

Application for Site Certification

Washington Energy Facility Site Evaluation Council Wautoma Solar Energy Project



Revised August 2024

Applicant

INNERGEX

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Acronyms and Abbreviations

AC	alternating current
ADT	Average Daily Traffic
amsl	above mean sea level
Applicant	Innergex Renewable Development USA, LLC
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BCC	Benton County Code
BESS	battery energy storage system
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CRP	Conservation Reserve Program
CSWGP	Construction Stormwater General Permit
CUP	conditional use permit
dBA	A-weighted decibels
DC	direct current
DNR	Washington Department of Natural Resources
Ecology	Washington State Department of Ecology
EFSEC	Energy Facility Siting Evaluation Council
EPA	U.S. Environmental Protection Agency
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
gen-tie line	generation-tie transmission line
GHG	greenhouse gas
GMAAD	Growth Management Act Agricultural District
HCA	habitat concentration area
HPA	Hydraulic Project Approval
IBC	International Building Code
ISO	International Organization for Standardization
KOP	key observation point

kV	kilovolt
L _{eq}	equivalent sound level
LