	☒ **Yes**

	Species Name	**Listing Status**
	Columbia milkvetch (*Astragalus columbianus*)	State Sensitive

Name the sources that were checked, or work done to identify the at-risk species: TRC conducted botanical surveys of the Study Areas. Survey results are summarized in the Attachment B, Rare Plants Report. Columbia milkvetch [redacted].

B.4. Forest Harvest

Is a forest practice or timber harvest proposed on any sites associated with the proposal?		
☒ **No**	☐ **Yes**	
	Acres proposed:	

B.5. Fish and Wildlife

Are there any animals that have been observed or are known to be on or near the site?

☐ None known	☒ Yes		**List species that use the site as a travel corridor.**
	Birds: *such as hawks, herons, eagles, songbirds*		
	☐ No	☒ Yes	The results of the desktop analysis and wildlife surveys conducted are summarized in Attachment C, General Wildlife Surveys Report for each Project. A wildlife connectivity analysis will be conducted and provided as an addendum to the General Wildlife Surveys Reports.
		Specify: The results of the wildlife surveys conducted are summarized in the General Wildlife Surveys Report in Attachment C for each Project.	
	Mammals: *such as deer, bear, elk, beaver*		
	☐ No	☒ Yes	The results of the desktop analysis and wildlife surveys conducted are summarized in Attachment C, General Wildlife Surveys Report for each Project. A wildlife connectivity analysis will be conducted and provided as an addendum to the General Wildlife Surveys Reports.
		Specify*:* The results of the wildlife surveys conducted are summarized in the General Wildlife Surveys Report Attachment C for each Project.	
	Fish: *such as bass, salmon, trout, herring, shellfish*		
	☒ No	☐ Yes	
		Specify:	
	Other: Reptiles		
	☐ No	☒ Yes	
		Specify: The results of the wildlife surveys conducted are summarized in Attachment C General Wildlife Surveys Report for each Project.	
	Do you know of any at-risk animal species on or near the site?		
	• *Threatened or endangered* • *Species of local importance* • *Federal or state listed*	• *Federal or state priority* • *Tribal-specific fish, plant, or wildlife resources present on the site where abundance is limited elsewhere*	
	☐ None known	☒ Yes	
		Species Name	**Listing Status**
		Sagebrush sparrow (*Artemisiospiza nevadensis*)	State Candidate

	Rocky mountain elk (*Cervus canadensis nelsoni*)	Priority Habitat and Species
	American badger (*Taxidea taxus*)	Species of Greatest Conservation Need
	Burrowing Owl (*Athene cunicularia*)	State Candidate
	Name the sources that were checked, or work done to identify at-risk species: TRC biologists conducted wildlife surveys in the Study Areas. Survey methodology, sources reviewed, and surveys results are summarized in the General Wildlife Surveys Report for each Project (Attachment C).	

B.6. Property/Site Designations

Provide information for these 7 items	
Comprehensive Plan (name, date, pertinent sections):	Yakima County Comprehensive Plan: Horizon 2040 Comprehensive Plan, effective Aug 29, 2017 The proposed Projects are consistent with the zoning regulations of YCC Title 19 as detailed in the Land Use Consistency Review (Attachment A)
Current Zoning:	The proposed Project site has a Comprehensive Plan land use designation of Agricultural Resource, and it is zoned AG District
Planning Area:	Agricultural Resource
Shoreline Master Plan:	N/A
Designation:	N/A
Closest Surface Water:	Nine ephemeral channels are located in the High Top Project Site Control Boundary; eighteen ephemeral channels occur within the Ostrea Project Site Control Boundary. Two of the channels are located in the High Top MPE, eight channels are located in the Ostrea MPE. The ephemeral channels in both Projects are tributaries of the unnamed ephemeral channel located south of SR-24 that flows southeast.
Distance:	High Top: The nearest ephemeral channel (S-2) is located in the northeast fence line of MPE. Project micro-siting will avoid stream channels impacts in the High Top MPE. See Attachment D for more information. Ostrea: The east-west access road crosses five ephemeral channels (S-5, S-6, S-7, S-15, and S-18). See Attachment D for more information. The Project will apply for a NWP for these crossings.
WRIA #:	37

Is the site within a mapped FEMA Flood Zone?	
☒ **No**	☐ **Yes**
	Zone name:

Is the site a designated Natural Resource Land? *designated by the county or city*	
☒ **No** ☐ **Yes**	**Forest land**

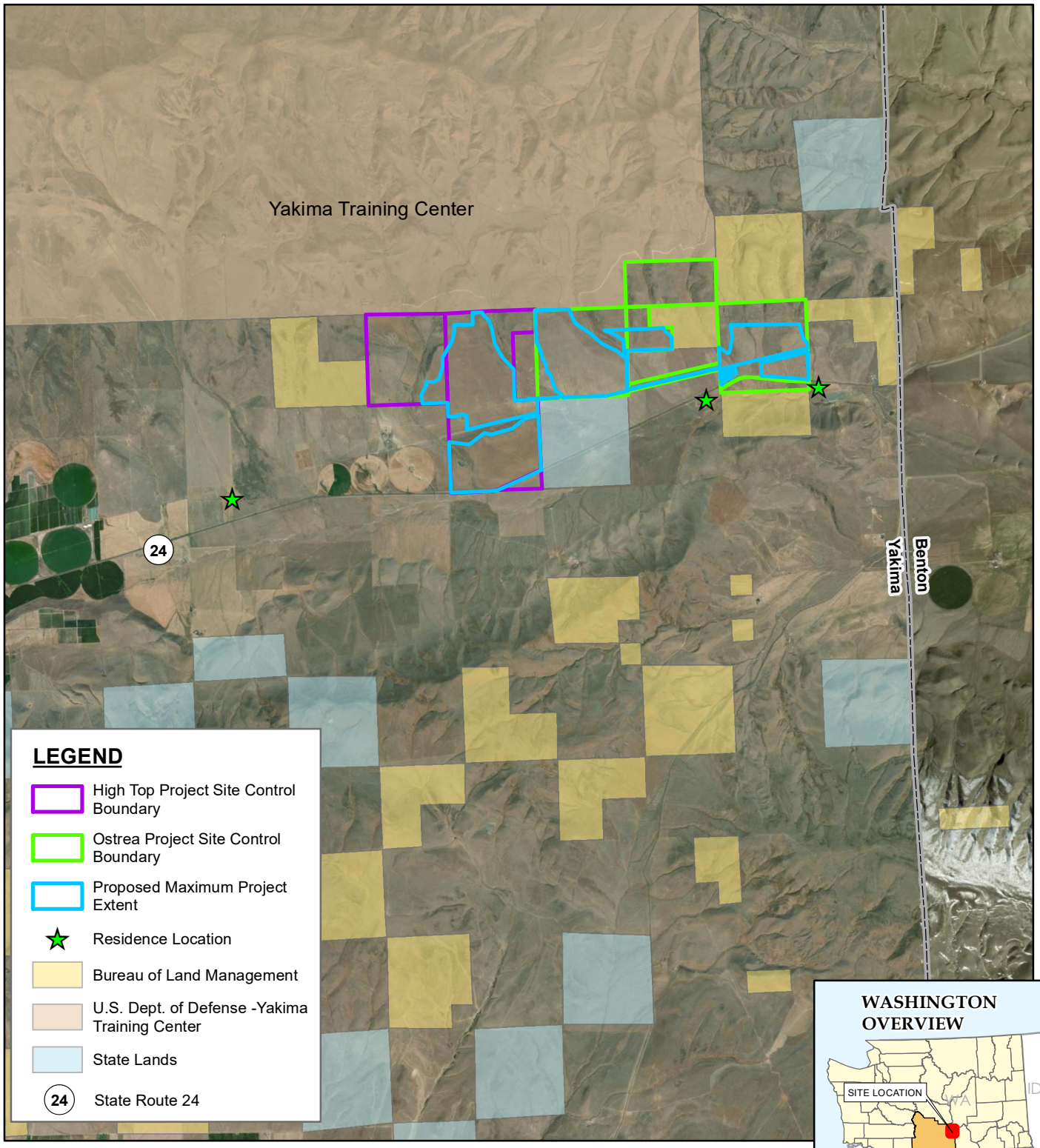
☐ No ☒ Yes	**Agriculture**	
☒ No ☐ Yes	**Mineral**	
Is the site, or land within 300 feet of the site, in a designated Critical Area? *designated by the county or city*		
☒ No ☐ Yes	**Wetland**	
☒ No ☐ Yes	**Frequently flooded**	
☒ No ☐ Yes	**Aquifer recharge**	
☐ No ☒ Yes	**Geologic hazard**	
☒ No ☐ Yes	**Fish/wildlife habitat conservation**	
☒ No ☐ Yes	**Other** *provide Critical Area name(s):*	
On a Local, State, or Federal Historic Register?		
☐ **No**	☒ **Yes**	The Midway-Moxee [No. 1] 115 kV Transmission Line within both Study Areas is eligible for listing on the National Register of Historic Places (NRHP) and the Washington Historic Register (WHR). The transmission line is situated within both of the Study Areas; but not within any of the MPEs and thus will not be impacted by the Projects.
	☒ **Listed**	☐ **Proposed**
Identified as a Local, State, or Federal Cultural Site?		
☐ **No**	☒ **Yes**	No archaeological sites have been identified in the high probability areas surveyed on the High Top Study Area. Additional cultural surveys were conducted in Spring 2022. The results will be included in an addendum to the cultural resources reports and provided to EFSEC. One archaeological site has been previously identified within the Ostrea Study Area and one newly recorded archaeological site was identified during the cultural surveys conducted in summer of 2021. Both of these sites are located over 100 feet from the nearest point of the MPE. See the Ostrea Cultural Resources Report, Attachment F, for more detail on the cultural resources in the Ostrea Study Area.
	☐ **Listed**	☒ **Proposed**
Are there tribes that may have or claim particular rights to all or part of the MPE?		
☐ **None known**	☒ **Yes**	
	Tribe	**Contact Made or Attempted, Who/When/method of contact** **Outcome of Contact including Right Asserted** (*if any*)
	Yakama Nation	Both Project Study Areas are within the ceded territory of the Yakama Nation. The Projects submitted letters to the Confederated Tribes and Bands of the Yakama Nation and requested an opportunity to meet with their staff (Jessica Lally) to discuss the proposed development plans and the coordination on cultural and archaeological field studies. On March 4, 2021, TRC conducted a virtual meeting with Jessica Lally to discuss any information or concerns related to the Project.

		[redacted]
	Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)	Both Project Study Areas are within the ceded territory of the CTWSRO. The Projects submitted letters to the CTWSRO February 12, 2021, to request information regarding the MPEs. On February 18, 2021, Christian Nauer, responded regarding the Tribes concerns on the Projects. [redacted]
Other applicable plans or local/state/federal designations that apply to the site?		
☒ None known	**☐ Yes**	
	Names:	

B.7. Land Uses

Identify the following.		
Existing Land Uses	Agricultural resource - Though the Study Areas have an agricultural land use designation; aerial images of the properties suggest that agricultural activity within the High Top Study Area ceased in 1996 and has not resumed in the succeeding 25 years. For Ostrea, portions of the parcels appear from aerial photography to have been used for agricultural activities beginning in 1962, and those activities ceased after 1982. Based on the historical aerial imagery, it is difficult to determine how many acres were used for crop production during those time frames. Limited cattle grazing still occurs within the Project Site Control Boundary for both Projects.	
Past Known Land Uses	Crop production and livestock grazing.	
Existing Adjacent Uses	**North:**	Yakima Training Center, a 327,000-acre area used for various military training exercises, including military training flights

	South:	Washington SR-24
	West:	Agriculture, Grazing, nearest residence is 2.5 miles west from the High Top Project Site Control Boundary, and 3.6 miles west from the Ostrea Project Site Control Boundary (Figure 2-7)
	East:	Grazing, nearest residence is approximately 850 feet east from the Ostrea Project Site Control Boundary and three miles east from the High Top Project Site Control Boundary (Figure 2-7).



TRC
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Issaquah, WA 98027
425-395-0010
www.trccompanies.com
TRC - GIS

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP AND OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

EXISTING ADJACENT USES TO THE HIGH TOP AND OSTREA PROJECTS

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	APRIL 2022
PROJ. NO.:	422984
FILE	Fig 2-7_High Top_and Ostrea Residence Location Map EFSEC.mxd

FIGURE 2-7

S:\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 2-7_High Top_and Ostrea Residence Location Map EFSEC.mxd -- Saved By: BTRACY on 4/4/2022, 15:22:16 PM

B.8. Utilities

Answer all yes/no options. Check boxes that apply and answer any items associated with the checked box.

B.8.a. Stormwater Management - Construction

Would there be stormwater runoff during construction?				
☒ **No**	☐ **Yes**			
	Source of runoff:	See Part 4. Water Quality (Stormwater Runoff)		
	Quantity of runoff:			
	Method of collection:	Erosion control measures and BMPs will be outlined in the SWPPP and associated ESCP and will be submitted to the EFSEC within 90 days prior to construction. See Part 4. Water Quality (Stormwater Runoff) for additional information		
	Drain/ discharge to:	☐ **Onsite**	☐ **Overland flow**	
			☐ **Engineered infiltration**	
			Describe:	
		☐ **Offsite**	☐ **Utility**	**Name:**
			☐ **Other**	
			Describe:	
	Is a new facility, system, or line required?			
	☒ **No**	☐ **Yes**		
		Describe and locate on site map*:*		

B.8.b. Stormwater Management - Operations

Would there be stormwater runoff during operations?			
☒ **No**	☐ **Yes**		
	Source of runoff	See Part 4 Water Quality (Stormwater Runoff)	
	Quantity of runoff		
	Method of collection	Erosion control measures and BMPs will be outlined in the SWPPP and associated ESCP and will be submitted to the EFSEC within 90 days prior to construction. See Part 4. Water Quality (Stormwater Runoff) for additional information	
	Drain/ discharge to	☐ **Onsite**	☐ **Overland flow**

			☐ **Engineered infiltration**	
			Describe:	
		☐ **Offsite**	☐ **Utility**	**Name:**
			☐ **Other**	
			Describe:	
	Is a new facility, system, or line required?			
	☒ **No**	☐ **Yes**		
		Describe and locate on site map:		

B.8.c. Energy

Would there be energy consumption?		
☐ **No**	☒ **Yes**	
	Electricity ⇒ Utility name: Electricity will be sourced from local provider through coordination with BPA	
	☐ **Natural gas ⇒ Utility name:**	
	☐ **Fuel ⇒ type:**	
	Is a new facility, generator, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on site map: Discussions for power delivery are ongoing.
Would there be energy production?		
☐ **No**	☒ **Yes**	
	☒ **Electricity ⇒ Receiving utility name:** Commercial discussions for delivery of the power from the Projects are in process with BPA	
	Is a new facility, generator, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on site map: High Top Length of new line: to be provided prior to construction Height of poles**:** to be provided prior to construction Ostrea Length of new line: to be provided prior to construction Height of poles**:** to be provided prior to construction

B.8.d. Water Use - Construction

Would there be water use during construction?	
☐ **No**	☒ **Yes**

	Gallons per day proposed: For both Projects: Water used for construction activities will include, but not be limited to fugitive dust control, drinking water, portable chemical toilet/hand washing facilities for construction workers, etc. Water use quantities will be calculated during the Project design process and provided to EFSEC prior to construction.	
	Water source: Water for construction will be procured by the engineering and procurement contractor. Water will be trucked in from an off-site source. Options include the City of Yakima or Marvin Valley Dust and Ice Products, which have both provided informal acknowledgements they can provide the water. Once the off-site water source is identified, the source will be provided to EFSEC.	
	☐ Utility	**Name:**
	☐ Surface water	**Name:**
	☐ Private well	
	☐ Private water system	**Name:**
	Is a new well, diversion, line, or connection required?	
	☒ No	**☐ Yes**
		Describe and locate on site map:

B.8.e. Water Use - Operation

Would there be water use during operation?		
☐ No	**☒ Yes**	
	Gallons per day: Panel washing will consist of approximately 1,200 gallons per MW per wash cycle with up to 2 wash cycles per year. For each Project (80 MW), panel washing will use an estimated 96,000 gallons per wash, and up to an estimated 192,000 gallons per year. A wash cycle may take approximately 25 to 50 days, resulting in a maximum instantaneous flow demand of approximately 10 gallons per minute (assuming all water is used in one 25-day wash, with 8 hours/day washing). Up to an estimated 10,000 gallons per year would be used for domestic uses as part of the O&M trailer.	
	Water source: Water will be trucked in from an off-site source. Options include the City of Yakima or Marvin Valley Dust and Ice Products, which have both provided informal acknowledgements they can provide the water. Once the off-site water source is identified, the source will be provided to EFSEC.	
	☐ Utility	**Name:**
	☐ Surface water	**Name:**
	☐ Private well	
	☐ Private water system	**Name:**
	Is a new well, diversion, line, or connection required?	
	☒ No	**☐ Yes**
		Describe and locate on site map:

B.8.f. Sanitary Waste Management

Would there be a need for sanitary waste management?		
☐ **No**	☒ **Yes**	
	Gallons per day: Flows would be less than 3,500 gallons per day. The specific amount will be determined prior to construction and provided to EFSEC. ..	
	Discharge to:	
	☐ **Utility**	**Name:**
	☒ **Septic system** Construction: The system will consist of portable chemical toilets that are periodically pumped out during construction and will not connect to an onsite septic system. O&M: A bathroom will be part of the O&M trailer for O&M personnel. This will result in the need to construct a permanent/ fixed on-site above ground sanitary sewer/septic system for O&M personnel.	
	☐ **Other**	
	Is a new system, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on a site map: The O&M trailer would have a new on-site septic system. The Projects will use less water than a residential septic system due to the limited number of permanent staff

B.9. Emergency Service Providers

Identify the providers for the following services for the project site:	
Police Services:	Yakima County Sheriff
Fire Services:	Yakima County Fire Department
Other Emergency Services:	Emergency Medical Services would be provided by either Yakima County Fire Department and Yakima County Sheriff

B.10. Transportation

Will transportation methods other than roads/motorized vehicles be used to access the site? (air, water, rail, pedestrians, bicycles, etc.)	
☒ **No**	❑ **Yes**
	Describe:
What are the arterial roads serving the area of the project site?	Washington SR-24.

Vehicular traffic generated by project:				
Round trips per day			**Peak hour trips/day**	**Timing of peak hours**
During:	**Vehicles**	**Heavy equipment/material deliveries**		
Construction	Estimated at 150 max	Up to 20 at max	Approximately 50	10 am to 3 pm
Operation/use	1-2	0	TBD	TBD

Are new public roads proposed?	
☒No	**☐ Yes**
Are any public road improvements proposed?	
☐ No	**☒ Yes**
	Location/description: For each Project, the approach off of SR-24 onto the private road, which accesses the individual MPEs, will be improved for Project safety and access. An additional approach off SR-24 on the southwest corner of the High Top MPE will be added if required to access potential panels proposed on the west side of the ephemeral channel. Based on consultation with WSDOT, the Projects will be required to obtain a General Permit from WSDOT to perform the access upgrade work. The Projects will continue to consult with WSDOT to ensure the approach meets all applicable federal and state codes and standards. As required a Traffic Control Plan will be prepared and submitted to WSDOT in the General Permit application as well as to EFSEC at least 90 days prior to site preparation. The Projects will also adhere to the Yakima County public road entrance requirements per Yakima County Building Codes, Fire Codes, and other county requirements as part of the Building Permit.
Parking	**Existing spaces:** None
	Spaces after project: Six for each Project

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PART 3. Screening Questions

1. Earth

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

1.a. Screening Question – Earth

Will the project occur in an area that contains steep slopes, unstable soils, surface indications or history of unstable soils; or other geologic hazard with the potential of landslide, mass wasting erosion, faulting, subsidence, or liquefaction, or identified in local ordinance as a designated geologic hazard critical area?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Explain below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Potentially geologically hazardous areas identified by Yakima County are located in small portions of each MPE and include "Alluvial Fan Intermediate Risk" and "Oversteepened Slopes Intermediate Risk."

Because Yakima County data indicates the presence of potentially geologically hazardous areas, a Section 4 analysis was prepared, which details potential issues related to geology, soils, and seismic hazards, location of these areas in relation to the MPE, and potential mitigation, if required. See part 4 Detailed analysis – Earth.

As you complete the Detailed Analysis in Part 4 - 1. Earth, make sure you consider and address:

How the project could/would:

- Disturb the area(s)
- Be at risk from the area(s) in their current condition
- Be at risk from the area(s) if it degrades further
- Increase water flow over or through the area(s)

And considering other relevant factors addressed in:

- WAC 463-60-265: describe the means to be employed for protection of the facility from earthquakes, volcanic eruption, flood, tsunami, storms, avalanche or landslides, and other major natural descriptive occurrences.
- WAC 463-60-302, (1) and (2)
- WAC 463-62-020 regarding seismicity standards

2. Air Quality

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

2.a. Screening Question – Air Quality

Will the project have:		
• Indoor or outdoor air pollution emissions including dust, during operation, other than those related to vehicle emissions • The potential to produce an odor nuisance • Dust during construction	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Air quality impacts could occur from construction and O&M related activities based on the use of generators, the increase in traffic, the use of heavy equipment during construction, and fugitive dust. Based on the potential for air quality impacts, a Section 4 analysis was prepared, which details potential issues related to air quality, potential impacts, and potential mitigation, if required. See Part 4 Detailed Analysis – Air Quality.

As you complete the Detailed Analysis in Part 4 - 2. Air Quality, make sure you consider and address:

- Health hazards
- Area's existing/potential air quality issues (failure to meet standards, haze, aesthetics, etc.)
- Proximity to populated areas, recreational areas, or other areas of sensitivity

See guidance regarding information required by WAC 463-60-312.

And considering other relevant factors addressed in:

- WAC 463-62-020 regarding air quality laws and regulations
- WAC 463-60-225 (1) through (3)

3. Water Quality – Wetlands and Surface Waters (Buffers, Fill, Dredging, & Sedimentation)

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.a. Screening Question – Water Quality (Wetlands and Surface Waters)

Will the proposal involve any activities on a steep slope, area of unstable soils, or within a surface water body, wetland, or within 300 feet of those areas, within a floodplain, or an area known to flood?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Wetland delineations were conducted within the High Top Project Site Control Boundary on December 4 and 5, 2018; July 1, 2020; and May 2 to 9, 2021. Wetland delineations were conducted within the Ostrea Project Site Control Boundary July 1, 2020, and May 9 to 17, 2021. Wetland delineations were conducted in accordance with the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0, 1987 United States Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1, and subsequent guidance documents.

Based on field data collection, one wetland and several ephemeral channels were identified within the Study Area for each Project. The ephemeral channels were classified on non-forest land as Ns (Non-Fish Seasonal; formerly Type 5) streams pursuant to DNR and as Type 5 streams pursuant to the YCC (Title 16C Critical Areas Ordinance, Chapter 16C.06.06 Stream, Lake and Pond Typing System)". Yakima County does not have any buffer requirements for Type 5 streams (YCC 16C.06.06).

High Top: Nine ephemeral channels are located in the High Top Project Site Control Boundary. Two of these channels are located in the High Top MPE. The USACE has provided a No Permit Required Letter confirming no impacts to ephemeral channels from the Project based on the current Proposed Project Footprint.

Ostrea: Eighteen ephemeral channels occur within the Ostrea Project Site Control Boundary. Eight of these channels are located in the Ostrea MPE. Temporary and permanent impacts to these channels will be covered under a USACE NWP.

Based on the potential for water quality impacts, a Section 4 analysis was prepared, which details potential issues related to water quality, potential impacts, and potential mitigation, if required. See Part 4 Detailed Analysis – Water Quality (Wetlands and Surface Water) and Attachment D

As you complete the Detailed Analysis in Part 4 – 3. Water Quality (Wetlands and Surface Waters), make sure you consider and address:

- Erosion/erosion control
- Existing/potential water quality issues (temperature, turbidity, sedimentation, etc.)
- Loss of wetland/surface water functions and values (flood control, groundwater recharge, water quality, fish and wildlife habitat, aesthetics, recreation, etc.)
- Existing/potential flood risks

And considering other relevant factors addressed in:

- WAC 463-62-050 starts for wetland impact mitigation
- WAC 460-62-060-060 regarding water quality standards
- WAC 463-60-255, 463-60-322 (1-5), and 463-60-333

4. Water Quality – Wastewater Discharges

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	No	Yes	Yes	N/A

4.a. Screening Question – Water Quality (Wastewater Discharges)

Will the proposal discharge wastewater (septic systems, process waters, dairy waste, etc.) to onsite or offsite surface waters, wetlands, or the ground? (do not include discharges to utilities)	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

During construction, chemical portable toilets with secondary containment will be provided for construction employees. For O&M, a bathroom will be part of the O&M trailer for O&M personnel. The Projects will need to construct a permanent/ fixed on-site above-ground sanitary sewer/septic system for O&M personnel.

Large on-site sewage systems are permitted by the Washington State Department of Health (DOH [(WAC 246-272B]). A large on-site sewage system is designed to handle wastewater flows from 3,500 to 100,000 gallons per day. The Yakima Health District regulates and permits private sewage systems where a public sanitary or combined sewer is not available (YCC 12.05150 to 12.05.200). Type, capacities, location, and layout of private sewage disposal system shall comply with all recommendations of the DOH (YCC 12.05.170).

Because the proposed permanent/fixed on-site sewage/septic system would manage sanitary waste flows of less than 3,500 gallons per day, it is not considered a large on-site sewage system and would not require a permit from the Washington Department of Health, per WAC 246-272B. As a result, the proposed Project would comply with the applicable provisions under YCC 12.05.150 through 12.05.200 and the applicable permit requirements. The septic system will be permitted through the Yakima County Health Department and the Building Permit.

The first step in the sewage permitting process is a site and soil evaluation that will include assessing soils, slopes, cut banks, wells, surface waters (including irrigation and drainage ditches), driveways, easements, underground utilities, or anything that may affect the installation and/or operation of a septic system. Once this evaluation is complete and the results approved, the permit is submitted to the Yakima County Health District. The Yakima County Building Permit approval would depend on the septic system permit approval if a new septic system is proposed as part of the Project.

As the septic system will be installed by a licensed contractor, properly designed for site conditions, and constructed according to applicable codes and approved by Yakima County, no potentially significant effects on environmental health are anticipated or associated with the development of the sanitary facilities. Therefore, no Part 4 analysis is required.

As you complete the Detailed Analysis in Part 4 – 4. Water Quality (Wastewater Discharges), make sure you consider and address:

- Existing/potential water quality issues (nutrients, bacteria, metals, turbidity, temperature, etc.)
- Loss of wetland/surface water functions and values
- Discharge type, volume, potential contaminants, location, and method of discharge.
- Sole source aquifers

And considering other relevant factors addressed in:

- WAC 460-62-060 regarding water quality standards
- WAC 463-60-322 and 463-60-333.

5. Water Quality - Stormwater Runoff

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

5.a. Screening Question – Water Quality (Stormwater Runoff)

Does the proposal involve any potential sources of stormwater contamination from: ☐ Drainage from impervious surfaces ☒ Erosion from disturbed soils, lost vegetation, etc. ☐ Animal wastes ☐ Fertilizers or decomposing organic material ☐ Pesticides or other chemical usage Other _____	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects will be designed to avoid potential runoff and discharge to ephemeral channels located in and downgradient of the MPEs. In compliance with YCC 12.10.250, the Projects design will retain stormwater on-site while providing conveyance of upland flow in the existing natural drainages.

Given the low historical average precipitation in the area, the natural permeability of the upper soil horizon, and the micro-siting that will avoid steep slopes in the Project Footprint, infiltration of normal stormwater and snowmelt would occur within the MPEs. In addition, most of the MPEs would retain existing vegetation or be covered in gravel, allowing stormwater to infiltrate into the ground. The Projects will have impervious surfaces on-site which will include the solar panels, the O&M trailer, the substation, the parking area, and the concrete foundations for facilities (e.g., inverters). Minor changes to existing surface water runoff patterns would result from the installation of the Projects; however, natural drainage patterns shall be maintained.

A Part 4 analysis was prepared to provide more detailed information on surface-water runoff and infiltration, construction, and operation impacts. See Part 4 Detailed Analysis – Water Quality (Stormwater Runoff).

As you complete the Detailed Analysis in Part 4 - 5. Water Quality (Stormwater Runoff), make sure you consider and address:

- Existing/potential water quality issues (oil and grease, turbidity, sedimentation, nutrients, metals, and other pollutants)
- Loss of wetland/surface water functions and values

And considering other relevant factors addressed in:

- WAC 460-62-060 regarding water quality standards
- WAC 463-60-215 and 463-60-322

6. Water Quantity – Water Use

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

6.a. Screening Question – Water Quantity (Water Use)

Will the proposal involve a new withdrawal, diversion, retention, or use for water not received from a utility?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Water is required for the following Project purposes: onsite sewer/sanitary facilities, panel washing, and dust control. Water requirements for both construction and operation phases of the Project are small and are estimated up to approximately 202,000 gallons per year for each Project. Water will be trucked on-site from an off-site source. Options include the City of Yakima or Marvin Valley Dust and Ice Products which have both provided informal acknowledgements they can provide the water and have the adequate water rights. The engineering and procurement contractor will secure the off-site water source. Once the off-site water source is identified, it will be provided to EFSEC.

No potentially significant effects on either ground or surface waters are anticipated from the Projects, nor are the Projects anticipated to affect any local or regional water purveyor's resources or capacity to supply water. No effects on public services or utilities are expected. Therefore, no Part 4 analysis is required.

As you complete the Detailed Analysis in Part 4 – 6. Water Quantity (Water Use), make sure you consider and address:

- Changes in flow or volume
- Existing/potential water quantity/ availability issues (water right controversy, endangered aquatic species, high ground water table, etc.)

And considering other relevant factors addressed in:

- WAC 463-60-165 (1) and (3), 463-60-322 and 463-60-333

7. Water Quantity – Runoff, Stormwater & Point Discharges

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	Yes

7.a. Screening Question – Water Quantity (Runoff, Stormwater & Point Discharges)

Is the project likely to result in changes in flow or volume in any water body or aquifer? Consider changes in vegetation, blocking of recharge by new impervious surfaces, grading, filling, discharges, water use, etc.	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The proposed Project facilities, structures, and landscape changes to the MPEs would not contribute to significant increases in the flow rate or volume of discharge leaving the MPEs to any WOTUS or the state.

Impervious surfaces such as the angled solar panels, portions of the road development, fencing, an O&M trailer, and concrete pads would exist. Although the solar panels themselves are impermeable, they are small, disconnected from each other, and installed over the existing soil surface. Stretches of roads and turnouts will be constructed with crushed gravel and will traverse the MPEs. It is anticipated that stormwater will infiltrate into the ground before it can be discharged off site. There is no point discharge for stormwater runoff from the MPEs.

Any runoff resulting from abnormally heavy rains or snowmelt would be unlikely to enter any nearby channels but, if it did, channels would lead to a primarily dry unnamed channel south of the MPEs that parallels SR-24 as it flows eastward. Mitigation actions will be implemented during construction and include a variety of BMPs to minimize or preclude the potential for stormwater runoff exposed to construction activities. Mitigation actions include the preparation and implementation of a variety of plans including sediment and erosion control and construction stormwater pollution plans.

Neither Project is located in an area mapped by FEMA as a floodplain. There are several ephemeral channels located in both Project Site Control Boundaries that flow north to south toward an eastward flowing unnamed channel on the south side of SR-24. The substrates of the drainages are sandy, often with cobble, and in many sections packed with dried tumbleweed vegetation. Two ephemeral channels are located in the High Top MPE. On Ostrea, the east-west access road crosses several ephemeral channels within the power line corridor ROW. Construction access will be across several of the drainages on the eastern most parcel of the Ostrea MPE. The access road would follow the contours of the channel and would not change the natural drainage patterns and infiltration. Construction access

across ephemeral channels in the Ostrea MPE will be temporary and will be minimized. Any changes in the channel topography will be restored post-construction.

Based on the proposed site footprint and existing site conditions, the flow or boundaries of channels will not be changed or modified, therefore no Part 4 analysis is required. Mitigation will include the development of an ESCP, and SWPPPs as part of the obtaining a CSWGP,, Vegetation Management Plan, and construction BMPs that will be implemented prior to and during construction, as well as post-construction during O&M of the Projects.

As you complete the Detailed Analysis in Part 4 – 7. Water Quantity (Runoff, Stormwater & Point Discharges), make sure you consider and address:

- Potential loss of groundwater recharge
- Change in seasonal stream flow
- Existing/potential flood risks
- Existing/potential water quantity/ availability issues

And considering other relevant factors addressed in:

- WAC 463-60-215, 463-60-322 and 463-60-333

8. Plants

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

8.a. Screening Question – Plants

Will the project occur in or near an area with special status plants, (e.g. DNR natural heritage program or WDFW Priority Habitats and Species (PHS))?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects Areas include shrub-steppe habitat, which is considered a Priority Habitats and Species (PHS) by WDFW. However, a majority of both Study Areas have been converted from native shrub-steppe habitat, with evidence of agricultural use and plowing, and current grazing use with a low number of cattle present on both sites. Twelve special status plant species were identified as having potential to occur in the Study Areas based on each of the species range, habitat characteristics, and element occurrence locations, soils, topography, and elevation in the Study Areas. Based on the potential for these species to occur, a Part 4 detailed analysis and field survey was conducted. The results are summarized in Attachment B, High Top and Ostrea Rare Plants Reports. Additional rare plant surveys are being conducted in April 2022. April surveys results will be summarized in an addendum to the Rare Plants Reports and submitted to EFSEC.

As you complete the Detailed Analysis in Part 4 – 8. Plants, make sure you consider and address:

- Alteration/loss of fish/wildlife habitat
- Endangered or other at-risk plant species
- Changes to critical areas identified in part C.1.

And considering other relevant factors addressed in:

- WAC 463-60-332

9. Animals

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

9.a. Screening Question – Animals

Will the project occur in or near an area with migration areas, special status wildlife or habitats (e.g. WDFW Priority Habitats and Species (PHS)?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects include shrub-steppe habitat, which is considered a PHS by WDFW. However, a majority of the Study Areas have been converted from native shrub-steppe habitat, with evidence of agricultural use and plowing, and current grazing use with a low number of cattle present on both sites. In accordance with WDFW recommendations, desktop analyses, and initial field reconnaissance site visits were completed for the sites to identify species of concern with the potential to occur in the vicinity of the Study Areas, including federal- and state-listed and candidate species, state PHS, state Species of Greatest Conservation Need (SGCN), and raptors with the potential to nest within 0.5 mile of the MPE.

Based on the results of the desktop analyses, a Part 4 detailed analysis and field survey was conducted. The results are summarized in Attachment C, High Top and Ostrea General Wildlife Surveys Reports. A wildlife connectivity analysis will be conducted and submitted as an addendum to the General Wildlife Surveys Reports.

As you complete the Detailed Analysis in Part 4 – 9. Animals, make sure you consider and address:

- Alteration/loss of fish/wildlife habitat
- Endangered or other at-risk animal species
- Obstructions/barriers to the movement of fish and wildlife
- Noise, light, or glare
- Changes to critical areas identified in part C.1.

And considering other relevant factors addressed in:

- WAC 463-62-040 regarding fish and wildlife mitigation
- WAC 463-60-332

10. Energy and Other Natural Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

10.a.Screening Question – Energy and Other Natural Resources

Will the project, because of type, size, or design, require the consumption or removal of substantial quantities of natural resources including energy (electricity, petroleum, etc.), rock minerals, trees/wood, peat, etc. during either construction or operation?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects would not require the consumption or removal of substantial quantities of renewable or non-renewable natural resources during construction or operation. Natural resource impacts during construction would result from the installation of the solar array, potential BESS storage pad, associated electrical facilities, upgrades to the existing public road approach, and the development of the site access roads. A temporary concrete batch plant would be set up on-site during construction. Gravel, which is a non-renewable resource, would be used for the site access roads, and around the concrete foundations for the BESS storage pad, invertors, and other facilities for the Projects.

The solar panels are made from non-renewable silicon components. Additional natural resource use would be electricity and/or fuels to power construction and operational equipment/facilities. Quantities of gravel, fuel, and electricity consumed for the Projects would be typical or less than that of commercial construction facilities of a similar size and can be provided by the existing capacities of local service providers.

Because the Project would not require the consumption or removal of substantial quantities of non-renewable or renewable natural resources, a detailed analysis of energy/natural resources under Part 4 is not warranted. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 10. Energy and Other Natural Resources, make sure you consider and address:

- Existing/potential of resource supply not meeting demand
- Conservation methods
- Use of renewable vs. non-renewable resources

And considering other relevant factors addressed in:

- WAC 463-60-342 (1)-(4)

11. Waste Management

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	Yes

11.a.Screening Question – Waste Management

Will the project generate large quantities of waste during either construction or operation other than those listed as a discharge under D.3.WATER QUALITY or D.2.AIR QUALITY?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Waste generated during construction activities could include both hazardous and non-hazardous wastes. These would include, but not be limited to, discarded construction materials, packaging materials, damaged erosion control materials, wood forms for cast-in-place foundations, scrap metal, or unused wiring. Waste generated during O&M could also include hazardous and non-hazardous waste such as paper, food packaging, food scraps, residuals from repair and replacement of solar arrays and associated equipment, and battery replacement. Depending on the type of battery used in the BESS, batteries would need to be replaced every five to 20 years. Replacement of the solar array panels would be rare to infrequent as solar panel life is typically more than 30 years without significant loss of function. Component replacement is infrequent.

Materials that can be recycled, such as cardboard, paper, and metal would be recycled to the extent possible. Battery disposal would follow specific protocols for disposal of battery components at an approved facility for disposal or recycling. Temporary BMPs/control measures (i.e., channel crossing materials, sediment logs, etc. will be removed and disposed of properly at the end of construction. Wastes generated during construction and operation would be hauled away by an appropriate contractor, in accordance with applicable federal, state, and local regulations. Solar array disposal will be through the manufacturers per Washington State law (RCW 70A.510.010) which requires manufacturers of PV modules to provide a convenient and environmentally sound way to recycle all modules purchased after July 1, 2017.

In general, waste types and quantities from construction and O&M would be typical of any large-scale utility development relative to the total size of the Project Footprints. Therefore, no Part 4 analysis is required for Waste Management.

An Initial Site Restoration Plan will be developed for the Projects that will include provisions for removal of the solar panels and racking system, foundations, cables, and other facilities upon decommissioning.

As neither Project would generate large quantities of waste during construction or O&M, a detailed analysis of waste management under Part 4 is not warranted. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 11. Waste Management, make sure you consider and address:

- Landfill capacity
- Loss of resources
- Opportunities to reduce, reuse, or recycle waste

12. Environmental Health – Existing Site Contamination

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	Yes

12.a.Screening Question – Environmental Health (Existing Site Contamination)

Is there any evidence that the project site(s) contain(s) potentially hazardous materials including toxic chemicals, volatile gases or other poisonous or hazardous substances?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

A Phase I Environmental Site Assessment was completed for each Project following the American Society for Testing and Materials (ASTM) Standard Practice E1527-13 in September 2020. A second Phase I Environmental Site Assessment was completed for the revised larger Ostrea Project Site Control Boundary in January 2022.

The Phase I Environmental Site Assessment includes review of readily available historical information, site inspection, interviews with knowledgeable parties, and a regulatory records search. Recognized environmental conditions (RECs) are documented and defined as "The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property (i) due to release to the environment; (ii) under conditions that are indicative of a release to the environment; or (iii) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."

Ostrea

Based on the review of readily available historical information, site inspection, interviews with knowledgeable parties, and a regulatory records search, no RECs were identified within the Ostrea Project Site Control Boundary.

Based on the lack of RECs within the Ostrea Project, further detailed analysis of existing site contamination under Part 4 is not required. No adverse impacts to public health and safety, environmental health, or planned land uses are anticipated; therefore, no mitigation is anticipated to be required for this resource.

High Top

Based on the review of readily available historical information, site inspection, interviews with knowledgeable parties, and a regulatory records search, the assessment found two RECs within the High Top Project Site Control Boundary:

The first REC included small patches of apparent oil-stained soil and numerous unlabeled partially full and empty containers (i.e., 5-gallon buckets, 55-gallon drums, and other smaller containers) and storage tanks, including one tank that was cut open and empty; rubber tires, piles of drilling mud, household items, as well as several vehicles and abandoned equipment, including a water truck and drilling rig.

The second REC included a drilling rig, an abandoned vehicle-mounted crane (engine removed), three 55-gallon drums, 50-square feet of apparent oil-stained soil, and miscellaneous materials and trash.

Soil borings and test pits were conducted in the areas of the two identified RECs during the Phase I Environmental Site Assessment. In the results from the soil borings and test pits, it was noted that the compounds identified and observed included non-significant concentrations of gasoline and/or oil-related products in addition to low levels of metals. It was noted that these exceedances are generally typical of industrial farming activities, largely localized, and contained to areas of current or former equipment, drum, or material storage. It was observed that these compounds were evident with minor staining in some locations and appeared to be localized within the near-surface (zero to two feet in depth) soils. Based on field observations, it appears that these impacts do not reach deeper soil horizons due to the shallow thickness of overburden soil before encountering hard, massive basalt rock. In addition, groundwater was not observed in any boreholes or test pits during subsurface investigation; therefore, impacts to groundwater are not expected.

Although the RECs are located within the Project Site Control Boundary, they are outside of the MPE. No surface disturbance will occur within the boundaries of the RECs. Based on the lack of RECs within the High Top MPE, further detailed analysis of existing site contamination under Part 4 is not required. No adverse impacts to public health and safety, environmental health, or planned land uses are anticipated; therefore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 12. Environmental Health (Existing Site Contamination), make sure you consider and address:

- Public health and safety
- Environmental health (air, soils, ground water, surface waters, plants, and animals)
- Conflict /compatibility with planned land uses
- Include description of hazardous materials and the manner and extent of the contamination.

13. Environmental Health – Hazardous Materials

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

13.a.Screening Question – Environmental Health (Hazardous Materials)

Will the project involve the removal, use, or disposal of hazardous materials that involve toxic chemicals, asbestos, risk of fire or explosion, and/or spill or danger to public health and the environment?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

For the Ostrea Project, a BESS will be located at the site. For the High Top Project, a BESS may be located on the site. The BESS will consist of self-contained storage modules placed in racks and will include a cooling system; notably the BESS has the potential to be a flammable source if the lithium-ion system overheats. The proposed BESS will contain a fire suppression system in accordance with fire code and National Fire Protection Association (NFPA) Standards, specifically NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems." The system will include monitoring equipment and alarm systems with remote shut-off capabilities. The BESS will be mounted on a cement pad which will be encircled with a gravel buffer.

The Phase I Environmental Site Assessment for High Top identified several RECs in the Project Site Control Boundary for High Top. However, these RECs are located outside the High Top MPE and would not be impacted by Project construction or O&M.

Based on the potential for environmental health (hazardous materials) concerns, a Section 4 analysis was prepared, which details potential issues related to hazardous materials specifically related to the BESS systems, potential impacts, and potential mitigation, if required. See Part 4 Detailed Analysis – Environmental Health – Hazardous Materials.

As you complete the Detailed Analysis in Part 4 – 13 Environmental Health (Hazardous Materials), make sure you consider and address:

- Public Safety
- Environmental health (air, soils, ground water, surface waters, plants, and animals)
- Hazardous material sources, storage, identification, classification

And considering other relevant factors addressed in:

- WAC 463-60-352 (2) – (4), (6)

14. Land Use, Natural Resource Lands, & Shoreline Compatibility

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

14.a. Screening Question – Land Use, Natural Resource Lands, & Shoreline Compatibility

Will the proposal involve or result in any of the following (include likely future proposals that will occur as a result of this action, such as increased development from newly created lots or extension of services, etc.)? • Change in land use • Change in intensity of land use • Provide new or improved service to an area (e.g. transportation, utilities, entertainment, etc.)	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects would result in a change in land use by introducing new solar power generation facilities to currently undeveloped property in unincorporated Yakima County that is designated for agricultural use. The Project sites are currently active rangeland with a low number of cattle present. However, neither site has been used for crop production for 25 or more years and neither is currently irrigated. Cheatgrass is dominant in the previously plowed areas on the site and is not well-suited for livestock grazing year-round, particularly in the summer due to sharp awns on the plant.

Land use and potential development of the Project sites are governed by the general goals and policies in the Yakima County Comprehensive Plan (YCCP) and the zoning regulations and standards in Title 19 (Unified Land Development Code) of the YCC. The proposed Project sites have a Comprehensive Plan land use designation of Agricultural Resource, and both are zoned AG District. Although not an agricultural use of land on the property, the proposed project is a conditionally permitted use in the AG District (YCC 19.14.010, Table 19.14.1, Allowable Land Uses). For the Projects to be approved, the proposed use must be found to be consistent with the necessary findings required for approval of a Type 3 Conditional Use Permit, including consistency with adopted Comprehensive Plan policies. There are no shorelines on or near either Project site.

Each Project will generate a maximum of 80 MW of AC energy per hour to be delivered to the electric power grid. Construction of both Projects would help Washington meet its goal of 100% clean electricity supply as set forth in the CETA, passed by the Washington legislature in 2019 (SB 5116, 2019).

A Section 4 land use compliance analysis was prepared for each project, which details potential issues related to land use, compliance with land use regulations, and potential mitigation, if required. See Part 4 Detailed Analysis – Land Use, Natural Resource Lands & Shoreline Compatibility and Attachment A Land Use Consistency Review.

As you complete the Detailed Analysis in Part 4 – 14. Land Use, Natural Resource Lands, & Shoreline Compatibility, make sure you consider and address:

- Loss of designated natural resource lands (agriculture, forest, mineral) under RCW 36.70A.030; or other existing land uses
- Viability of existing or planned adjacent or nearby land or water uses
- Compatibility or conflict with intended land or shoreline uses
- Increased transportation, utility, or service demands

15. Housing

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

15.a.Screening Question – Housing

Will the project be likely to displace or otherwise affect existing or future housing, particularly housing for low and moderate-income households?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Neither of the Projects would displace or introduce a resident population to the local area. Agricultural land uses and rural residences currently surround the Projects with minimal development on properties adjacent to the Projects. These lands are predominantly undeveloped large parcels of 40 or more acres. An analysis was conducted for nearby occupied residences via aerial imagery and Google 'Street View' photos. Three residences were identified in the area surrounding the Project Site Control Boundaries. Residential locations and number of stories were confirmed during site visits in April 2021. Based on the results of Project analyses, the Projects as currently designed are not predicted to create any potentially significant impacts to these residences. Furthermore, local land use planning documents, including the YCCP, do not identify the Project Site Control Boundaries for future residential growth. A socioeconomic report for each Project is included in Attachment J.

Because the Project sites are not likely to displace or otherwise affect existing or future housing, a Part 4 detailed analysis of housing impacts is not warranted. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 – 15. Housing, make sure you consider and address:

- Decreased availability of housing for low to moderate income households
- Impediments to meeting fair housing and/or population growth goals

16. Noise, Light, Glare, and Aesthetics

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

16.a.Screening Question – Noise, Light, Glare, and Aesthetics

Will the project transmit light, glare, or noise onto adjacent areas or alter or obstruct any views in the immediate area?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Under certain conditions, solar PV arrays can reflect sunlight and produce glint which is defined as a momentary flash of bright light, or glare, a continuous source of bright light.

Noise can occur from construction activities as well as Project equipment including inverters, transformers, traffic, the O&M trailer, and the BESS.

Aesthetics of the area will change with the development of the Projects.

Based on the potential for light and glare concerns, a Section 4 analysis was prepared, which details potential impacts related to these issues and potential mitigation, if required. See Section 4.J Detailed Analysis – Noise, Light, Glare, and Aesthetics and Attachment H Glint and Glare Analysis Solar Glare Report and Attachment I FAA Determination of No Hazard Letters. A detailed analysis of noise and aesthetics was not conducted as the result of the lack of an appreciable amount of sensitive receptors near the Study Area (Figure 2-7). A limited number of residences and agricultural outbuildings are located east of the Ostrea MPE adjacent to SR-24.

As you complete the Detailed Analysis in Part 4 - 16. Noise, Light, Glare, and Aesthetics, make sure you consider and address:

- Proximity to residential areas, or other areas with sensitivity
- Scenic views that could be blocked, altered, or impaired for existing or planned uses in adjacent areas

And considering other relevant factors addressed in:

- WAC 463-62-030 regarding noise standards

- WAC 463-60-352 (1), 463-60-362 (2) and (3)

17. Recreation

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

17.a.Screening Question – Recreation

Will the project occur in an area or location that includes the following? ❑ Existing designated and informal recreation opportunities in the immediate vicinity ❑ Displace or otherwise affect any existing recreational uses during construction or operation	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Both of the Projects are located on private land and do not include any designated or informal recreation opportunities accessible to the public such as parks and open space, campgrounds, trails, river access, wildlife viewing areas, hunting areas, or similar recreational uses. Agricultural land uses and a few rural residences surround the Study Areas to the south, east, and west. There are no designated recreation opportunities immediately adjacent to the sites. The Priest Rapids State Wildlife Area is located approximately 11 miles north of the Projects, the city parks in Sunnyside are located approximately 13 miles north of the Projects, and the Moxee City Park is located approximately 18 miles west of the Projects.

Adjacent federal lands to the High Top Project Site Control Boundary include U.S. Bureau of Land Management (BLM) lands to the west and the southern boundary of the Yakima Training Center to the north. Adjacent federal and state managed lands to the Ostrea Project Site Control Boundary include BLM lands to the north, south and east, in include a small parcel west of the eastern Project parcel; the Yakima Training Center to the north; and Washington State Lands to the south that are managed by DNR. These lands are not actively used for recreation and public access is limited. The Projects would not displace or otherwise adversely affect existing recreational uses or opportunities. Therefore, a detailed analysis of potential impacts to recreation opportunities under Part 4 is not warranted. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 17. Recreation, make sure you consider and address:

- Existing recreation uses (e.g., hunting) that could be removed

18. Archaeological and Historical Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

18.a.Screening Question – Archaeological and Historical Resources

Will the project occur in an area or location that includes the following? *Note: to answer these questions with a definite "yes" or "no" requires a Desktop Survey that must be conducted by a consultant. See guidance for more information.* ❑ Archaeological Site or Built Environment Property over 50 years in agricultural resource site ❑ Any known landmarks or evidence of historic, archaeological, scientific, or cultural importance ❑ Is listed or is eligible to be listed on a local, state, or federal historic register	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The University of Washington's DAHP predictive model for cultural resources identified areas in both Projects as High Risk for cultural resources. Based on the DAHP predictive model results, a Part 4 detailed analysis was completed. Field Surveys were conducted within the Study Areas in areas that have a high probability for known and unknown archaeological resources based in part on the DAHP's archaeological predictive model. Areas identified as Levels 4 and 5 (High Risk) for archaeological resources by DAHP's archaeological predictive model were subjected to intensive pedestrian surveys and shovel test probes (STPs) in May 2021. Additional surveys were conducted for Ostrea in October 2021. The remaining cultural field surveys are planned in Spring 2022 for the unsurveyed areas in the Study Area. The results of the spring 2022 surveys will be summarized in an addendum to the cultural resource reports and submitted to the State of Washington Energy Facility Site Evaluation Council (EFSEC) once complete. The results for each Project are summarized in Attachment F, Cultural Resources Report.

As you complete the Detailed Analysis in Part 4 - 18. Archaeological and Historical Resources, make sure you consider and address:

- Effects on access to the site or to the resource
- Methods to protect/preserve cultural and historic resources
- Enhancement measures (improved public or tribal access, matching the character of the site, etc.)
- Include description of the cultural/historic resource and how it was identified.

And considering other relevant factors addressed in:

- WAC 463-60-362

19. Cultural Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

19.a.Screening Question – Cultural Resources

Will the project occur in an area or location that includes the following? • existing tribal hunting or fishing rights • existing tribal plant gathering • tribal cultural sites • a usual and accustomed area • material culture artifacts activities on the site could impede views of tribal cultural sites	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Both Projects are within the territories of the Yakama Nation and the CTWSRO; however, the Projects will be constructed on private lands that are currently inaccessible to tribes for hunting, fishing, or plant gathering. A records search through the Washington DAHP Washington Information System for Architectural and Archaeological Records Data (WISAARD) online database on February 3, 2021, identified one historic property (676383 – Midway-Moxee No. 1 115 kV Transmission Line) and nine archaeological recorded resources within a 1-mile radius of the High Top Project Site Control Boundary. One historic property (676383 – Midway-Moxee [No. 1] 115 kV Transmission Line) and two archaeological sites (45YA01587 and TRC-Ostrea-001) occur within the Ostrea Study Area and five archaeological resources have been recorded within a 1-mile radius of the Ostrea Project Site Control Boundary.

Based on the potential for cultural resources to be present, a Part 4 detailed analysis and field survey was conducted. The results are summarized in Attachment F, Cultural Resources Report for each Project.

As you complete the Detailed Analysis in Part 4 - 19. Cultural Resources, make sure you consider and address:

- Whether you have talked to any tribal representatives
- Whether you have checked any tribal websites

20. Traffic and Transportation

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

20.a.Screening Question – Traffic and Transportation

Will the project be likely to cause any of the following in relationship to the local and regional transportation system during construction or operation? • Reduce the level of service (LOS) in an area • Restrict vehicular use • Potential to create or increase local safety hazards • Conflicts with local, state, or federal requirements related to traffic and transportation	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Truck traffic would increase during the limited duration of construction for delivery of materials and worker transportation. During O&M, traffic would only see minor changes related to periodic visits by full-time operational staff. The private road access approach off of SR-24 will require improvements. The Projects will apply for a General Permit for access off of SR-24.

The Projects would be unlikely to reduce the level of service on area roads, except potentially during brief periods during construction. The Projects would not restrict vehicular use or create or increase local safety hazards and would not conflict with local, state, or federal requirements related to traffic and transportation.

However, due to potential truck traffic and potential transportation of oversize or overweight loads during construction, a Part 4 detailed analysis has been completed. The Part 4 analysis details potential impacts related to these issues and potential mitigation, if required. See Part 4 Detailed Analysis – Traffic and Transportation.

As you complete the Detailed Analysis in Part 4 - 20. Traffic and Transportation, make sure you consider and address:

- Existing/potential safety hazards
- Traffic delays or road closures during construction

And considering other relevant factors addressed in:

- Relevant factors addressed in WAC 463-60-372

21. Public Services and Facilities

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

21.a.Screening Question – Public Services and Facilities

Will the project be likely to increase use of public services and facilities directly or indirectly such as fire protection, law enforcement, schools, parks and recreation, public open space, social services, or general government?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

The Projects could temporarily impact public services and facilities and would include the potential use of emergency services. Although impacts are anticipated to be minor, a part 4 analysis was prepared outlining potential concerns and impacts, and proposed mitigation, if required. See Part 4 Detailed Analysis – Public Services and Facilities.

As you complete the Detailed Analysis in Part 4 - 21. Public Services and Facilities, make sure you consider and address:

- Existing/potential inadequacy of service providers to meet need
- Consumption of disproportionate share of existing or future service capacities
- Options to reduce service demand (onsite security, etc.)

22. Utilities

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

22.a.Screening Question – Utilities

Will the project be likely to increase demand for public or privately owned water, sewer, storm water, solid waste, communication, or energy utilities?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:

Both Projects could require private utility facilities for water, on-site sewage/septic, stormwater capture, solid waste disposal, and communications. Because public and private utilities will be utilized, a detailed analysis of potential impacts to utilities is required. Please see Part 4 Detailed Analysis – Utilities for detailed analysis and mitigation measures including an analysis of water availability for construction and panel washing, stormwater runoff analysis, and sewage/septic use.

As you complete the Detailed Analysis in Part 4 - 22. Utilities, make sure you consider and address:

- Existing/potential inadequacy of utilities to meet need
- Consumption of disproportionate share of existing or future utility capacities
- Potential to reduce service demand (conservation, etc.)
- Identify where utilities have confirmed service availability

PART 4. Detailed Analysis

Detailed analysis for both Projects is presented below. Where information is relevant for both MPEs, it is presented as a combined discussion. Information that is specific to each Project is presented under separate headers where relevant. Proposed mitigation for all resources is provided in Attachment O.

Detailed Analysis – Earth

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
High Top Draft Geotechnical Report, Attachment G	January 2020	ANS Geo, Inc.	Y
Ostrea Draft Geotechnical Report, Attachment G	January 2020	ANS Geo, Inc.	Y

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

ANS Geo prepared a draft Geotechnical Report, dated January 15, 2020, (Attachment G) for CCR. For each Project Site Control Boundary, the draft Geotechnical Report included the results of the drilling of 13 borings, excavation of 13 test pits, and performance of 12 field electrical resistivity tests and six soil thermal resistivity tests for each Project site.

To document existing conditions and issues for both Projects, TRC geotechnical engineers and geologists reviewed publicly available geological and geotechnical information concerning the site and the draft Geotechnical Report. In addition, a TRC geologist performed a detailed field reconnaissance of both Project Study Areas on May 25, 2021. The field reconnaissance focused on identifying any common geomorphic features of landslides, as well as any indications of recent activity and instability of slide masses.

B.1. Geologic Site Description

B.1.a. Geology

Available mapping indicates that the Study Area for each Project lies within Quaternary nonmarine deposits (Figure 4-1, Figure 4-2, WDNR 2010). This particular surficial unit includes Aeolian deposits consisting of light brown, homogenous Loessial silt with minor gravel, boulders, and sand inclusions.

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TRC - GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

Plot Date: 3/14/2022, 13:52:44 PM by BTRACY -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\CCR\Northwest\442984-High Top\Fig 4-1_High Top_Geology Map EFSEC.mxd

YAKIMA TRAINING CENTER

Tc
Ql
Qa
wtr
Qd
Qf
Qls
Tv(cr)
State Route 24
Hanford Rd
Yakima Valley Hwy
243
241

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Qd, Holocene dune sand
- Qa, Quaternary alluvium
- Qls, Quaternary mass-wasting deposits
- Ql, Quaternary loess
- Qf, Pleistocene outburst-flood deposits
- Tc, Tertiary continental sedimentary rocks
- Tv(cr), Tertiary volcanic rocks, Columbia River Basalt Group
- Water
- Bureau of Land Management
- U.S. Dept. of Defense-Yakima Training Center
- State Lands
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/MAXAR 2019.
2. GEOLOGY BASE LAYER IS FROM WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES DIVISION OF GEOLOGY AND EARTH RESOURCES.

1:125,000
1 inch = 2 miles

0 2 4 Miles

WASHINGTON OVERVIEW
SITE LOCATION
WA
ID
OR

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

HIGH TOP GEOLOGY MAP

DRAWN BY:	R. BLAKE	PROJ. NO.:	442984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		
DATE:	MARCH 2022		

FIGURE 4-1

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-1_High Top_Geology Map EFSEC.mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

Plot Date: 3/11/2022, 16:06:15 PM by RBLAKE -- LAYOUT: ANSI B (11"x17")
Path: S:\GIS\1-PROJECTS\CCRI\Northwest\427473-Ostrea\Fig 4-2_Ostrea_Geology Map EFSEC.mxd

YAKIMA TRAINING CENTER

Stub Route 24

Hurlburt Rd

Yakima Valley Hwy

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Qd, Holocene dune sand
- Qa, Quaternary alluvium
- Qls, Quaternary mass-wasting deposits
- Ql, Quaternary loess
- Qf, Pleistocene outburst-flood deposits
- Tc, Tertiary continental sedimentary rocks
- Tv(cr), Tertiary volcanic rocks, Columbia River Basalt Group
- Water
- Bureau of Land Management
- U.S. Dept. of Defense-Yakima Training Center
- State Lands
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/MAXAR 2019.
2. GEOLOGY BASE LAYER IS FROM WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES DIVISION OF GEOLOGY AND EARTH RESOURCES.

N

WASHINGTON OVERVIEW

CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

OSTREA GEOLOGY MAP

DRAWN BY:	R. BLAKE	PROJ. NO.:	427473
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-2**
DATE:	MARCH 2022		

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FILE NO.: Fig 4-2_Ostrea_Geology Map EFSEC.mxd

Bedrock geology of the area consists of Miocene volcanic rocks and also a unit from the Middle Miocene age that is generally known as the Columbia River Basalt (Yakima Basalt Subgroup). The bedrock is described as dense dark-gray to black aphanitic basalt flows; commonly columnar jointed, less commonly irregularly and platy jointed; some flows vesicular, grading to scoriaceous; including minor pillow lava, palagonite beds, and interbedded soil profiles and sedimentary beds; and contains diatomite beds locally. Maximum thickness of the basalt unit in south-central Washington can exceed 10,000 feet.

The generalized subsurface conditions of the sites as provided in the draft Geotechnical Reports are summarized in Table 4-1 (ANS 2020a, b). More specific soil condition observations are included in the draft Geotechnical Report for each Project (Attachment G).

Table 4-1 Generalized Subsurface Profile for both Projects

Average Depth (ft)	Material	Consistency	Description
0' – 0.5' Topsoil	Topsoil		Approximately 4 to 12 inches of topsoil existed at the surface throughout most of the Study Area.
0.5 – 3'	Silt (ML)	Stiff	Light brown silt with varying amounts of sand, gravel, and clay were encountered beneath the topsoil layer in most locations. This material was noted to be very dry and predominantly nonplastic. Gravels and rock fragments were frequently encountered near the bottom of this stratum.
3' – 4'	Gravel/Cobbles (GM)	Very Dense	Dense silty gravel and/or cobbles were frequently encountered beneath the silt layer.
4'+	Basalt		Strong, slightly weathered basalt bedrock was encountered or inferred at all investigation locations beginning between 1 and 7-1/2 feet below grade.

Source: ANS 2020a, b

B.1.b. Site Slope Conditions

High Top

Site elevations range from approximately 2,025 feet above mean sea level (amsl) to 1,480 feet amsl, for a total relief within the High Top Study Area of about 545 feet. Native slopes throughout

the High Top Study Area generally descend at gradients ranging from approximately less than 10 Horizontal (H):1 Vertical (V) to some limited areas at about 1H:1V.

Aside from a noted area of potential ongoing sluffing along the over-steepened erosional slopes along the drainage wash that crosses the northern portion of the site, no evidence of any significant slope instability was noted at the site. A deeply incised drainage channel is located off site to the west of the northern portion of the site and continues southward and is located on the western portion of the site. The slopes of the channel appear to be as steep as 1H:1V. The slopes expose basalt bedrock, and no signs of instability were noted.

Ostrea

Site elevations range from approximately 1,975 amsl to 1,352 feet amsl, for a total relief within the Project Study Area of about 623 feet. Native slopes throughout the Ostrea Study Area generally descend at gradients ranging from approximately less than 10H:1V to some limited areas at about 1H:1V.

Aside from a noted area of potential ongoing sluffing along the over-steepened erosional slopes along the drainage that crosses the northeastern corner of parcel 231209-11001 within the Study Area and the drainage on the far northeast corner of the parcel 231211-11001 located on the northeastern corner of the Study Area, no evidence of any significant slope instability was noted at the site. A small dormant landslide was noted in the over-steepened slope east of the drainage channel in the northeast corner of the westernmost parcel.

Several deeply incised drainage channels are located on the site. The slopes of the channels appear to be as steep as 1H:1V. The slopes expose basalt bedrock, and no signs of instability were noted.

B.2. Groundwater

The Ecology Well Log database was reviewed to estimate groundwater levels in the site vicinity based on nearby wells. In a review of the Well Log database, groundwater was not encountered within the borings and test pits to a maximum depth of approximately 10 feet below ground surface (bgs). The review of nearby well logs indicates the depth to groundwater in the site vicinity is likely on the order of 150 feet bgs or greater. There is a potential for surface water to percolate and perch atop the basalt layer. Groundwater levels likely fluctuate throughout the year with irrigation, precipitation, drainage, and regional pumping from wells, typically highest during the irrigation season and decreasing thereafter.

Due to the noted subsurface soil and rock conditions that prevail across the Project site and the significant depth to static groundwater conditions, the risk to groundwater of contamination to designated critical aquifer recharge areas resulting from the proposed development is extremely low provided that appropriate stormwater management facilities are incorporated into the Project design. Stormwater and runoff are discussed further in Section 4.D.

B.3. Geologic Hazards

High Top

A significant erosional drainage gully or wash extends from the northwest portion of the Study Area and then drains south through the southwest side of the Study Area. The drainage drains south under SR-24 approximately near the southern boundary of Section 17. These drainages flow under

SR-24 through culverts and into the ephemeral channel flowing west to east on the south side of SR-24. The incised drainage is depicted on U.S. Geological Survey (USGS) maps as an intermittent (seasonal) stream/ephemeral stream (flow only after significant precipitation). TRC conducted wetland delineation surveys and determined this was an ephemeral channel (TRC 2021a, Attachment D). The noted drainage path incises the alluvial fan deposits. Yakima County has mapped the area along the well-defined drainage as geologically hazardous ("Alluvial Fan Intermediate Risk").

Ostrea

Several erosional drainage gullies or washes cross the Study Area varying in width and depth. These drainages flow under SR-24 through culverts and into the ephemeral channel flowing west to east on the south side of SR-24. The drainages are depicted on USGS maps as an intermittent (seasonal) stream/ephemeral stream (flow only after significant precipitation). TRC conducted wetland delineation surveys and determined there are 17 ephemeral channels within the Study Area. Of those, five are located in the MPE and have downstream connectivity to the ephemeral channel on the south side of SR-24 that flows east (TRC 2021b, Attachment D). The noted drainage paths have cut down in the alluvial fan deposits. Yakima County has mapped several areas in the Study Area as geologically hazardous: "Alluvial Fan Intermediate Risk," "Oversteepened Slopes High Risk," and "Avalanche Intermediate Risk." The Yakima County geologically hazardous areas are shown in Figure 4-3 and 4-4.

B.4. Foundation Conditions

As noted in the draft Geotechnical Report for each Project (Attachment G), borings met auger refusal at depths ranging from 1.2 to 7.5 feet bgs. To achieve the typical eight to ten-foot pile foundation lengths, pre-drilling of piles into the bedrock was recommended in the draft Geotechnical Report for each Project (Attachment G). Because of this condition, the alternative of founding the arrays on appropriate shallow footings should be considered.

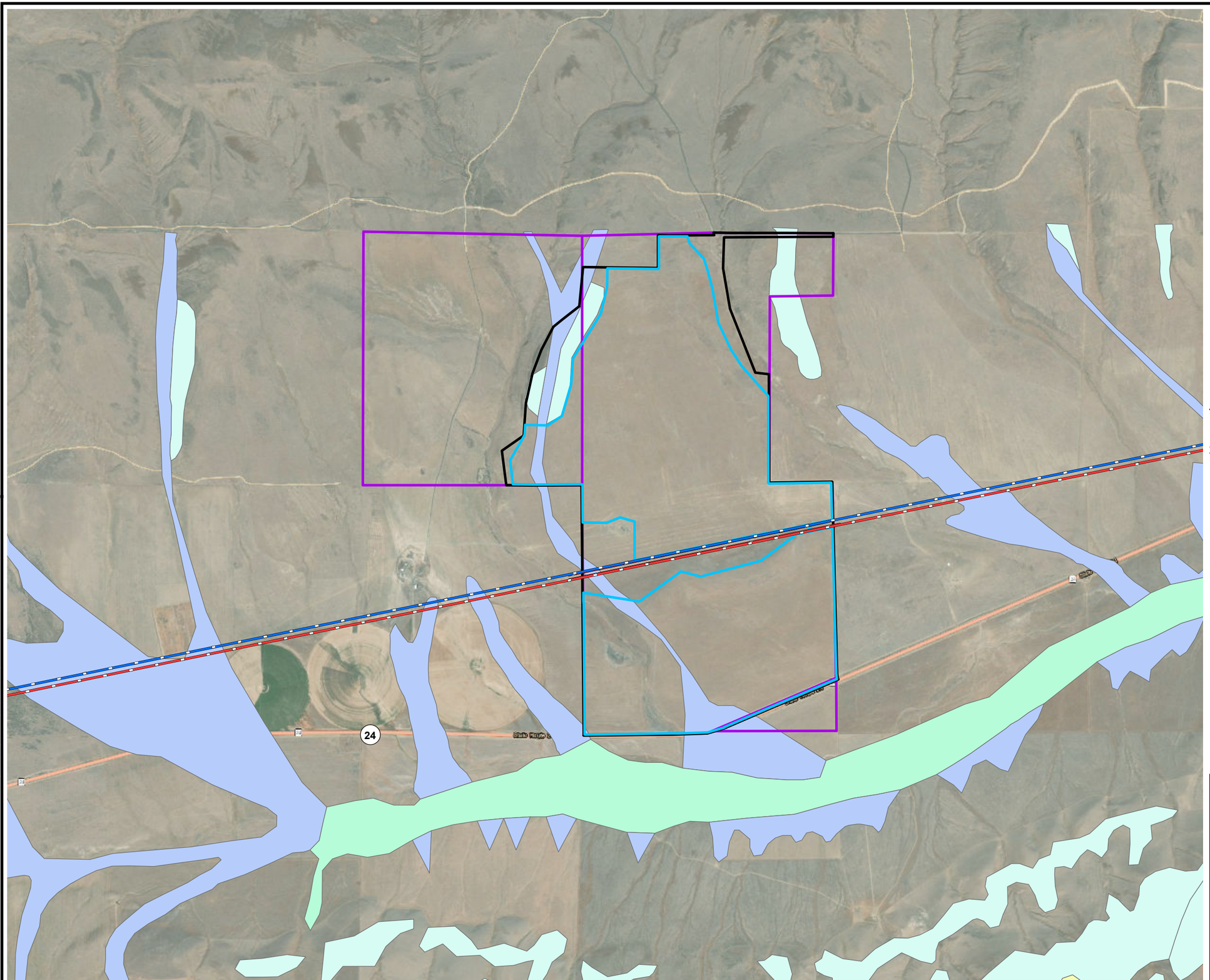
The constraints on the use of shallow footings include a frost penetration depth of 18 inches and a potential unfactored adfreeze (uplift) stress of 1,500 pounds per square foot (psf) (or 10.4 pounds per square inch [psi]) for the upper 1.5 feet of overburden soil. These factors should be considered during panel foundation sizing and design. Foundations bearing at a depth of three to four feet would be capable of supporting 4,000 psi dead plus live loads with a one-third increase for short-term loading. It is recommended that pile drivability testing and load testing be performed prior to final design.

B.5. Soil Liquefaction

Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. Both MPEs are mapped within an area of very low to low liquefaction susceptibility with a few areas mapped as bedrock as shown on the DNR Liquefaction Susceptibility Map of Yakima County, Washington (Palmer et.al. 2004). Based on the findings from subsurface field explorations conducted (ANS 2020a, b), detailed site reconnaissance, and desktop analysis, the existing native (undisturbed) site slopes are generally considered to be grossly stable with expected factors of safety against movement to be well above recommended minimums for development. The existing native on-site vegetation serves to provide some protection from shallow surficial instability and erosional forces.

Ongoing long-term raveling/spalling of the exposed gravelly/cobbly incised sides of the noted drainage channel will continue. No further stability

analyses of the existing slope conditions appear warranted. Based on TRC's on-site evaluation, the risk of liquefaction for most of the MPEs is considered very low.



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Alluvial Fan High Risk
- Alluvial Fan Intermediate Risk
- Oversteepened Slopes High Risk
- Oversteepened Slopes Intermediate Risk

NOTES

1. BASE MAP IMAGERY FROM ESRI/MAXAR 2019.
2. SOURCE: HTTPS://GIS-YAKIMACOUNTY.OPENDATA.ARCGIS.COM/DATASETS/GEOLOGIC-HAZARDS

0 1,000 2,000 Feet

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

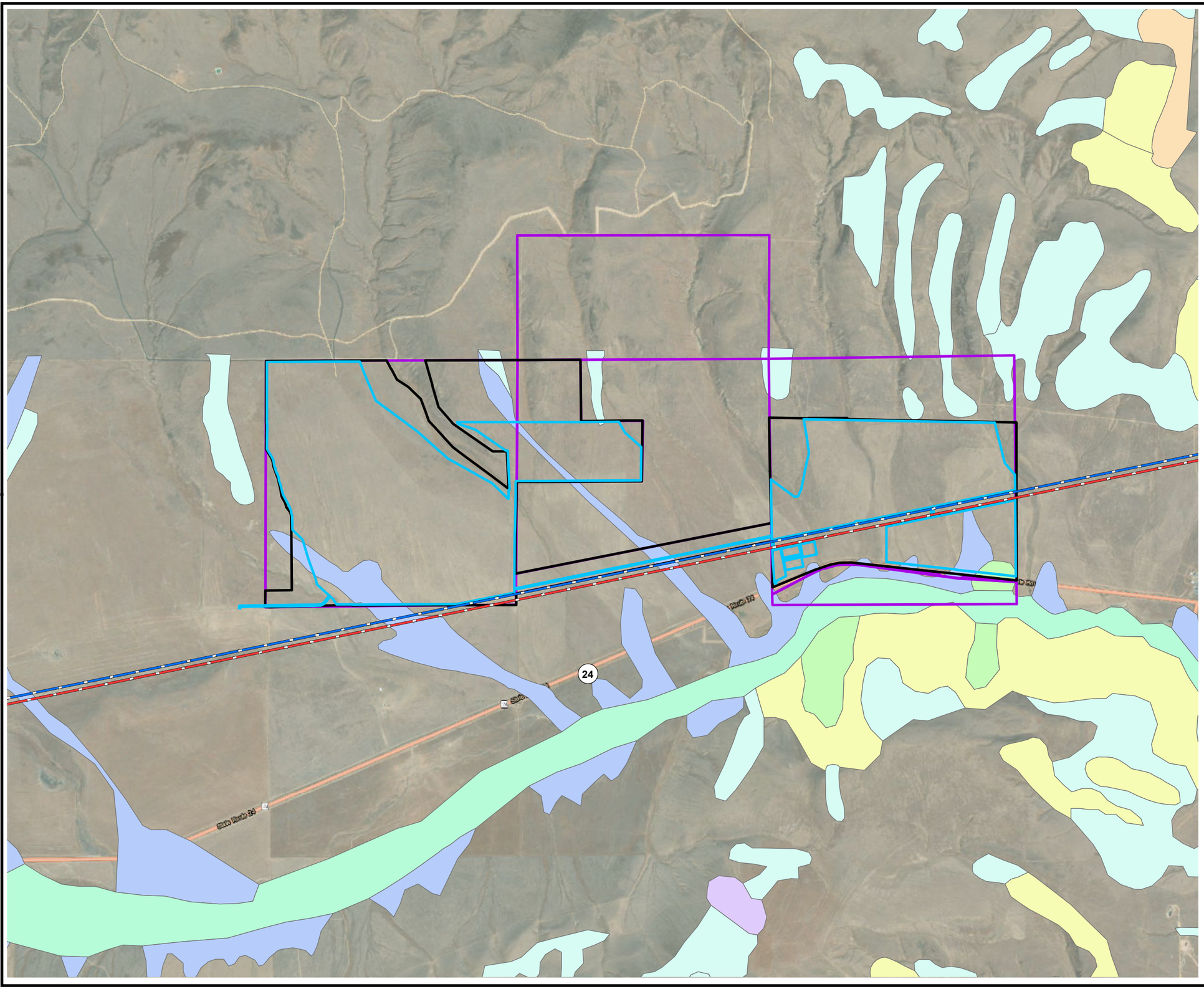
HIGH TOP GEOLOGICAL HAZARDS AND CRITICAL AQUIFER RECHARGE AREAS MAP

DRAWN BY:	R. BLAKE	PROJ. NO.:	442984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-3**
DATE:	MARCH 2022		

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-3_High Top_Geological Hazards Map EFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 3/21/2022, 14:17:07 PM by RBLAKE -- LAYOUT: ANSI B(11"x17")
Path: S:\GIS\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 4-3_High Top_Geological Hazards Map EFSEC.mxd



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Alluvial Fan High Risk
- Alluvial Fan Intermediate Risk
- Landslide High Risk
- Landslide Intermediate Risk
- Oversteepened Slopes High Risk
- Oversteepened Slopes Intermediate Risk
- Unknown Hazard

NOTES

1. BASE MAP IMAGERY FROM ESRI/MAXAR 2019.
2. SOURCE: HTTPS://GIS-YAKIMACOUNTY.OPENDATA.ARCGIS.COM/DATASETS/GEOLOGIC-HAZARDS

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

OSTREA GEOLOGICAL HAZARDS AND CRITICAL AQUIFER RECHARGE AREAS MAP

DRAWN BY:	R. BLAKE	PROJ. NO.:	442984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-4**
DATE:	MARCH 2022		

TRC
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Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-4_Ostrea_Geological Hazards Map EFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 3/21/2022, 13:58:33 PM by RBLAKE -- LAYOUT: ANSI B(11"x17")
Path: S:\GIS\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 4-4_Ostrea_Geological Hazards Map EFSEC.mxd

B.6. Soils

High Top

Soils in the High Top Project Study Area are listed in Table 4-2. The High Top Project Study Area is primarily composed of 47 percent Willis silt loam, 8 to 15 percent slopes and 20 percent Moxee cobbly silt loam, 0 to 30 percent slopes, both of which are classified in the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Surveys as farmland of unique importance (Table 1-1). The remaining 33 percent of the Study Area is composed of nine other soil map units.

Table 4-2. Soils in the High Top Study Area.

Soil Map Unit Symbol	Soil Map unit Name	Farmland Classification	Acres in Study Area	Percent of Study Area
3	Bakeoven, very cobbly silt loam, 0 to 30 percent slopes	Not prime farmland	14.4	1
36	Finley cobbly fine sandy loam, 0 to 5 percent slopes	Not prime farmland	11.0	1
55	Harwood-Burke-Wiehl, very stony silt loams, 15 to 30 percent slopes	Not prime farmland	23.3	2
65	Kiona, stony silt loam, 15 to 45 percent slopes	Not prime farmland	37.1	3
83	Moxee, silt loam, 2 to 15 percent slopes	Not prime farmland	131.1	12
85	Moxee, cobbly silt loam, 0 to 30 percent slopes	Farmland of unique importance	226.8	20
104	Ritzville, silt loam, basalt substratum, 0 to 5 percent slopes	Farmland of unique importance	24.4	2
105	Ritzville, silt loam, basalt substratum, 5 to 15 percent slopes	Farmland of statewide importance	99.6	9
130	Selah, silt loam, 8 to 15 percent slopes	Farmland of statewide importance	2.2	<1
187	Willis, silt loam, 2 to 5 percent slopes	Farmland of statewide importance	22.9	2
189	Willis, silt loam, 8 to 15 percent slopes	Farmland of unique importance	521.2	47

Source USDA NRCS 2021

Ostrea

Soils in the Ostrea Project Study Area are listed in Table 4-3. The Ostrea Project Study Area is primarily composed of 46 percent Moxee silt loam, 2 to 15 percent slopes and 30 percent Willis silt loam, 8 to 15 percent slopes. Of these two predominant soil types on the site, only the Willis silt loam is classified by the USDA NRCS as farmland of unique importance. USDA NRCS classifies the Moxee silt loam as “not prime farmland.” The remaining 23 percent of the Project site is composed of nine other soil map units.

Table 4-3. Soils in the Ostrea Study Area.

Soil Map Unit Symbol	Soil Map unit Name	Farmland Classification	Acres in Study Area	Percent of Study Area
35	Finley fine sandy loam, 0 to 5 percent slopes	Prime farmland if irrigated	11.4	1
65	Kiona stony silt loam, 15 to 45 percent slopes	Not prime farmland	17.7	2
83	Moxee silt loam, 2 to 15 percent slopes	Not prime farmland	512.8	46
127	Scooteney cobbly silt loam, 0 to 5 percent slopes	Not prime farmland	16.6	1
130	Selah silt loam, 8 to 15 percent slopes	Farmland of statewide importance	73.5	7
132	Shano silt loam, 2 to 5 percent slopes	Farmland of statewide importance	56.1	5
142	Starbuck silt loam, 2 to 15 percent slopes	Not prime farmland	17.1	2
143	Starbuck-Rock outcrop complex, 0 to 45 percent slopes	Not prime farmland	20.7	2
179	Warden silt loam, 8 to 15 percent slopes	Farmland of unique importance	0.3	<1
187	Willis silt loam, 2 to 5 percent slopes	Farmland of statewide importance	56.7	5
189	Willis silt loam, 8 to 15 percent slopes	Farmland of unique importance	340.1	30

Source USDA NRCS 2021

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Geohazards	Draft geotechnical reports for both the High Top and Ostrea Projects outlined recommended mitigation measures that will be implemented as appropriate to prevent impacts from potential on-site geohazards.
	Water flow	Surface water flow in the MPEs will not be increased by the development of the Projects. The Projects will have only limited impervious surfaces on-site - which will include the O&M trailer, substation, parking area, and concrete foundations for facilities (e.g., inverters) - and

		infiltration of normal stormwater and snowmelt will occur in the majority of the MPEs.
	Topography	Review of the conceptual site layout and the topographic survey indicates that the planned layout generally avoids any areas of significantly steep slopes. It shall be noted that construction of new solar arrays or other ancillary structures should be avoided on areas of existing native slopes steeper than 2H:1V. Any proposed reconfigured cut or fill slopes shall be constructed with appropriate geotechnically engineered grading practices, including keying and benching and proper placement of engineered fill at maximum gradients not to exceed 2H:1V. An overlay of the final layout on the final grading plan will be prepared to ensure compliance with this requirement. Installation of each of the Project's PV arrays will generally follow existing contours of the two MPEs, requiring minimal grading and maintaining the natural slopes on site. Arrays will also be placed in a configuration that will avoid natural drainage channels in the MPEs, precluding the need for fill in or removal of potential habitat in these areas. Grading permits will be obtained prior to construction for each Project and the grading site plan for each Project will be provided to EFSEC at the time of submittal for each permit. If fill is needed, he construction plans and specifications will identify the source of fill, which will be provided to EFSEC for approval at least 90 days prior to site preparation.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	Design around slope and geohazards	To minimize risk due to erosion and flash flooding, the Projects will be designed to avoid the steepest slopes, drainages, and geohazards as identified through field surveys. All permanent structures and most construction activities will maintain a 20-foot buffer from existing channels and avoid construction on steep slopes. Appropriate erosion control measures and BMPs

		will be implemented to minimize erosion and soil movement.

D. Proposed Mitigation and Monitoring

☒ **Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.**

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ **No**	☒ **Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.	CWA Section 404/401	State Waters USACE Ecology

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

F. References

ANS. 2020a. High Top Draft Geotechnical Report. Prepared for Cypress Creek Renewables, Santa Monica, CA.

ANS. 2020b. Ostrea Draft Geotechnical Report. Prepared for Cypress Creek Renewables, Santa Monica, CA.

Palmer, S.P., S.L. Magsino, E.L. Bilderback, J.L. Poelstra, D.S. Folger, and R.A. Niggemann. 2004. Liquefaction Susceptibility Map of Yakima County, Washington. Accessible at https://fortress.wa.gov/dnr/geologydata/liquefaction_maps/ofr2004-20_sheet77_yakima_liq.pdf

TRC. 2021a. Wetland and Waterbody Delineation Report. High Top Solar, LLC. Prepared for Cypress Creek Renewables, LLC. September 28, 2020. Revised October 2021.

TRC. 2021b. Wetland and Waterbody Delineation Report. Ostrea Solar, LLC. Prepared for Cypress Creek Renewables, LLC. September 28, 2020. Revised November 2021.

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Detailed Analysis – Air Quality

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
No studies relating to air quality were conducted for the Project.	N/A	N/A	N/A

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

B.1. Regulatory

B.1.a. National Ambient Air Quality Standards

The Clean Air Act (CAA), through the U.S. Environmental Protection Agency (USEPA) has declared a set of primary and secondary National Ambient Air Quality Standards for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), two size categories of particulate matter (less than or equal to 10 microns in diameter [PM-10] and less than or equal to 2.5 microns in diameter [PM-2.5]), ozone (O_3), sulfur dioxide (SO_2), and lead. The primary standards are designed to protect public health and are based on concentration levels of pollutants in ambient air averaged over a specific time interval. The secondary standards are concentration levels designed to protect public welfare and other resources from adverse effects of air pollution including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The State of Washington has adopted the same ambient air quality standards as the federal levels (WAC 173-476, Ambient Air Quality Standards). Local air quality is measured against these national and state standards, and areas that do not meet the standards are designated as “non-attainment” areas.

B.1.b. Reciprocating Internal Combustion Engines (RICE)

The USEPA has implemented a New Source Performance Standard and National Emissions Standard for Hazardous Air Pollutants to limit criteria and hazardous air pollutants, respectively, from various types of emission sources. The specific requirements are generally dependent on the size, fuel type, installation date, and type of service (e.g., emergency use).

B.1.c. Greenhouse Gases

The USEPA's Greenhouse Gas Reporting Program, promulgated in 40 CFR Part 98, requires large Greenhouse Gases (GHG) emission sources, fuel and industrial gas suppliers, and CO_2 injection sites to report emissions on an annual basis.

In Washington State, GHGs are regulated by RCW Chapter 80.80, which establishes goals for statewide reduction of GHG emissions. Current goals are to reduce overall GHG emissions to 1990 levels by 2020, and to 25 percent below 1990 levels by 2035. By 2050, Washington State intends to reduce overall emissions to 50 percent below 1990 levels. WAC 173-441 established a mandatory greenhouse reporting rule for certain operations. However, as solar power would not emit GHGs during O&M, these regulations would not apply to the Project.

B.1.d. Washington State and Yakima County Permitting Requirements

Most air quality regulations specific to the Projects are overseen by the YRCAA. The YRCAA is delegated to enforce relevant federal regulations, the Washington CAA, State of Washington regulations, and YRCAA regulations and policies within the boundaries of Yakima County. The YRCAA issues permits and certifies dust control plans for both construction and the post-construction operational projects phases.

Types of air quality permits include:

- General orders permit – For specific industries.
- Air operation permit - required for major sources of air emissions that emit 10 tons per year or more of hazardous air pollution or 25 tons per year or more of a combination of hazardous air pollution.
- Notice of construction permit - is required before installing a new source of air pollution or modifying an existing source of air pollution.
- Prevention of Significant Deterioration permit – is for new, large facilities or major changes at existing large facilities that could increase air pollution in an area.

WAC 173-400 identifies general regulations for air pollution sources. All sources and emissions units are required to meet the emission standards outlined in WAC 173-400-040. The following codes apply to impacts typically associated with construction activities:

- WAC 173-400-040(3) Fallout; "No person shall cause or allow the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited."
- WAC 173-400-040(4–4a) Fugitive emissions:" The owner or operator of any emissions unit engaging in materials handling, construction, demolition or other operation which is a source of fugitive emission: (a) If located in an attainment area and not impacting any nonattainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation. (b) If the emissions unit has been identified as a significant contributor to the nonattainment status of a designated nonattainment area, the owner or operator shall be required to use reasonable and available control

methods, which shall include any necessary changes in technology, process, or other control strategies to control emissions of the air contaminants for which nonattainment has been designated."

- WAC 173-400-040(9)(a) Fugitive Dust: "The owner or operator of a source or activity that generates fugitive dust must take reasonable precautions to prevent that fugitive dust from becoming airborne and must maintain and operate the source to minimize emissions. (b) The owner or operator of any existing source or activity that generates fugitive dust that has been identified as a significant contributor to a PM-10 or PM-2.5 nonattainment area is required to use reasonably available control technology to control emissions. Significance will be determined by the criteria found in WAC 173-400-113(4)."

Power generators that may be used during construction and/or operation may be subject to the following state rules for limiting emissions:

- WAC 173-400 General Regulations for Air Pollution Sources, and
- WAC 173-460 Diesel Engine Exhaust Particulate.

WAC 463-62-070 requires that energy facilities meet all federal and state air quality laws and regulations mentioned above, and WAC 463-78 establishes adoption of these requirements by EFSEC. EFSEC issues authorizations for air emissions for sources under its jurisdiction.

Construction Emissions/Fugitive Dust

Fugitive dust is particulate matter suspended in the air either by mechanical disturbance of surface materials or by wind action blowing across the surface. Mechanical disturbance includes re-suspension of particles from vehicles travelling over roadways, parking lots, and other open areas. Wind action includes dust blown off inadequately stabilized open areas. The quantity of fugitive dust emissions is dependent on several factors such as the size of the source, emission rate, and application of controls. It is the policy of the YRCAA to reduce fugitive dust emissions with an emphasis on prevention, rather than mitigation.

The WAC and the YRCAA regulations require air pollution sources to take "reasonable precautions" to prevent the release of fugitive emissions. As particulate emissions from construction sites are considered to be fugitive emissions, this policy is based on existing regulations and clarifies what constitutes "reasonable precautions" to minimize emissions of fugitive dust from construction sites. The primary mechanism for doing this is to identify industry practices for fugitive dust control and implement these practices according to flexible, site-specific fugitive dust control plans developed for each construction site and reviewed by the YRCAA for adequacy.

A Master Dust Control Plan must be submitted to and approved by the YRCAA in advance of any construction activities (YRCAA 2012). Dust control plans must be submitted to the YRCAA 15 days prior to commencement of any work that would disturb soil stability or cover, or otherwise cause fugitive dust emissions. Within five days of receipt of a dust control plan, the YRCAA will review the plan and notify the submitting party of its adequacy, request additional information or propose modifications to the plan.

New Source Review (NSR) Permitting

NSR permits are required for generators that are rated above 500 horsepower. The NSR permit is required pursuant to YRCAA Regulation 1, Section 4.01. In addition to obtaining an NSR permit, the owner must complete an annual registration and pay an annual fee. The YRCAA conducts regular inspections of registered sources to verify compliance with air pollution regulations.

Odor Regulations

Odors are regulated under WAC 173-400-040, which states that “any person who shall cause or allow the generation of any odor from any source or activity which may unreasonably interfere with any other property owner's use and enjoyment of her or his property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.” There are exemptions for odors related to agriculture. The YRCAA prohibits the burning of specific materials including garbage, asphalt, petroleum products, paints, and construction/demolition debris as well as any materials that emit obnoxious odors, toxic emissions, or dense smoke (YRCAA Regulation 1: Sec. 3.03D1[13]).

B.2. Climate

The Study Areas are located within a rain shadow created by the Cascade Mountains, which causes a decrease in precipitation. This region is relatively dry with an annual average of nearly 200 days of sunshine. Average annual precipitation at Yakima, the city closest to the Study Areas, is 8.25 inches and average seasonal snowfall is 22.6 inches.

Wind conditions near the Study Areas are characterized by Automated Surface Observing Systems (ASOS) with the closest ASOS station located at the Yakima Airport in Yakima, Washington. Prevailing winds most frequently blew from the west, northwest, and southwest and over a period from 1984 to 2018, the ASOS-documented average wind speed was approximately 6.0 miles per hour (NOAA 2021).

B.3. Regional air quality

While the air quality in Yakima County is generally good, the region’s sunny climate, pollution-trapping mountains, and growing population can contribute to air quality concerns. In non-irrigated agricultural areas in the region, cattle grazing, and other agricultural activities are already significant generators of dust in the arid climate of the Moxee Valley and windblown fugitive dust is widespread.

The nearest air quality monitors to the Study Areas are located in Sunnyside and Toppenish, Washington (approximately 14 and 19 miles to the south, respectively), which measures PM-2.5, and in Yakima, Washington (approximately 26 miles to the west), which measures PM-10 and PM-2.5. The nearest SO_2 monitor is in Wenatchee, Washington (approximately 55 miles to the northwest). The nearest O_3, NO_2, and CO monitors are all greater than 100 miles from the Study Areas. The air quality monitoring shows that Yakima County is in attainment with all ambient air quality standards.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**

	Construction	The anticipated primary sources of air pollution generated by construction of the Projects will be from vehicle exhaust emissions and fugitive dust particles generated by disturbed soils that become airborne during digging and grading. Sources of vehicle exhaust emissions would include heavy construction equipment operating on the site, trucks delivering construction materials and Project components to the site, and vehicles used by construction workers to access the site. Pollutants emitted from these sources would be limited and comparable to emissions from other equipment used for agriculture, transportation, and construction in Yakima County. During construction of the Projects, heavy construction equipment will be used on site. The use of this equipment on the undeveloped and unpaved areas would produce dust and minor odors during construction. Construction activities that could create fugitive dust include on-site material transport, clearing and grading for project infrastructure, concrete batch plant, generators, and potential trenching for underground utility cables. Construction of the Projects may also require the use of a portable concrete batch plant or several generators for the on-site job trailers. A concrete batch plant will generate particulate matter emissions for each Project. It is assumed each job trailer would use a 65-112 kilowatts diesel generator unless a temporary service is installed from the utility. It is anticipated that generators will be used for HVAC systems, back-up power, and at the substation. The use of generators or other pollutant-emitting operations or equipment on site, may require a NSR permit through the YRCAA. During construction, the combustion of fuels in construction equipment, vehicles, and backup generators will generate small amounts of GHGs. These emissions will be temporary in nature and the low levels of emissions will not be expected to have an impact on GHG emissions in the region. Emissions associated with construction are expected to be low and short-term.
	Operation	Emissions related to operation will consist of routine maintenance inspections and operation of diesel-fired backup generators. Vehicles used for maintenance activities will generate combustion and fugitive dust emissions. Vehicle movement on site will be

		predominantly by delivery trucks, light vehicles, and water trucks on the constructed gravel roads. Occasionally, these vehicles may divert to areas not paved by gravel and depending on current precipitation and temperature conditions could generate considerable dust. The volume of traffic is expected to be low and intermittent; therefore, emissions due to maintenance activities will be minimal. Backup generators will be only operated as needed for backup power and are expected to operate for only short periods of time. Therefore, it is expected that the operational emissions from backup generators will not impact local air quality. The solar power that will be generated by these Projects will offset power that is generated from fossil fuels. As a result of these Projects, there will be an overall reduction in GHG emissions in Washington, which will support the State's GHG reduction goals.
	Odors	No site-specific sources of odor are expected during construction or full operation. During construction, there may be some odor from exhaust from diesel-powered equipment. These odors are not expected to be noticeable beyond the Project boundary and will not interfere with other property owner's use and enjoyment of their property.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**

	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

F. References

National Oceanic and Atmospheric Administration (NOAA). 2021. National Oceanic and Atmospheric Administration Website. https://www1.ncdc.noaa.gov/pub/data/ccd-data/wndspd18.dat. Accessed February 18, 2021.

U.S. Environmental Protection Agency (USEPA). 2021. Nonattainment Areas for Criteria Pollutants (Green Book). Online: https://www.epa.gov/green-book. Accessed July 13, 2021.

Yakima Regional Clean Air Agency (YRCAA). 2012. Construction Dust Control Policy Of The Yakima Regional Clean Air Agency August 9, 2012.

Detailed Analysis – Water Quality (Wetlands and Surface Waters)

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Wetland Delineation Report, Attachment D	Complete – October 2021	TRC	Y
Ostrea Wetland Delineation Report, Attachment D	Complete – March 2022	TRC	Y

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

See Attachment D for the wetland delineation report for each Project which provides an overview of existing conditions and issues for this resource. Changes to and from Existing Condition

B.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Ostrea - Road Crossings	Current preliminary site plans have the east-west access road crossing five ephemeral channels. The permanent placement of fill, most likely gravel, will be placed in the ephemeral channels. A culvert will be installed for each crossing. Temporary construction crossing could occur in four ephemeral channels north of the east-west access road. The ephemeral channels will be restored to pre-construction conditions. Impacts will be permitted through USACE NWP 14.

B.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	☐ Yes	
	Topical Area/issue	**Changes**
	Stream Buffers	Other than the road crossings on Ostrea, the MPE has been designed to be set back 20 feet from the delineated channels.

C. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

D. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**

Detailed Analysis – Water Quality (Stormwater Runoff)

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Preliminary Hydrologic and Hydraulic Assessment	Complete	Sierra Overhead Analytics	Y
Ostrea Preliminary Hydrological and Hydraulic Assessment	Complete	Sierra Overhead Analytics	Y

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

B.1. Regulatory

The CWA established water quality goals for WOTUS. The National Pollutant Discharge Elimination System (NPDES) is the national program for issuing, modifying, revoking, and reissuing, terminating, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA, for the discharge of pollutants to state and federal surface waters from point sources. The NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges that adversely affect the quality of our nation's waters.

The NPDES permit program is administered by the USEPA, however, based on Chapter 90.48 RCW, the USEPA has delegated responsibility to administer the NPDES permit program to the State of Washington. Chapter 90.48 RCW defines Ecology's authority and obligations in administering the wastewater discharge permit program. Permitting for wastewater discharge is covered by Ecology.

B.1.a. Construction Stormwater

CSWGP is required for construction activities that result in the disturbance of one or more acres, as well as disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb one acre or more. To apply for a CSWGP, a permit application in the form of an NOI to Ecology must be submitted using an electronic application. The NOI must be submitted at least 90 days before discharging stormwater from construction activities and prior to the date of the first public notice as outlined in S2.B of the CSWGP. The current CSWGP for the State of Washington was effective on January 1, 2021, and expires on December 31, 2025.

B.1.b. Local/Yakima County

Yakima County operates through an interagency agreement with EFSEC for permitting and compliance. Under Yakima County regulations, a Stormwater Site Plan must be prepared and submitted. This would be a site plan that would outline the different construction activity phases and the related material/equipment staging areas, decontamination areas, areas of land disturbance, roadways, access points, and any related BMPs. The site plan would also outline any areas of easement of construction activities to channels even if they are dry and the plan must show that construction or O&M will not affect (block or impede) streams or channels. The site plan needs to be submitted and approved before any land-disturbing activities occur. The approval process requires approximately two weeks per site plan but can occur in as little as 48 hours if there are no major findings on the site plan.

B.2. Precipitation

According to the Western Regional Climate Center (WRCC), the closest climate station is located in Moxee, Washington at the Moxee City 10 E 455688 climate station (WRCC 2021). Historical (1946-2016) average annual rainfall is 7.87 inches, as obtained from the station's website. The two months with the highest volume of rainfall are November and December (averaging up to one inch of rain per month). The month with the least rainfall is July (averaging only 0.25 inches of rain). It is common for several weeks to pass without rainfall during July and August.

Precipitation also exists in the region resulting from snowfall and snowmelt. According to the WRCC, snowfall can reach up to 13.2 inches per year. The snowfall occurs chiefly between November and February each year. Snow tends to remain on the ground for periods varying from a few days to two months during this period. Snowfall can accumulate and melt rapidly causing runoff.

B.3. Surface Water Runoff

Both Study Areas are currently used for and zoned for agricultural activities including cattle grazing. The cattle grazing and other agricultural activities are already significant generators of dust in the arid climate of the Moxee Valley. This dust would potentially be a contributor to suspended solids entering the runoff and discharge.

As discussed in Attachment D, the ephemeral channels in the both the High Top and Ostrea Site Control Boundaries are categorized as ephemeral Type 5 drainages by Yakima County. As many of the ephemeral channels are currently filled with dried tumbleweed, Russian thistle, and other vegetation, this dried compacted vegetation layer may act as a natural impediment for stormwater runoff moving down the channels (Attachment D).

The 2020 Preliminary Hydrologic & Hydraulic Assessment for each Project (SOA 2020a, SOA 2020b, Attachment E) demonstrated that both Study Areas are currently undeveloped. In the High Top MPE, there are no clear natural drainage pathways in any areas marked out for development. On the periphery of development there will be channels for runoff potential, but most stormwater and snowmelt runoff will infiltrate before leaving the site.

For the Ostrea MPE, five channels will be crossed by an east-west access road. Four channels are located between sets of panels, however, there are no proposed facilities and panel arrays located in the ephemeral channels. On the edge of the development areas, there is runoff potential, but most stormwater and snowmelt runoff will infiltrate before leaving the site. Based on the 2020

Preliminary Hydrologic & Hydraulic Assessment findings and the anticipated regrading and total impervious surface areas for each Project, the runoff volume increase during construction was determined by the Preliminary Hydrologic and Hydraulic Assessment to be negligible (Attachment E). Stormwater runoff flow rates will be reassessed following proposed additional regrading or design changes as part of the final site plan design. If required, appropriate BMPs will be identified based on final site plan revisions.

The Preliminary Hydrologic and Hydraulic Assessment used HEC-RAS to model the maximum depths and velocities anticipated in a 100-year rainfall return event. The figures showing the HEC-RAS output for velocity for each Project was overlain with the proposed Projects as shown in Figures 4-3 and 4-4. Figures 4-3 and 4-4 demonstrate the relationship of land-disturbing activities to existing channels and streams on site.

As shown on both figures, all permanent structures and most construction activities in the MPEs will maintain a 20-foot buffer from existing channels and steep slopes. In areas with more gentle sloping where construction activities are likely to occur, the hydrologic velocity information provided on the Figures demonstrates the limited amount of runoff and the high amount of infiltration that is anticipated in the Study Areas.

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LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Potential BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- Proposed Access Road
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- 24 State Route 24

N

0 508 1,016 Feet

1 " = 538 '
1:6,458

PROJECT:
CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:
HIGH TOP HYDROLOGIC VELOCITY

DRAWN BY:	R.BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST	**FIGURE 4-5**	
DATE:	APRIL 2022		

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trcompanies.com

FILE NO: Fig 4-5 High Top Hydrologic Velocity EFSEC.mxd

Velocity (ft/sec)

High : 8.30

Low : 0.01

24

N W E S

0 0.1 0.2

Legend

Ostrea Project Boundaries

Velocity (ft/sec)

High : 8.30

Low : 0.01

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Proposed Access Road
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- 24 State Route 24

N

0 508 1,016 Feet

1:6,458 1" = 538 '

PROJECT:	CYPRESS CREEK RENEWABLES, LLC OSTREA SOLAR, LLC YAKIMA COUNTY, WASHINGTON
TITLE:	OSTREA HYDROLOGIC VELOCITY
DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERQUIST
DATE:	APRIL 2022
PROJ. NO:	427473
	FIGURE 4-6
	TRC 11180 NW Maple St. Suite 310 Issaquah, WA 98027 425-395-0010 www.trccompanies.com
FILE NO:	Fig 4-6 Ostrea Hydrologic Velocity EFSEC.mxd

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Surface-water runoff and infiltration	Given the low historical average precipitation in the area, combined with the natural permeability of the upper soil horizon, and the Study Areas' limited sloping in areas of proposed potential land disturbance, infiltration of normal stormwater and snowmelt would occur within the property boundaries and in the Study Areas. Normal levels of stormwater would not be concentrated even in the instance of a significant rain event. The Projects will result in minor changes to existing runoff patterns, as altered stormwater drainage occurs, changes will result from the limited amount of impervious surfaces proposed for each Project. There will be 5.0 acres of impervious surfaces for High Top and 8.2 acres of impervious surfaces for Ostrea. The Projects will retain stormwater on site and maintain natural drainage patterns for conveyance of upland flow in compliance with YCC 12.10.250. Proposed construction activities have the potential to generate stormwater pollutants during the construction phase. Stormwater runoff from construction could contain soils and sediments resulting from site grading and traffic that will contribute to total suspended solids and turbidity. In addition, spills or leaks from heavy equipment and machinery could contribute to chemicals and petroleum in the runoff. Other common pollutants that may result from construction activities include chemical spills; concrete residues; wastes from paints, sealants, solvents, detergents, glues, acids, lime, plaster, and cleaning agents; and heavy metals from equipment such as zinc or copper. Operation of the Project will include occasional site visits for inspections as well as needed and routine O&M activities. O&M activities could include applying an environmentally safe water-based or polymer additive dust palliative such as lignin sulfonate to roadways to mitigate dust emissions, PV panel washing using a truck with a water tank and sprayer, and managing the native

		vegetation and wildlife within the site boundaries. The Applicant currently anticipates PV panel washing will occur up to one to two times per year. and depending on the accumulation of dust on the surfaces of the PV panels. PV panel cleaning will have a negligible impact on stormwater runoff quality. As the operation would not create any pollutants of concern, impacts to downstream surface waters are anticipated to be minimal.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	Design considerations to minimize exposure	PV panel installation and most roadways will be kept as distant as reasonable from potential channelized flow. Final design and infiltration parameters shall be the responsibility of the Civil Engineer of Record chosen for the Projects.

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**

	N/A	N/A

F. References

Sierra Overhead Analytics (SOA). 2020a. October 28, 2020, Preliminary Hydrologic & Hydraulic Assessment High Top Solar Project, Yakima County, Washington. Sierra Overhead Analytics, Inc. October 28, 2020.

_____.. 2020b. October 28, 2020, Preliminary Hydrologic & Hydraulic Assessment Ostrea Solar Project, Yakima County, Washington. Sierra Overhead Analytics, Inc. October 28, 2020.

Western Regional Climate Center (WRCC). 2021. Period of Record Monthly Climate Summary. Moxee City 10 E, Washington. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa5688. Western Regional Climate Center. Retrieved on June 29, 2021.

Detailed Analysis – Plants

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Rare Plant, Attachment B	March 2021	Michael Ritter (WDFW) provided feedback on protocols and list of sensitive species for surveys.	Y
Ostrea Rare Plant, Attachment B	March 2021	Michael Ritter (WDFW) provided feedback on protocols and list of sensitive species for surveys.	Y
High Top Rare Plants, Addendum (to summarize March 2022 survey results	April 2022	Michael Ritter (WDFW) provided feedback on protocols and list of sensitive species for surveys.	N
Ostrea Top Rare Plants, Addendum (to summarize March 2022 survey results	April 2022	Michael Ritter (WDFW) provided feedback on protocols and list of sensitive species for surveys.	N

☐ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

See Attachment B, Rare Plants Reports for each Project which provides an overview of existing conditions, survey results, and recommended mitigation measures for avoidance and minimization of impacts to State sensitive plant species.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**

	Washington Natural Heritage Program	Both Projects have been designed to avoid impacts to the mapped populations of Columbia milkvetch [redacted]. The Projects have also been designed to minimize impacts to associated shrub-steppe habitat.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**

Detailed Analysis – Animals

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Wildlife Surveys Report, Attachment C	April 2022	Michael Ritter, Wildlife Area Habitat Biologist for the WDFW, provided feedback on protocols and list of sensitive species for surveys.	Y
Ostrea Wildlife Surveys Report, Attachment C	April 2022	Michael Ritter, Wildlife Area Habitat Biologist for the WDFW, provided feedback on protocols and list of sensitive species for surveys.	Y
High Top Wildlife Connectivity Analysis Addendum	May 2022	Michael Ritter, Wildlife Area Habitat Biologist for the WDFW, provided feedback on protocols and list of sensitive species for surveys.	N
Ostrea Wildlife Connectivity Analysis Addendum	May 2022	Michael Ritter, Wildlife Area Habitat Biologist for the WDFW, provided feedback on protocols and list of sensitive species for surveys.	N
High Top Habitat Restoration and Mitigation Plan	May 2022	Michael Ritter (WDFW) provided feedback on WDFW mitigation requirements	N
Ostrea Habitat Restoration and Mitigation Plan	May 2022	Michael Ritter (WDFW) provided feedback on WDFW mitigation requirements	N

☐ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

Please see Attachment C, General Wildlife Surveys Report for each which provides an overview of existing conditions and issues for this resource for each Project. The High Top and Ostrea Wildlife Connectivity Analysis Addendum and Habitat Restoration and Mitigation Plan will be submitted to EFSEC once complete.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ No	**☒ Yes**	
	Topical Area/issue	**Changes**
	WDFW PHS	High Top A total of three vegetation communities were identified; one of which, shrub-steppe, is considered a Washington PHS. Wetland delineation surveys identified several ephemeral channels in the Study Area. In the Study Area, the total shrub-steppe community is 225.5 acres found in the northern portion of the Study Area and south of the Transmission Line. Approximately 119.4 acres of shrub-steppe habitat will be in the MPE. The total acreage of shrub-steppe to be disturbed by the Project Footprint and within the fence will be identified in the final site plan. Some of the area in the MPE will be disturbed through construction activities and the placement of solar panels and access roads. Ostrea A total of four vegetation communities were identified; one of which, shrub-steppe, is considered a Washington Priority Habitat. Wetland delineation surveys identified several ephemeral channels in the Study Area. The shrub-steppe in the Study Area is 398 acres. Approximately 231 acres of shrub-steppe habitat will be in the MPE. The total acreage of shrub-steppe to be disturbed by the Project Footprint and within the fence will be identified in the final site plan. Some of the area in the fence will be disturbed through construction activities, and the placement of solar panels and access roads.
	Threatened Endangered and Sensitive Species	Much of the Study Areas have been converted from native shrub-steppe habitat to pasture and mixed environs, with evidence of agricultural use and plowing occurring historically and current grazing use. No Federally- listed species are likely to occur within the Project Site Control Boundary, nor does the Project Site Control Boundary contain USFWS designated critical habitat for these species. State-listed threatened, endangered, and sensitive wildlife species observed within the Study Areas include: [redacted]

		 The Projects have been designed to minimize impacts to State-listed threatened, endangered, and sensitive wildlife species and, as a result, impacts from the Project are expected to be minimal (Attachment C).
	Risk of collision by avian species	The development of the Projects will convert the current landscape into a PV solar array field, which could pose a collision risk to birds during construction and operation. Predicting the number and species that could occur as fatalities at the sites (or any project) is not possible at this time. From the review, Kosciuch et al. (2020) derived six key points: 1) three of the top four species detected as fatalities were common and abundant ground-dwelling birds; 2) most fatalities occurred in fall; 3) there has been no evidence of a large-scale fatality event of nocturnal migrating passerines; 4) approximately 53% of fatalities were of feather spots from an unknown source of fatality; 5) water-obligate birds (e.g., loons and grebes) occurred in nine of 10 studies in the Sonoran and Mojave Deserts BCR in a known migration route; and 6) the average annual fatality estimate across all species was 2.49 fatalities/MW/year. The 2020 Kosciuch review was based on findings from 10 solar facilities across California and Nevada, some of which were sited in areas similar to the MPEs extent (comprising mostly dry climates, some with shrub-steppe habitat). Although the Project sites are located outside the region where the studies summarized by Kosciuch et al. (2020) occurred, similarly low fatality rates of common ground dwelling birds may be expected at each MPE.
	Noxious or non-native species	The Projects have developed a Vegetation Management Plan (Attachment L), which includes methods for effective noxious weed control and revegetation. The Project will comply with RCW 17.10.140 in controlling the spread of noxious weeds.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	WDFW Priority Habitats and Species	Mitigation of the acres of shrub-steppe habitat within the MPE for each Project will be determined with WDFW and EFSEC such that each Projects' effects will be fully mitigated. The temporary and permanent impacts will be calculated in consultation with WDFW and EFSEC. Please see Attachment O for proposed mitigation. The Habitat Restoration and Mitigation Plan will be developed through consultation with WDFW and will be provided to EFSEC 90 days prior to site preparation.

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

F. References

Kosciuch, K., D. Riser-Espinoza, M. Gerringer, and W. Erickson. 2020. A Summary of Bird Mortality at Photovoltaic Utility Scale Solar Facilities in the Southwestern U.S. PLoS ONE 15(4): e0232034. doi: 10.1371/journal.pone.0232034.

Detailed Analysis – Environmental Health (Hazardous Materials)

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
Phase I Environmental Site Assessment: High Top Solar, LLC, Highway 24, Yakima County, WA 97601	September 25, 2020	TRC	Y
Phase I Environmental Site Assessment: Ostrea Solar, LLC, State Route 24, Yakima County, WA 97601	January 7, 2022	TRC	Y

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

B.1. Regulatory

Waste generated on site will need to comply with WAC Chapter 70A.300 - Hazardous Waste Management, WAC Chapter 173-303 – Dangerous Waste Regulations and the Washington Model Toxics Control Act.

B.2. Known or Possible Contamination

A Phase I Environmental Site Assessment has been completed for each of the proposed Projects following ASTM Standard Practice E 1527-13.

<u>High Top</u>

Based on the review of readily available historical information, site inspection, interview with knowledgeable parties, and a regulatory records search, the assessment found two RECs in connection with the proposed Project site:

1. The first REC included small patches of apparent oil-stained soil and numerous unlabeled partially full and empty containers (i.e., 5-gallon buckets, 55-gallon drums, and other smaller containers) and storage tanks, including one tank that was cut open and empty; rubber tires, piles of drilling mud, household items, as well as several vehicles and abandoned equipment, including a water truck and drilling rig.

2. The second REC included a drilling rig, an abandoned (engine removed) vehicle-mounted crane, three 55-gallon drums, 50 square feet of apparent oil-stained soil, and miscellaneous materials and trash.

Ostrea

The Phase I Environmental Site Assessment revealed no evidence of RECs in connection with the Ostrea Project.

B.3. Risk of Fire or Explosion

Both MPEs are currently vacant with no known stored potentially hazardous or petroleum products on site.

B.4. Hazardous Material Sources

Both MPEs were historically used for agriculture. There were no RECs identified within the Ostrea Project Site Control Boundary. Two RECs were identified within the High Top Project Site Control Boundary. The RECs are located outside the High Top MPE. The compounds identified and observed included non-significant concentrations of gasoline and/or oil-related products in addition to low levels of metals and appeared to be localized within the near-surface (0 to 2-foot-depth) soils. Based on field observations, it appears that these impacts do not reach deeper soil horizons.

B.5. Public Safety Standards

There are no existing public safety plans for the Project properties.

B.6. Emergency Plans and Services

Emergency services are provided by the East Valley Fire Department and the Yakima County Sheriff's Office.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ No	**☒ Yes**	
	Topical Area/issue	**Changes**
	Risk of fire or explosion	Overall, the risk of fire on each of the Projects is low. All roads including the access road will be built to fire code standards as set by the Yakima County Fire Marshal's Office (YCC 13.10,19.18). The Yakima County Fire Marshal will review the proposed road plans for compliance with Yakima

		County fire equipment-related road standards for maneuvering on public and private roads. Fire hazards from vehicles and human activities will be reduced through implementation of BMPs, such as use of spark arrestors on power equipment, avoiding driving vehicles off roads and allowing smoking in designated areas only. Specific fire-related BMPs will be outlined in a Fire Control Plan to be developed in consultation with the Yakima County Fire Marshal and the East Valley Fire Department. On Ostrea, a BESS will be located at the site. For High Top, a BESS may be located on the site. The BESS will consist of self-contained storage modules placed in racks and a cooling system; notably the BESS has the potential to be a flammable source if the lithium-ion system overheats. The proposed BESS will contain a fire suppression system in accordance with fire code and NFPA Standards, specifically NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems." The system will include monitoring equipment and alarm systems with remote shut-off capabilities. Additionally, the amount of petroleum fuels or lubricating oils stored on site or used to operate equipment during construction and O&M will be minimal, further limiting any risk of fire.
	Hazardous material sources	Any hazardous materials used during construction activities will be stored and used in accordance with the manufacturer's specifications and applicable hazardous material regulations. The applicant will prepare a Construction and O&M SPCC Plan, consistent with requirements of 40 CFR Part 112, and WAC 463-60-205, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventive procedures and rapid response measures will address/prevent potential water quality issues. The handling and application of herbicides for the management of noxious weeds on site is described in the Vegetation Management Plan, which will be provided to EFSEC prior to construction. The Projects will only use herbicides approved for use in the State of Washington by the USEPA,

		Ecology, and the Washington Department of Agriculture.
	Emergency plans and services	The following emergency plans will be developed and maintained on site in the engineering and procurement contractor trailer and the O&M trailer and provided to local emergency services: • Construction Emergency Plan, • Construction Fire Control Plan, • Construction Health and Safety Plan, • O&M Emergency Plan, • O&M Fire Control Plan, and • O&M Health and Safety Plan. With these plans and preventative measures in place, the facilities are not expected to result in impacts from hazardous spills, fire, or other emergencies.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

D. Proposed Mitigation and Monitoring

☒ **Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.**

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ **No**	☒ **Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Land Use, Natural Resource Lands, & Shoreline Compatibility

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Land Use Consistency Review, Attachment A	March 2022	TRC	Y
Ostrea Land Use Consistency Review Attachment A	March 2022	TRC	Y

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

See Attachment A, Land Use Consistency Review for each Project which provides an overview of existing conditions and issues for this resource.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Changes to land use	The High Top and Ostrea Projects MPEs will occupy 926.6 and 811.3 acres respectively within each Project Site Control Boundary. The unoccupied portions will remain available for continued landowner uses. The Projects will not affect or be affected by land uses on nearby or adjacent properties, including normal business operations of working farmland. No structures will be demolished, no workers will reside in the completed facilities for the Projects, and no people will be displaced by the completed Projects.

	Prime Farmland	Both Projects are designated Agricultural Resource in *Horizon 2040.* Soils on both Projects meet criteria for designation as farmland of statewide or unique importance. However, crop production has been absent from High Top and Ostrea for 25 and 70 years, respectively and cheatgrass and other weedy species are dominant in the previously plowed areas on the Projects. Additionally, there is no on-site water source, so neither Project Study Area is irrigated, which diminishes the agricultural potential of the site. Therefore, use of the properties for a non-agricultural solar energy facility will not affect current agricultural activities on-site to the detriment of the region's commercial agricultural economy. With a planned Project lifespan of 40 years for each Project, after which the solar arrays will be decommissioned and removed from the site, the Projects will not remove the opportunity to re-establish agricultural uses in the future, consistent with the current intent of Policy LU-ER-AG 1.1.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	Military buffer and DOD, FAA consultation	Preliminary site plans for both Projects indicate that neither solar panels or access will be installed within 300 feet of the Yakima Training Center property line consistent with the Policy LU-G 1.4; in addition, none of the solar panels or access roads will constitute habitable structures to which Policy LU-G 1.4 specifically applies.
	Electrical generation capacity/service	The High Top and Ostrea Projects will be a new source of clean, renewable energy supply for regional customers. The Projects will support implementation of the Washington Clean Energy Transformation Act (2019), which made it current policy to transition the state's electrical supply to 100-percent carbon-neutral by 2030 and 100-percent carbon-free by 2045 (RCS 19.405.010). The existing BPA Midway to Moxee 115 kV and PacifiCorp's Union Gap-Midway 230 kV line

		transmission lines have sufficient capacity to support the additional MW from each Project without significant or cost-prohibitive upgrades.
	Horizon 2040 Yakima County Comprehensive Plan Designation	The High Top and Ostrea facilities will be consistent with the Horizon 2040 Yakima County Comprehensive Plan Designation as described in the Land Use Consistency Review for each Project, Attachment A. The Land Use Consistency Review analyze the Projects in terms of consistency with applicable goals and policies of Yakima County's Agricultural Resource Area land use designation.
	Yakima County Zoning District	The total extent of the MPEs will occupy a small portion of Yakima County's AG zoning district and will comply with applicable zoning standards and requirements for development of a solar energy generation facility. The Land Use Consistency Review, Attachment A, demonstrates the Projects' compliance with applicable provisions of Yakima County's AG zoning district. As a provider of renewable energy, the Projects will help the state to meet its needs for power for agricultural as well as commercial and industrial business operations, and in this way, the Projects will play a role in supporting the regional economy. Though the Project sites have an agricultural land use designation, aerial images of the property suggest that agricultural activity on High Top and Ostrea sites ceased 25 and 70 years previously, respectively. The Projects will facilitate the property owner's intent to develop the sites with revenue-generating Projects on lands that have not in recent years generated revenue with agricultural development. The Project would not remove the opportunity to re-establish agricultural uses in the future and preserves the land for future agricultural use.
	Yakima County Critical Areas	The Land Use Consistency Review demonstrates that the facilities will comply with Yakima County's applicable critical area regulations.

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☒ No	**☐ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	N/A	N/A	N/A

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Noise, Light, Glare, and Aesthetics

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
High Top Glint and Glare Analysis and Solar Glare Reports, Attachment H	Complete – February 2022	ForgeSolar	Y
Ostrea Glint and Glare Analysis and Solar Glare Reports, Attachment H	Complete – February 2022	ForgeSolar	Y
High Top Federal Aviation Administration (FAA) 7460-1 Determination of No Hazard (Attachment I)	July 28, 2020	FAA process for evaluating aviation impacts from new construction. The process includes review by Department of Defense.	Y
Ostrea FAA 7460-1 Determination of No Hazard (Attachment I)	July 24, 2020	FAA process for evaluating aviation impacts from new construction. The process includes review by Department of Defense.	Y
Yakima Training Center Consultation	December 30, 2021	Department of Defense Yakima Training Center	N

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

As noted in Part 3 16. only glint and glare was carried forward for detailed analysis. Please See Attachment H, Glint and Glare Analysis and Solar Glare Reports.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**

	Glare	Models project no glare will be visible at any selected observation points to either residences, roadways, or air traffic. Based on the results of these analyses, the Projects, as currently designed are not predicted to create any potentially significant impacts to residences, roadways, or air traffic. These studies were conducted using an intentionally conservative approach to represent the "worst-case scenario" for glare predicted. In most cases, glare predicted by this model will likely be an over-estimate of the actual glare visible by observers.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☒ No	**☐ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	N/A	N/A	N/A

No mitigation measures are proposed for glare, as no glare is predicted to be visible at any of the representative receptors. No significant unavoidable impacts from glare are expected.

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Archaeological and Historical Resources

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
Cultural Resources High Top Solar Project report, Attachment F.	Complete – October 2021	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	Y
Cultural Resources Ostrea Solar Project report, Attachment F.	Complete – October 2021	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	Y
Cultural Resources High Top Solar Project Addendum (February and March 2022 surveys)	April 2022	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	N
Cultural Resources Ostrea Solar Project Addendum (February and March 2022 surveys)	April 2022	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	N

☐ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

See Attachment F, Cultural Resources Report for each Project which provides an overview of existing conditions and issues for this resource.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Archaeological Resources	The Ostrea MPE has been designed to avoid direct impacts within a 100-foot buffer around the

		previously recorded site 45YA01587and newly recorded site TRC-Ostrea-001. It is possible that construction of the Projects (including, but not limited to, clearing of vegetation, grading, and excavation) could unearth previously undiscovered resources and result in significant impacts to archaeological resources and/or human remains. Unanticipated archaeological resources could be encountered during construction-phase ground-disturbing activities, inasmuch as precontact sites have been identified within a 1-mile radius of the Project sites. Accidental archaeological discoveries or unanticipated resources or remains encountered during construction could be significantly affected. If, during the course of construction, cultural resources (i.e., precontact sites, historic sites, or shell or bone, isolated artifacts or other features) are discovered, the Discovery of Archaeological Resources and Inadvertent Discovery Plan will be implemented. In order to comply with RCW 27.53, if any WHR-protected site is impacted by the Projects, a DAHP excavation permit will be obtained and perform all necessary archaeological work.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Avoidance of significant impacts to archaeological and historical resources.	The Ostrea MPE was designed to avoid direct impacts to the previously recorded site 45YA01587 and newly recorded site TRC-Ostrea-001.

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Cultural Resources

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
Cultural Resources High Top Solar Project report, Attachment F.	Complete – October 2021	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	Y
Cultural Resources Ostrea Solar Project report, Attachment F.	Complete – October 2021	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	Y
Cultural Resources High Top Solar Project Addendum (February and March 2022 surveys)	April 2022	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	N
Cultural Resources Ostrea Solar Project Addendum (February and March 2022 surveys)	April 2022	TRC contacted the DAHP Office on February 11, 2021, to discuss the Project.	N

☐ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

See Attachment F, Cultural Resources Report for each Project which provides an overview of existing conditions and issues for this resource.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**

	See Part 4 Detailed Analysis – Archaeological and Historical Resources C. 1	

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☐ No	**☒ Yes**	
	Topical Area/issue	**Changes**
	Part 4 Detailed Analysis – Archaeological and Historical Resources C. 2	

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Traffic and Transportation

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
No relevant studies were conducted for this section.	N/A	N/A	N/A

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

B.1. Transportation Systems

Primary access to the site is via SR-24, which is classified by WSDOT as a Rural Minor Arterial Road. Access to SR-24 will occur primarily from the west via I-82, but some vehicles could travel from the east, leaving Richland via SR-240 to SR-24 or leaving Sunnyside via SR-241 to SR-24. SR-24 via I-82 will be the preferred route for the limited oversize deliveries for Project construction, such as main power transformers.

SR-24 is a two-lane highway with approximately 2,700 average annual daily trips (AADT) in 2019, as measured at the intersection with Den Beste Road, approximately 14 miles west of the Projects (WSDOT 2020). Approximately 19 percent of vehicles currently using the road at this location are trucks (approximately 500 daily trips). Although hourly trip data at this location are not available, it is assumed that current truck traffic is spread throughout the day, and the majority of other trips in this rural area also are spread throughout the day, with relatively few extra trips focused during the morning and evening commute times. Spreading the average annual daily trips across a 10-hour period from 8 am to 6 pm suggests that on average, approximately 250 to 300 vehicles per hour may travel on SR-24 near the site. Traffic may be slightly higher during morning and evening commute times and some trips also will occur later in the evening or overnight.

Information on seasonal fluctuations in existing traffic is not available from WSDOT from locations in the immediate vicinity of the Project Site Control Boundaries. A monitoring station approximately 23 miles east of the Projects, at the Vernita Bridge across the Columbia River in Mattawa, suggests the highest hourly averages, approximately 12 to 13 percent of total AADT, occur during evening commute times in July through October. This likely reflects a slight increase in traffic during the harvest season, consistent with the agricultural character of the area.

West of the Projects, traffic numbers are higher passing through Moxee (AADT up to 8,000) and nearing the city of Yakima (AADT up to 23,000 on the off-ramp to I-82 north). Congestion on SR-24 occurs at the westbound off-ramp to I-82 (located approximately 27 miles west of the Project) during afternoon peak times.

WSDOT generically classifies state highways in rural areas with a level of service "C," indicating speeds near free flow but restricted freedom to maneuver. Site-specific level of service information for SR-24 has not been developed by WSDOT, and Yakima County does not maintain information for state highways. However, it is anticipated that the actual level of service in the vicinity of the Projects is closer to "A," indicating relatively free flow of traffic most of the time. The road surface in this area is in good to very good condition, as defined by WSDOT (WSDOT 2018a).

I-82 carries 48,000 to 52,000 AADT near the intersection with SR-24 and, according to WSDOT (WSDOT 2018b) the entire corridor performs above WSDOT's congestion threshold. SR-240 carries approximately 1,831 vehicles per day at the intersection with SR-24 (WSDOT 2018c). SR-241 carries an average of 1,900 annual daily trips and operates above WSDOT's congestion threshold (WSDOT 2018d).

Steep grades are present on the alternative route (i.e., SR-241) with no passing lane.

B.2. Waterborne Air and Rail Traffic

The Burlington Northern Santa Fe Railroad has a track running through the city of Yakima, more than 27 miles to the west and south of the Projects. The Union Pacific Railroad network includes a track between Wallula and the city of Yakima, also to the west and south of the Project. The Yakima Air Terminal in the city of Yakima provides air service to Seattle. No port service is present in the vicinity of the Projects.

B.3. Parking

No designated parking areas are currently present at the Projects' location.

B.4. Movement of People or Goods

The existing conditions related to the movement of people and goods near the Projects are described above, under "Transportation Systems" and "Waterborne Air and Rail Traffic."

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Transportation Systems	**Approach** The Applicant has consulted with WSDOT regarding the approach off SR-24 for both Projects. The existing approach for each is a private gravel road, which will be upgraded to accommodate the Projects. WSDOT has stated that the work will require a General Permit. The Applicant will obtain the General Permit and develop a Traffic Control Plan for traffic management during improvement of highway access. An additional approach off SR-24 on the southwest corner of the High Top MPE will be added if required to access potential panels proposed on the west side of the ephemeral channel. WSDOT reviewed the initial site plan for the Projects. The preliminary site plans were reviewed with WSDOT by zoom call in October and were emailed to WSDOT October 28, 2021. WSDOT provided to conceptual approval for the proposed entrances for each Project (Attachment P). The potential second Project entrance off of SR-24 in the southwest corner of the High Top Project has not been reviewed by WSDOT but will be included in the general permit if required. **Construction** Project construction for each Project will likely add an average of 900 to 1,000 truck trips over a construction period lasting nine - 24 months. The primary source of construction traffic will be worker commutes to the Projects, originating from nearby communities including Yakima, Sunnyside, and Richland. Construction traffic will include heavy-duty trucks, such as semi-trailer dump trucks and

		40-foot container trucks, that will be carrying gravel and other materials required to improve or construct new access roadways. These heavy-duty trucks will also provide concrete for component foundations and materials for the solar module blocks themselves. In addition to concrete and gravel, single-unit water-tank trucks delivering water to the Projects will be required. Water will be needed for dust control during road construction and for the temporary concrete batch plant (if required). Trucks will deliver water during construction. Semi-trailer flat beds carrying electrical equipment and materials required for solar panel construction and power transmission equipment also will be necessary. It is assumed construction crews will drive pick-up trucks to and from the Study Areas. During construction, traffic on SR-24 in the vicinity of the Projects will likely increase approximately 210 vehicle trips per day, from the current average of 2,700 trips per day to an average of 2,910 trips per day. Worker commutes will add approximately 75 vehicles to SR-24 during the morning commute and again in the evening, with some workers arriving from housing to the west (Moxee or Yakima area) and others arriving from the east (Sunnyside or Tri-Cities). Equipment deliveries are expected to be a maximum of 20 per day during the first five months of construction and will taper off to a maximum of 10 per day for the second half of construction for each Project. These 210 trips conservatively project to approximately 20 deliveries per day over the entirety of construction for each Project. Equipment and water deliveries will be spread throughout the day. The timing of peak construction activity on each Project may overlap with the harvest season; however, harvest vehicles will typically travel throughout the day and are not limited to prime commuting hours. Even if all traffic were to come via the primary route on I-82, a temporary increase of 210 trips per day for each Project compared to the current 48,000 to 52,000 trips per day on I-82 will not significantly impact current congestion on this roadway.

		If all workers arrive on site during one hour in the morning and leave during one hour in the evening, this will constitute a temporary increase over current traffic from the current estimated 250-300 hourly trips during peak commute hours in the vicinity of the Study Areas. However, the additional vehicles will not all arrive from the same direction and therefore, will add only a portion of the total 75 commute trips to traffic from the west, with the remainder adding to traffic coming from the east. Conservatively assuming a relatively even distribution of construction trips leading to SR-24 between I-82, SR-240, and SR-241, the additional daily trips on SR-240 and SR-241 are anticipated to be less than 75 trips per day on either road (i.e., 40-50 worker commute trips in the morning, and 40-50 worker commute trips in the evening). This will constitute a temporary increase on SR-241 and SR-240 of less than 20 percent under the conservative assumption that all these trips occur during a single peak morning or evening commute hour. These temporary increases will not significantly impact current traffic levels on these roadways. **Operations** Full-time operational staff are expected to occasionally commute to each Project from nearby communities. Operational trips include maintenance employees traveling to work in their personal vehicles, as well as specialized personnel required for periodic inspections of the Project components who may travel in light-duty trucks. The occasional delivery truck may also access the Projects during operations. In addition, water will be delivered to each site up to two times each year for panel washing during operations. Assuming 96,000 gallons are required each time the panels are washed, up to approximately 50 truck trips may be required to wash panels for up to two panel washings. Panel washing will occur over the span of approximately one week, resulting in approximately 5 truck trips per day for each Project. This will not result in a significant impact on level of service for area roadways because it will result in less than one percent increase in vehicle traffic on the days when it occurs.

	Internal Access Roads	Internal access roads for each Project are shown in Figures 4-5 to 4-13.
	Waterborne Air and Rail Traffic	No changes will occur to waterborne, rail, or air traffic as a result of either Project's construction or operation. Neither Project will rely on these modes of transportation for Project activities.
	Parking	During construction, workers will park off public roads in designated areas within the construction site for each Project. Construction will not adversely affect the availability of parking for other users because no parking is currently available. Parking needs during operations will be limited to occasional use by two to four employees at the O&M trailer for each Project. Each Projects' gravel parking area will be located less than 100 feet from the O&M trailer and will include at least six parking spots. As the O&M trailer is internal to the MPEs, no vehicular backing up or maneuvering will occur within a public right-of-way.
	Movement of People or Goods	Improvements to each Project approach along SR-24 may temporarily increase traffic along that roadway. Therefore, a Traffic Control Plan will be prepared in concert with WSDOT.
	Traffic Hazards	Improvements to each Project approach along SR-24 have a potential to cause traffic hazards if not marked and mitigated. Therefore, a Traffic Control Plan will be prepared and submitted to EFSEC at least 90 days prior to site preparation.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

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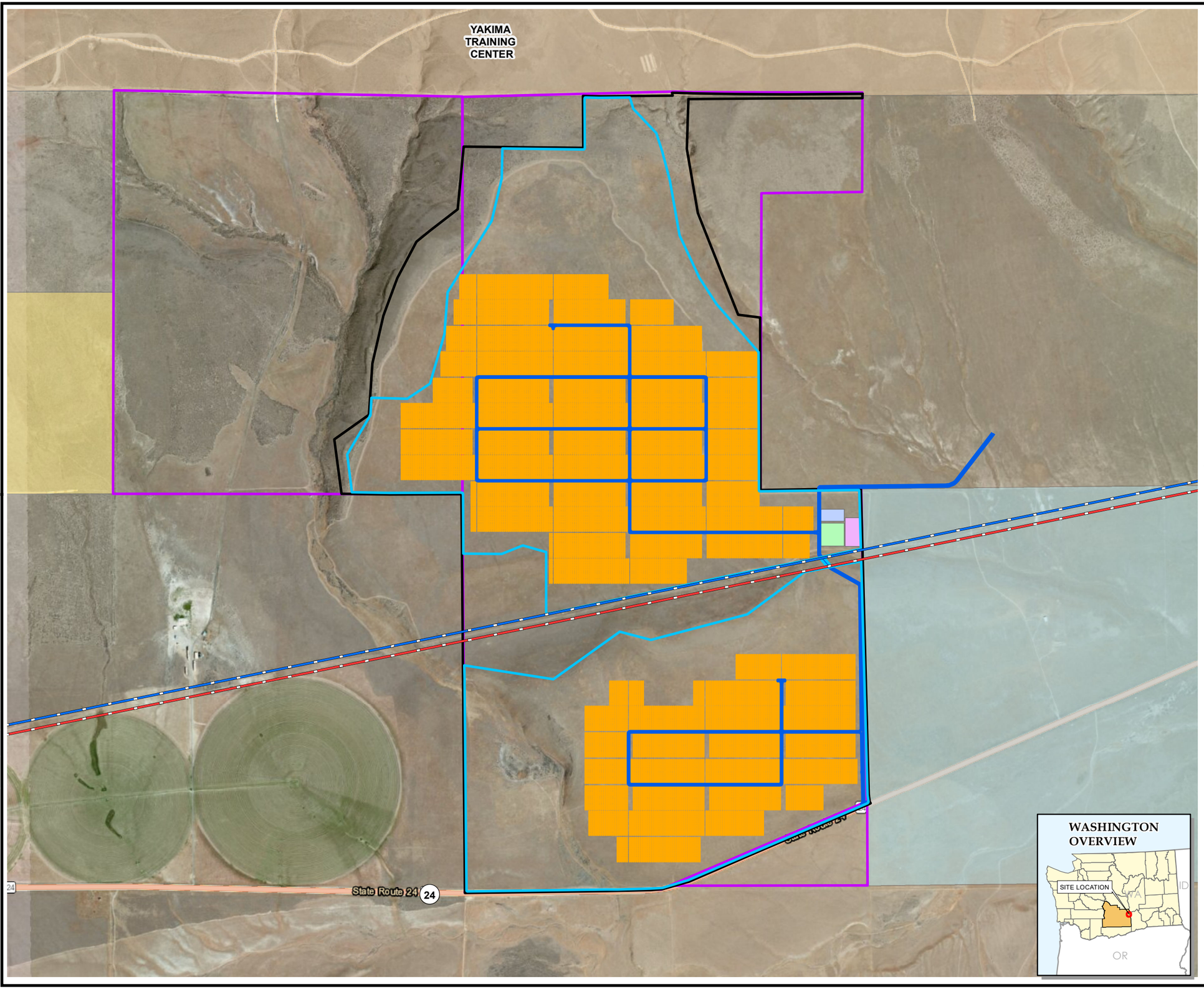


LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Proposed Access Road
- Proposed Solar Array
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Potential BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- Bureau of Land Management
- U.S. Dept. of Defense-Yakima Training Center
- State Lands
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

N

0 1,000 2,000 Feet

1 " = 1,250 '

1:15,000

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

HIGH TOP PROPOSED SOLAR PANEL FIELDS AND ROADS

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		
DATE:	APRIL 2022		

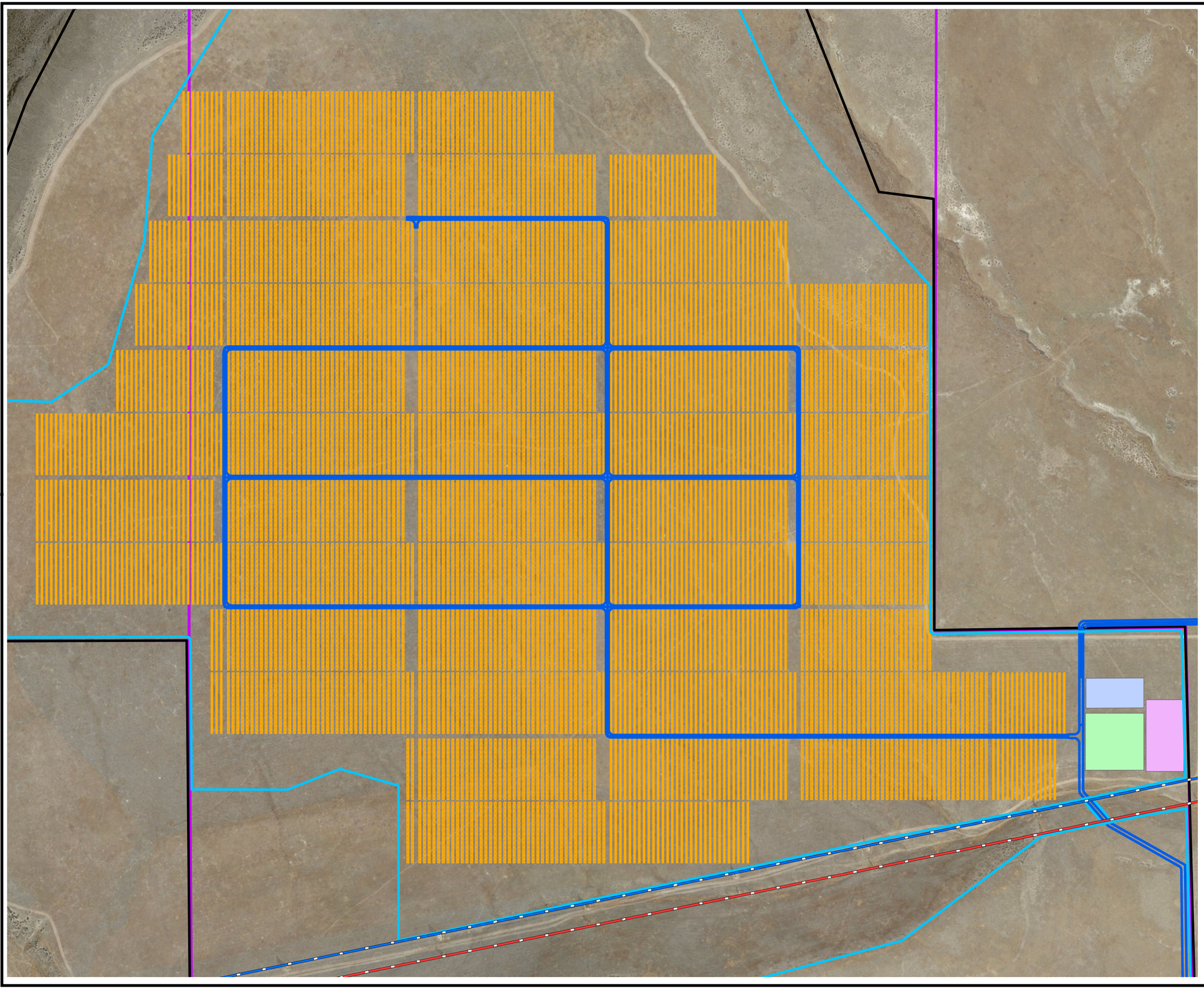
FIGURE 4-7

TRC

11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-7 High Top Proposed Solar Panel Fields and RoadsEFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 4/4/2022, 14:27:20 PM by BTRACY -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 4-7 High Top Proposed Solar Panel Fields and RoadsEFSEC.mxd



LEGEND

- Project Site Control Boundary
- Study
- Proposed Maximum Project Extent
- Proposed Access
- Proposed Solar
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Potential BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

N

0 500 1,000 Feet

1 " = 500 '

1:6,000

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

HIGH TOP NORTH PROPOSED SOLAR PANEL FIELD ROAD ACCESS

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-8**
DATE:	APRIL 2022		

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Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-8 High Top Proposed Solar North Panel Field Road Access EFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 4/4/2022, 13:55:05 PM by BTRACY -- LAYOUT: ANSI B (11"x17")
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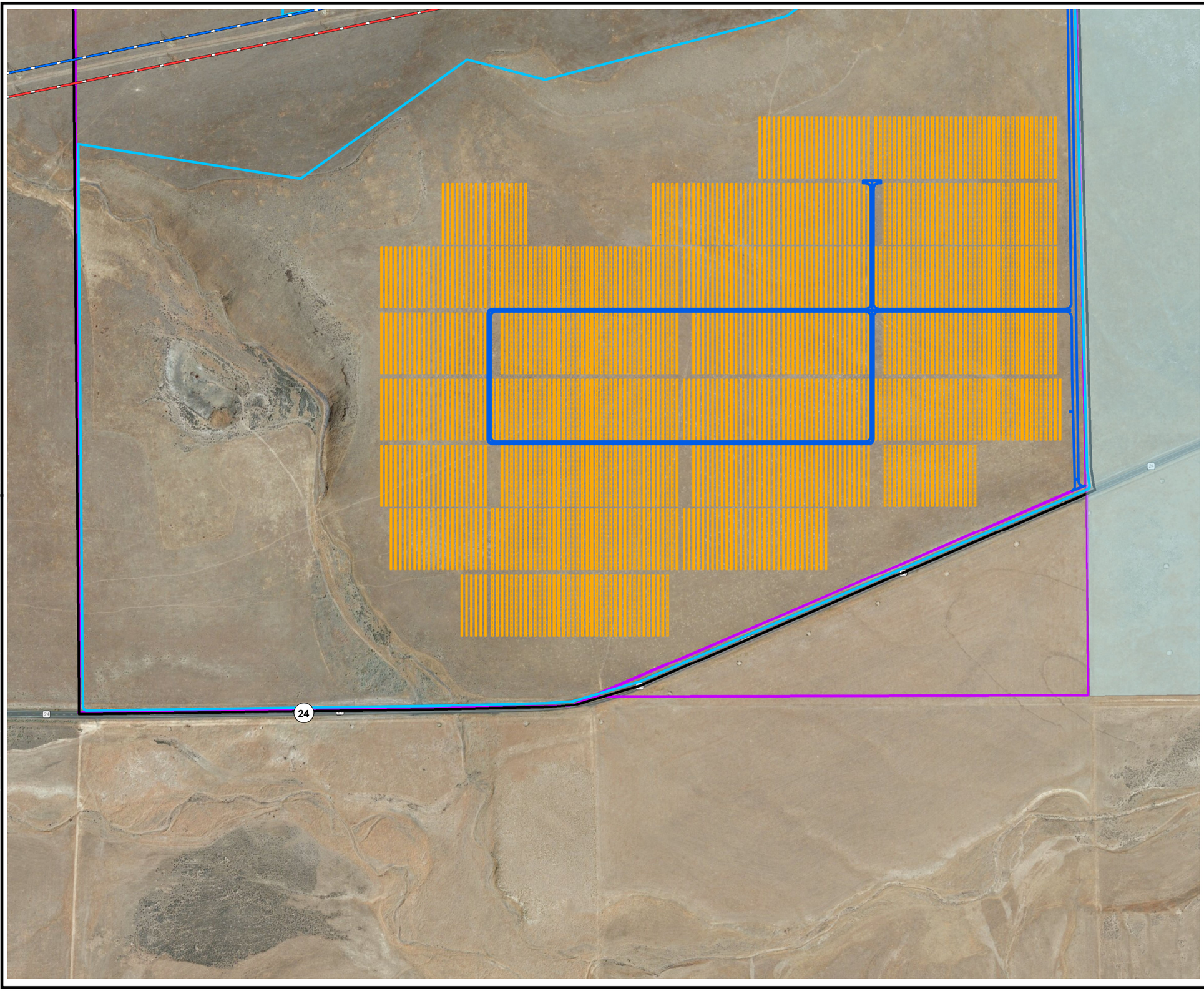

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Proposed Access Road
- Proposed Solar Array
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- State Lands
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

N

0 500 1,000 Feet

1 " = 500 '
1:6,000

PROJECT:
CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:
HIGH TOP SOUTH PROPSED SOLAR PANEL FIELD ROAD ACCESS

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-9**
DATE:	APRIL 2022		

TRC
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Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-9 High Top Solar South Proposed Solar Panel Field Road Access EFSEC..mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
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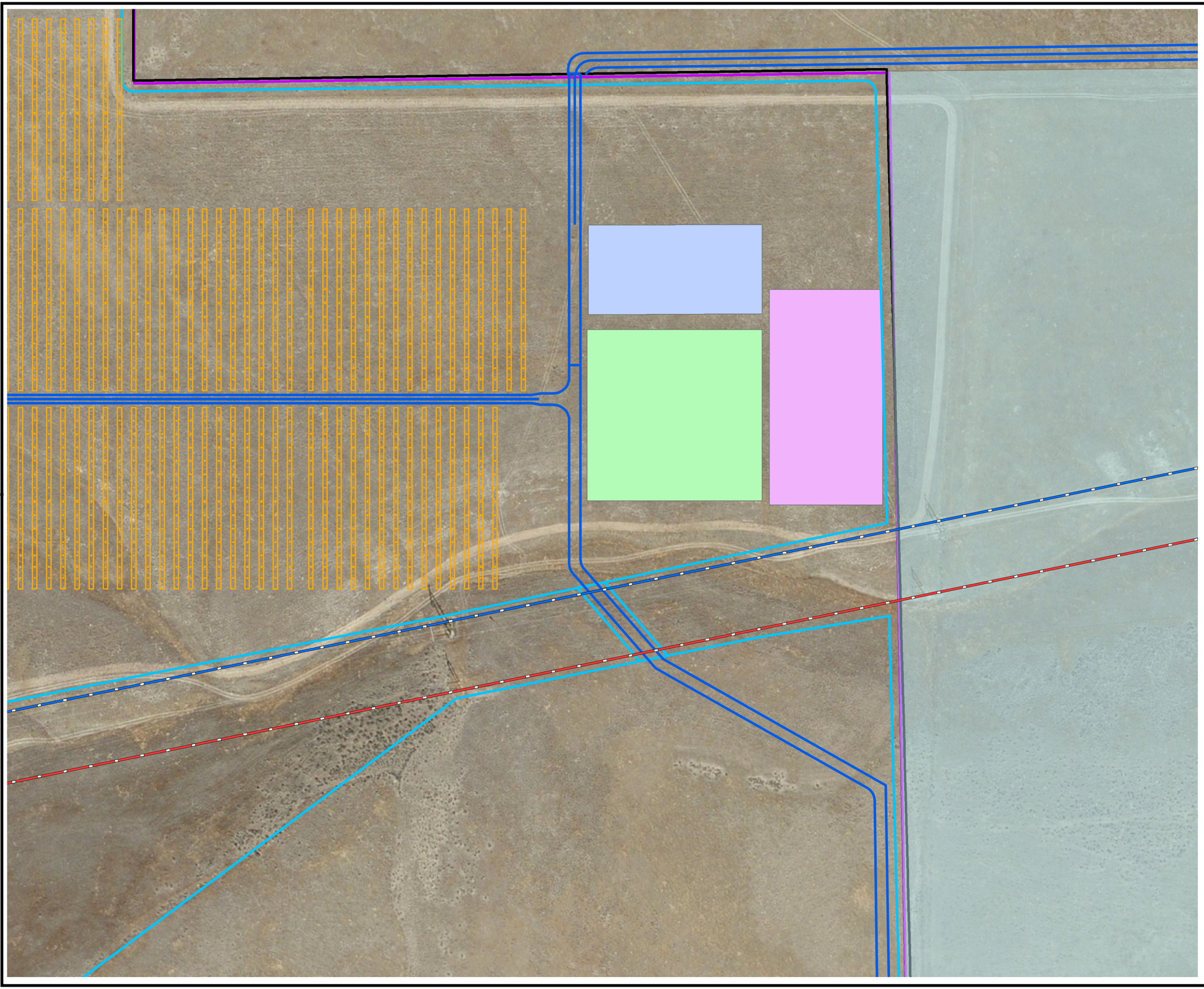
Path: S:\1-PROJECTS\CCRN\Northwest\422984-High Top\Fig 4-9 High Top Solar South Proposed Solar Panel Field Road Access EFSEC..mxd



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Proposed Access Road
- Proposed Solar Array
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Potential BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- State Lands

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

N

0 100 200 Feet

1 " = 167 '

1:2,000

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

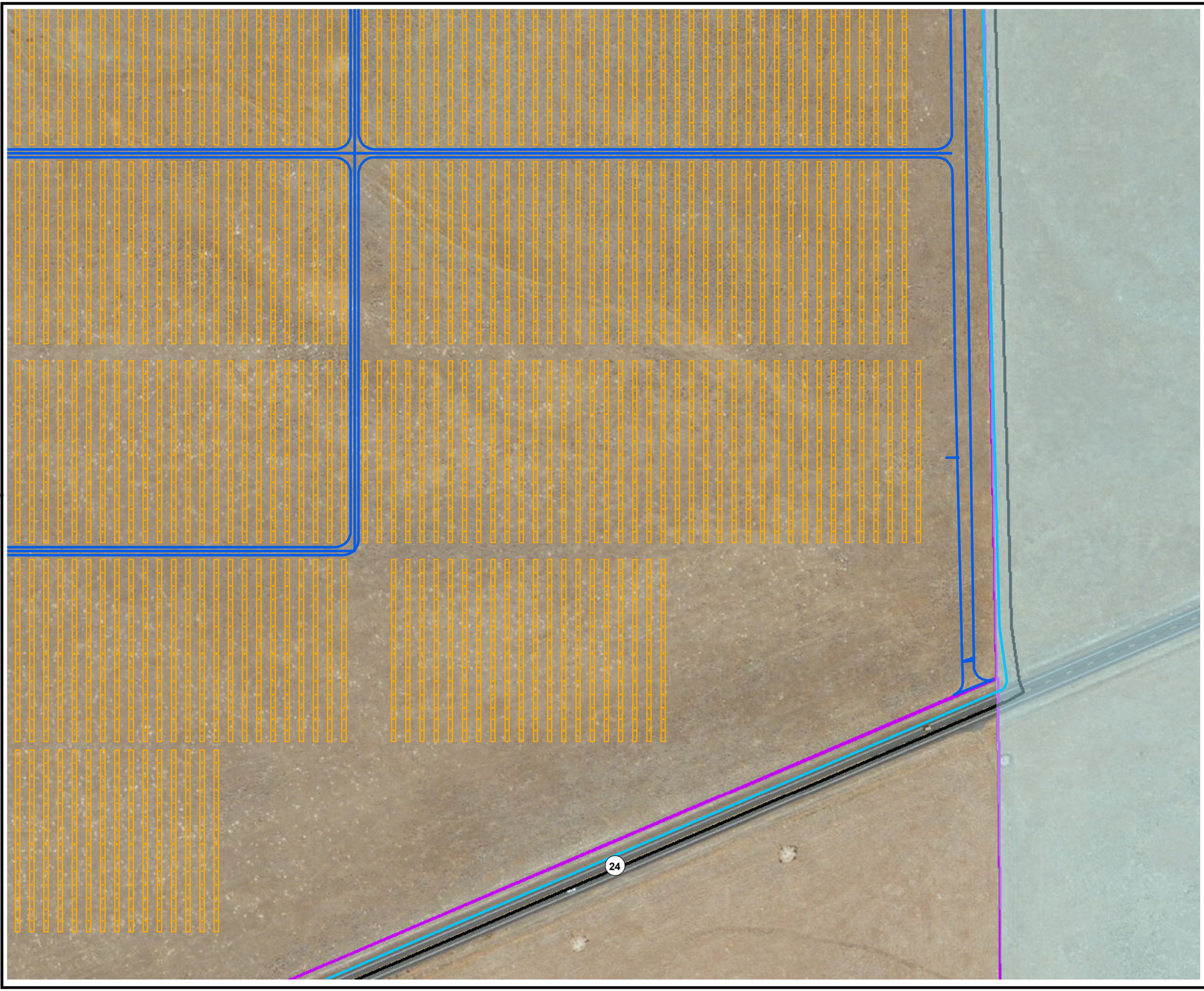
HIGH TOP PROPOSED SUBSTATION AND MATERIAL LAYDOWN AREA

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-10**
DATE:	APRIL 2022		

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-10 High Top Proposed Solar Substation and Material Laydown Area EFSEC..mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 4/4/2022, 14:06:39 PM by BTRACY -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\CCRN\Northwest\422984-High Top\Fig 4-10 High Top Proposed Solar Substation and Material Laydown Area EFSEC.mxd



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Proposed Access Road
- Proposed Solar Array
- State Lands
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

WASHINGTON OVERVIEW

0 100 200 Feet

1 " = 167 '

1:2,000

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
HIGH TOP SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

HIGH TOP PROPOSED SR-24 ENTRANCE ROAD

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	P. LORENZ		
APPROVED BY:	B. BERGQUIST		**FIGURE 4-11**
DATE:	MARCH 2022		

TRC

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Issaquah, WA 98027
425-395-0010
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FILE NO.: Fig 4-11 High Top Solar Proposed SR 24 Entrance Road EFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
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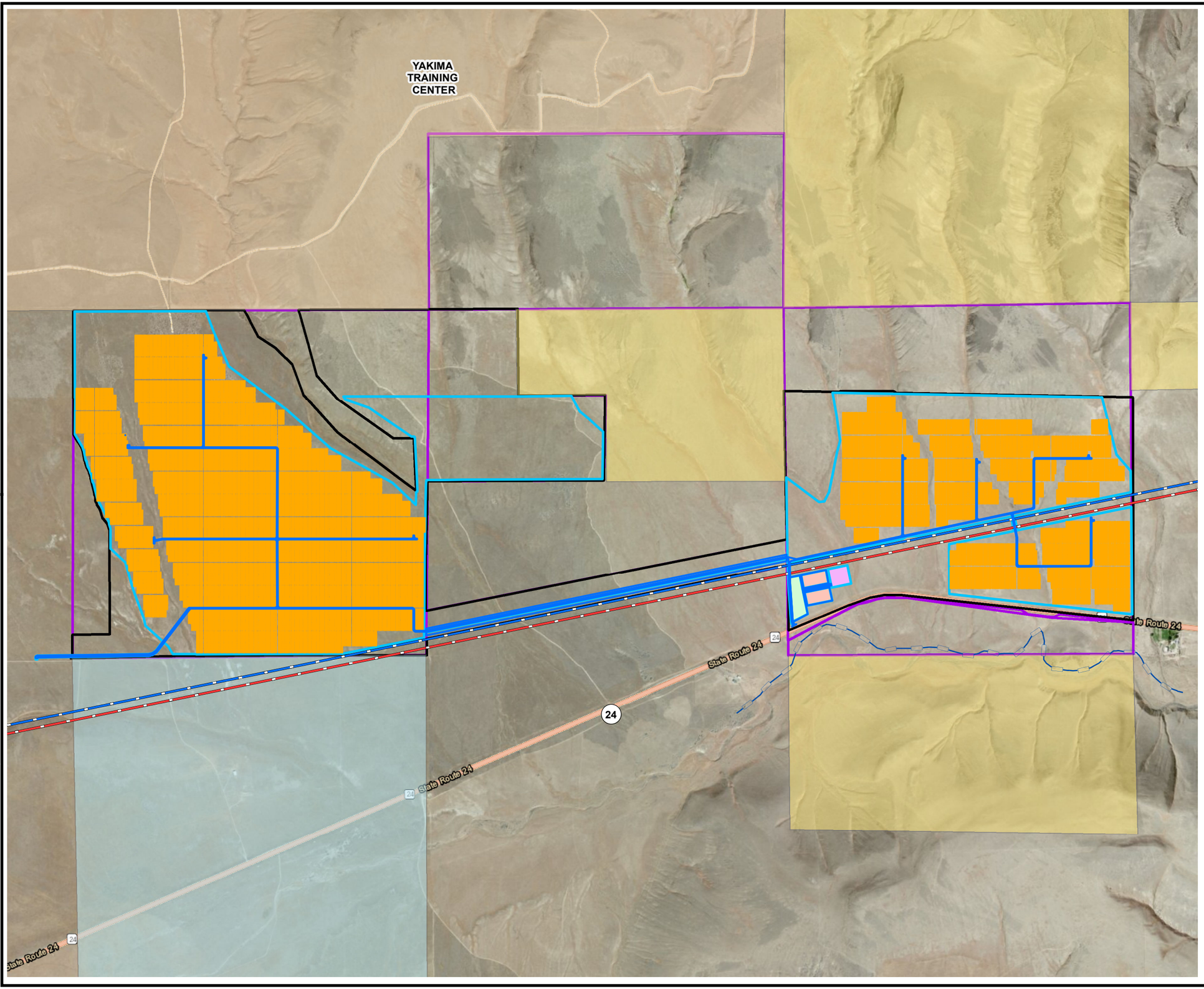

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Solar Array
- Proposed Access Road
- 100 yr Floodplain
- Proposed BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- Bureau of Land Management
- U.S. Dept. of Defense-Yakima Training Center
- State Lands
- (24) State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

1 " = 1,417 '
1:17,000

0 1,000 2,000 Feet

PROJECT:
CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:
OSTREA PROPOSED SOLAR PANEL FIELDS AND ROADS

DRAWN BY:	R. BLAKE	PROJ. NO.:	427473
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-12**
DATE:	APRIL 2022		

TRC
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Issaquah, WA 98027
425-395-0010
www.trccompanies.com

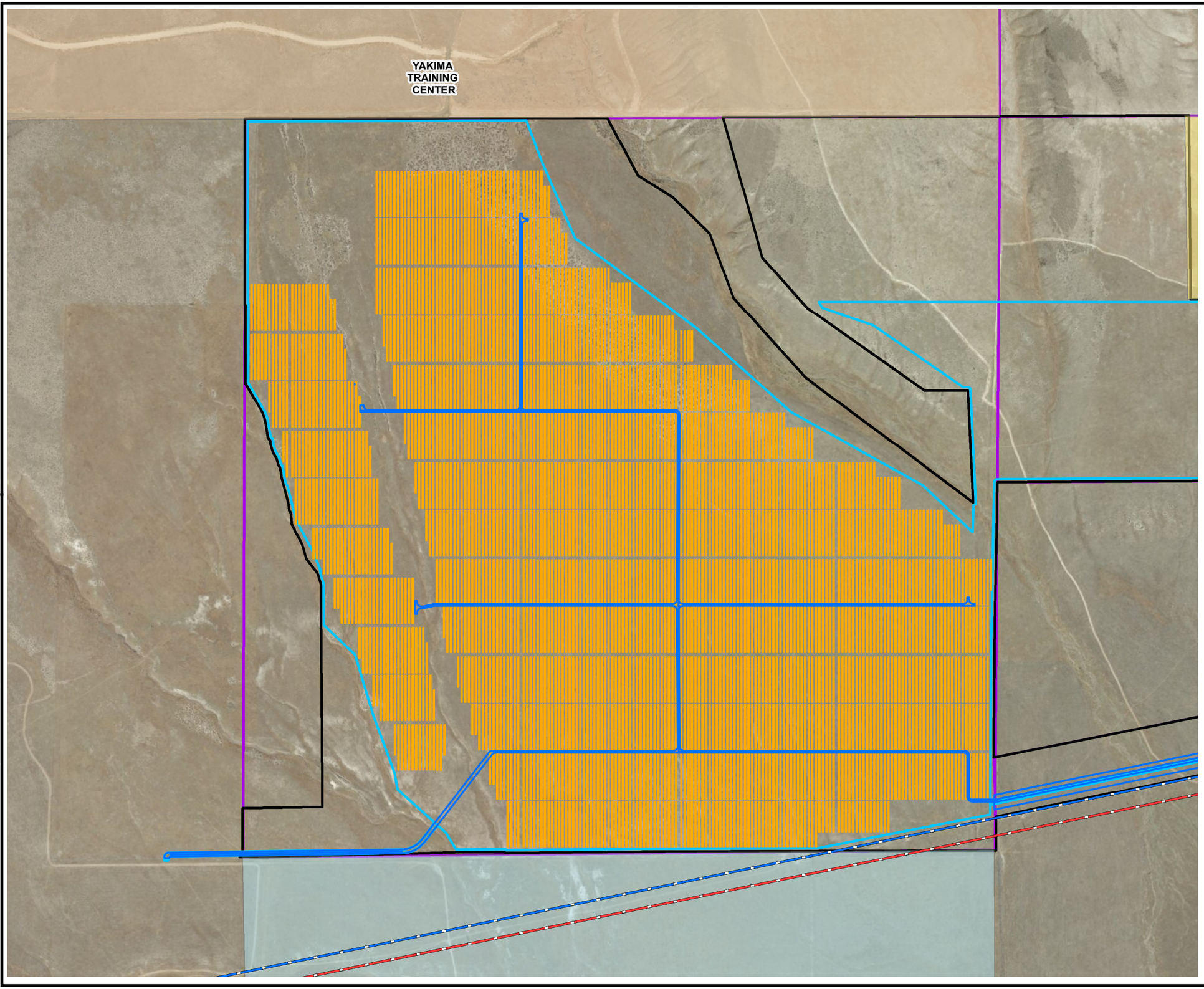
FILE NO.: Fig 4-12 Ostrea Proposed Solar Panel Fields and Roads EFSEC.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0
Plot Date: 4/4/2022, 14:14:55 PM by BTRACY -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\CCRN\Northwest\427473-Ostrea\Fig 4-12 Ostrea Proposed Solar Panel Fields and Roads EFSEC.mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

Plot Date: 4/4/2022, 14:34:39 PM by BTRACY -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 4-13 Ostrea West Proposed Solar Panel Field Road AccessEFSEC..mxd



Legend

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Solar Array
- Proposed Access Road
- Bureau of Land Management
- U.S. Dept. of Defense-Yakima Training Center
- State Lands

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

0 667 Feet

1 " = 667 '
1:8,000

PROJECT:
CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:
OSTREA WEST PROPOSED SOLAR PANEL FIELD ROAD ACCESS

DRAWN BY:	R. BLAKE	PROJ. NO.:	427473
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		
DATE:	APRIL 2022		

FIGURE 4-13

TRC
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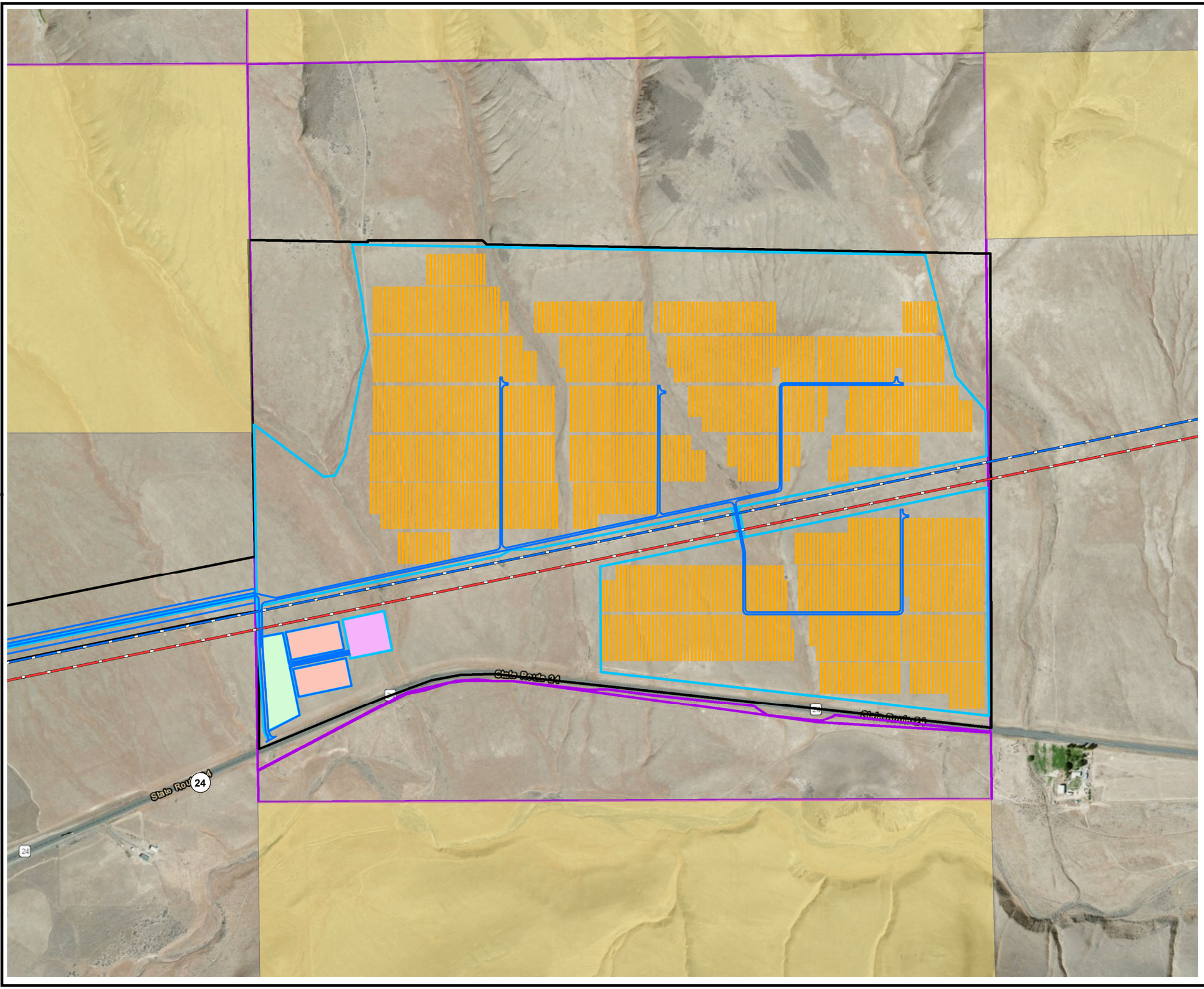
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-13 Ostrea West Proposed Solar Panel Field Road AccessEFSEC..mxd



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Solar Array
- Proposed Access Road
- Proposed BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- Bureau of Land Management
- 24 State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

N

0 667 Feet

1 " = 667 '

1:8,000

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

OSTREA EAST PROPOSED SOLAR PANEL FIELD ROAD ACCESS

DRAWN BY:	R. BLAKE	PROJ. NO.:	427473
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		
DATE:	APRIL 2022		

FIGURE 4-14

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425-395-0010
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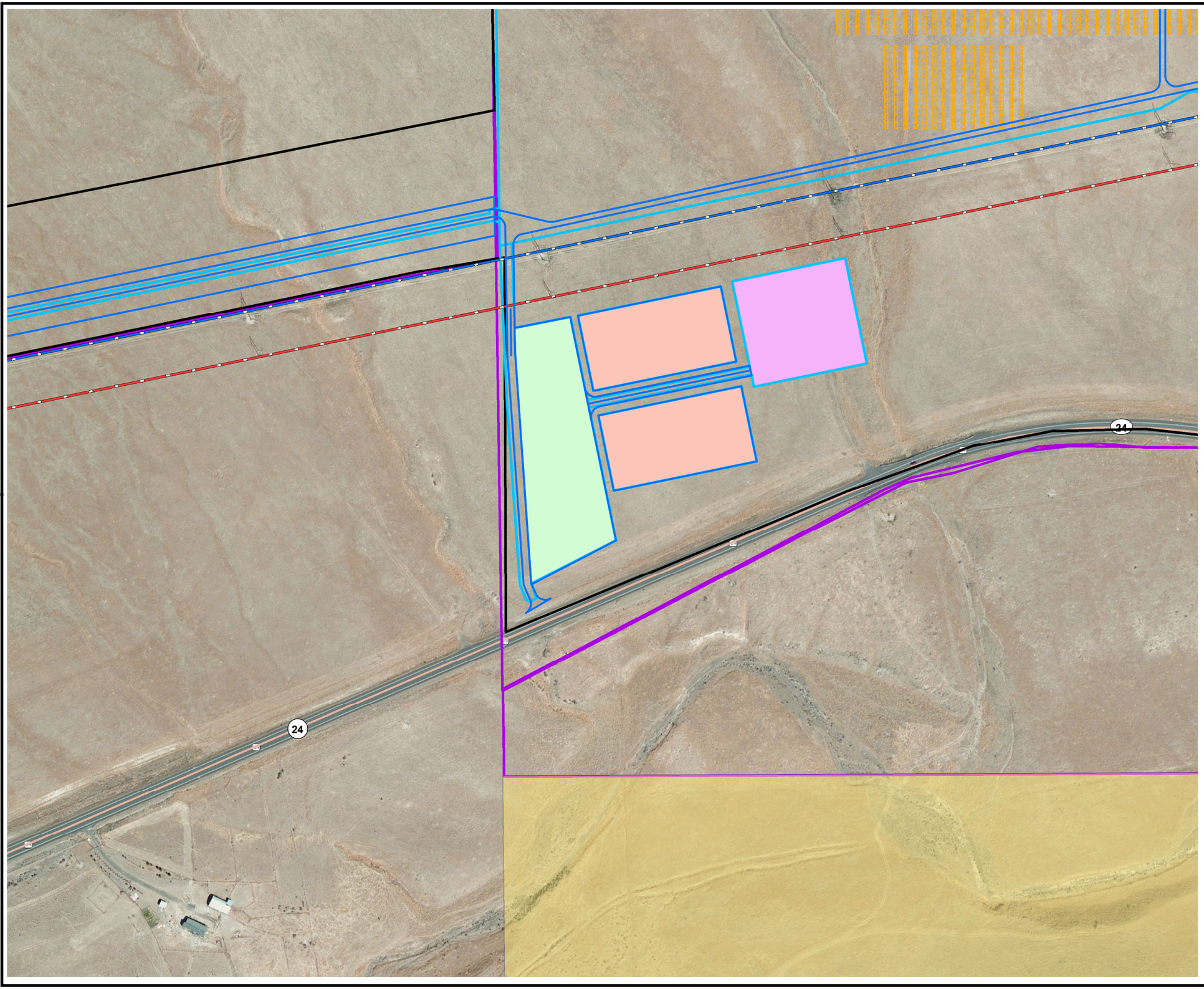
FILE NO.: Fig 4-14 Ostrea East Proposed Solar Panel Field Road Access EFSEC..mxd

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

Plot Date: 4/4/2022, 14:39:20 PM by BTRACY -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 4-14 Ostrea East Proposed Solar Panel Field Road Access EFSEC..mxd

TRC - GIS



LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Proposed Access Road
- Proposed Solar Array
- Proposed BESS Location
- Proposed O&M Trailer, Employee Parking, and Laydown Area
- Proposed Project Substation
- Bureau of Land Management
- (24) State Route 24

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.

WASHINGTON OVERVIEW

N

0 667 Feet

1 " = 246 '

1:2,949

PROJECT:

CYPRESS CREEK RENEWABLES, LLC
OSTREA SOLAR, LLC
YAKIMA COUNTY, WASHINGTON

TITLE:

OSTREA SR-24 ENTRANCE, SUBSTATION, BESS, AND MATERIAL LAYDOWN AREA

DRAWN BY:	R. BLAKE	PROJ. NO.:	427473
CHECKED BY:	P. LORENZ		
APPROVED BY:	E. BERGQUIST		**FIGURE 4-15**
DATE:	APRIL 2022		

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

FILE NO.: Fig 4-15 Ostrea Solar Substation and Material Laydown Area EFSEC..mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

Plot Date: 4/4/2022, 15:13:18 PM by BTRACY -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\CCR\Northwest\427473-Ostrea\Fig 4-15 Ostrea Solar Substation and Material Laydown Area EFSEC..mxd

Figure 4-16 Recommended Gradation of Crushed Stone

Sieve Size Percent Passing

1 ½-inch 100

¾-inch 55 – 90

No. 4 25 – 50

No. 50 5 – 20

No. 200 3 – 10

[From High Top and Ostrea Solar Project Draft Geotechnical Report (ANS GEO. INC. 2020)]

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Proposed mitigation for this resource is provided in Attachment O.		

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

F. References

ANS GEO, INC. 2020. Cypress Creek Renewables – High Top Solar Project Draft Geotechnical Report. January 15, 2020.

Washington State Department of Transportation (WSDOT). 2018a. Corridor Sketch Summary. Corridor 367 - SR 24: I-82 Jct (Yakima) to SR 243 Jct Summary. Available online at: https://wsdot.wa.gov/sites/default/files/2018/04/23/CSS367-SR24-i82JctYakima-SR243Jct.pdf

WSDOT. 2018b. Corridor Sketch Summary. Corridor 512 - I-82: Selah Gap to Union Gap Summary. Available online at: https://wsdot.wa.gov/sites/default/files/2018/02/05/CSS512-i82-SelahGap-UnionGap.pdf

WSDOT. 2018c. Corridor Sketch Summary. Corridor 138 - SR 240: SR-24 (Vernita Vic) Jct to US 395 Jct (Kennewick) Summary. Available online at: https://wsdot.wa.gov/sites/default/files/2017/08/11/CSS138-SR240-SR24JctVernita-US395JctTri-Cities.pdf

WSDOT. 2018d. Corridor Sketch Summary. Corridor 426 - SR 241: I-82 Jct (Sunnyside) to SR-24 Jct Summary. Available online at: https://wsdot.wa.gov/sites/default/files/2018/04/23/CSS426-SR241-i82JctSunnyside-SR24Jct.pdf

WSDOT. 2020. Traffic GeoPortal. Available online at: https://www.wsdot.wa.gov/data/tools/geoportal/?config=traffic

Detailed Analysis – Public Services and Facilities

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
No relevant studies were conducted for this section.	N/A	N/A	N/A

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.	
Topical area/issue	**Existing Condition and Problems**
Use of Emergency Services	Emergency services in the area are currently provided by the East Valley Fire Department and the Yakima County Sheriff's Office. Local use of emergency services may be impacted due to the possibility of Projects emergency service's needs.
Off-site Water Use	The local area is currently experiencing extreme drought. In July 2021, a drought emergency was declared for most of the watersheds in Washington including those in Yakima County. The drought emergency order will expire on June 1, 2022, unless it is extended. Precipitation in the Yakima Valley from October to February 2021 was above average. The High Top and Ostrea Projects will require water for construction and operations activities.
Waste Hauler Services	Waste disposal in the county is provided by Yakima Waste Systems and Basin Disposal of Yakima. The High Top and Ostrea Projects will require waste hauler services for construction and operations activities.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.		
☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**

	Use of Emergency Services	The use of emergency services may occur during construction and operations activities. As such, The Applicant will develop a set of emergency plans including: • Construction Emergency Plan, • Construction Fire Control Plan, • Construction Health and Safety Plan, Operations Emergency Plan, • Operations Fire Control Plan, and Operations Health and Safety Plan. Additionally, the Applicant will provide training to fire responders and construction staff on a recurring basis during the life of both Projects. The intent of the training will be to familiarize both responders and workers with the codes, regulations, associated hazards, and mitigation processes related to solar electricity and battery storage systems. This training also will include techniques for fire suppression of PV and high voltage technology. With appropriate planning and training, any impacts to emergency services from High Top and Ostrea construction and operation activities will be short-term and minor. As such, it is anticipated that project activities will not adversely impact local emergency services.
	Off-site Water Use	The local area is currently experiencing extreme drought. In July 2021, a drought emergency was declared for most of the watersheds in Washington including those in Yakima County. The drought emergency order will expire on June 1, 2022, unless it is extended. Precipitation in the Yakima Valley from October to February 2021 was above average. Water will be required for both construction and operations activities. Water requirements for construction and operation phases of the Projects are small. Water will be trucked on site. Based on the limited amount of water required for the Projects, trucking water on site, the Projects are not anticipated to affect any local or regional water purveyor's resources or capacity to supply water. No effects on public services or utilities are expected.
	Waste Hauler Services	Waste types and quantities from construction and operations will be typical of any large-scale facility, and likely less than many commercial buildings relative to the total size of the Project Footprints. As neither the High Top or Ostrea Projects will generate large quantities of waste during either

		construction or operations, it is anticipated that there will be no adverse impact to local waste-hauling services.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☒ No	**☐ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	N/A	N/A	N/A

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?		
☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

Detailed Analysis – Utilities

A. Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.			
Study name	**Expected completion date**	**Expert agency participation Name, Title, and Involvement**	**Completed Y/N**
No relevant studies were conducted for this section.	N/A	N/A	N/A

☒ **Check this box when all proposed studies for this topic are completed**

B. Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.	
Topical area/issue	**Existing Condition and Problems**
Water	In July 2021, Ecology declared a drought emergency for most of the watersheds in Washington including those in Yakima County. The drought emergency order will expire on June 1, 2022, unless it is extended. Precipitation in the Yakima Valley from October to February 2021 was above average. The High Top and Ostrea facilities are not within the boundaries of any municipalities' water service area.
Sewer	There are currently no existing sewer systems within the MPEs. A bathroom will be part of the O&M trailer for operations personnel. This will result in the need to construct a permanent/-fixed on-site above-ground sanitary sewer/septic system for operations personnel.
Stormwater	The High Top and Ostrea MPEs are not served by a stormwater system as a result of the remote rural location. Per the Yakima County Comprehensive Plan, developers are responsible for design and construction of stormwater collection, retention, conveyance, treatment, and disposal systems.
Solid Waste	Yakima County is served by a number of landfills and transfer stations such as the Terrace Heights Landfill and Transfer Station, Cheyne Road Landfill and Transfer Station, and the Lower Valley Transfer Station. It is estimated that the Terrace Heights Landfill will reach capacity in 2027.
Energy	The existing BPA Midway-Moxee No. 1 115 kV and PacifiCorp's Union Gap-Midway 230 kV transmission line transects a portion of each MPE.

C. Changes to and from Existing Condition

C.1. Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Water	It is anticipated that each Project will use up to approximately 192,000 gallons of water per year to wash the panels, and 10,000 gallons per year to operate on site waste facilities. Water will be trucked on-site from an off-site source listed above. No potentially significant effects on either ground or surface waters are anticipated from the Project. Based on the limited amount of water required for the Project, the Project is not anticipated to affect any local or regional water purveyor's resources or capacity to supply water.
	Sewer	To provide adequate sanitary waste collection systems/facilities during construction, temporary portable sanitary waste facilities (i.e., portable chemical toilets and handwashing facilities) will be installed at various locations around the construction sites to accommodate the workforce. These temporary portable sanitary waste facilities can be delivered, managed, and removed by a licensed contractor. The proposed High Top and Ostrea Projects include a permanent/ fixed on-site aboveground sanitary sewer/septic system for operations personnel that will operate and maintain the projects after construction is completed and operations begin. The proposed system will be permitted through the Yakima County Health District consistent with Chapter 246-272A – On-Site Sewage Systems of the WAC and installed by a licensed contractor on the approved Yakima County Health District's list. As a result of the distance between the facilities and the nearest development, it is anticipated that there will be no impact to community sewer systems.
	Stormwater	No potentially significant unavoidable stormwater impacts were identified as all construction and operational activities will primarily occur beyond buffer zones for all channels. Given the low historical average precipitation in the area,

		combined with the natural permeability of the upper soil horizon, and the MPE's limited sloping in areas of proposed potential land disturbance, infiltration of normal stormwater and snowmelt will occur within the property boundaries and in the MPE. Normal levels of stormwater will not be concentrated even in the instance of a significant rain event (SOA 2020a, b).
	Solid Waste	Waste generated during construction activities could include discarded construction materials, packaging materials, spent erosion control materials, wood forms for cast-in-place foundations, scrap metal, or unused wiring. Waste generated during operations could include paper, food packaging, food scraps, residuals from repair and replacement of solar array and associated equipment, and battery replacement. Depending on the type of battery used in the BESS, batteries will need to be replaced every five to 20 years. Replacement of the solar array will be rare to infrequent as a solar array typically lasts more than 30 years without significant loss of function. Component replacement is infrequent. Materials that can be recycled such as cardboard, paper, and metal will be recycled to the extent possible. Battery disposal will follow specific protocols for disposal of battery components at an approved facility for disposal or recycling. Wastes generated during construction and operation will be hauled away by an appropriate contractor, in accordance with applicable federal, state, and local regulations. Solar array disposal will be through the manufacturers per Washington State law (RCW 70A.510.010) which requires manufacturers of PV modules to provide a convenient and environmentally sound way to recycle all modules purchased after July 1, 2017. RCW 70A.510.010 updated the original Photovoltaic Module Stewardship and Takeback Program to include solar modules installed as part of a utility scale system. RCW 70A.510.010 also extended the time for manufacturers to submit their stewardship plan to Ecology. Per 70A.510.010, beginning July 1, 2025, no manufacturer, distributor, retailer, or installer may sell or offer for sale a photovoltaic module in or into the state unless the manufacturer of the photovoltaic

		module has submitted to Ecology a stewardship plan and received plan approval. In general, waste types and quantities from construction and operations of each Project will be typical of any large-scale facility, and likely less than many commercial buildings relative to the total size of the High Top and Ostrea footprints.
	Energy	The BPA Midway-Moxee 115 kV and PacifiCorp's Union Gap-Midway 230 kV Transmission Line cross each MPE. The close proximity of the transmission line will limit environmental impacts. The facilities will require a small amount of power when not generating in order to power basic functions. No adverse impacts to the local energy infrastructure are anticipated.

C.2. Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?		
☒ No	**☐ Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

D. Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?			
☒ No	**☐ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	N/A	N/A	N/A

E. Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g., water, plants, animals, noise), that has not already been considered and discussed in this form?	
☒ No	**☐ Yes**

	Environmental Element	Additional changes or effects
	N/A	N/A

F. References

SOA. 2020a. October 28, 2020, Preliminary Hydrologic & Hydraulic Assessment High Top Solar Project, Yakima County, Washington. Sierra Overhead Analytics, Inc. October 28, 2020.

SOA. 2020b. October 28, 2020, Preliminary Hydrologic & Hydraulic Assessment Ostrea Solar Project, Yakima County, Washington. Sierra Overhead Analytics, Inc. October 28, 2020.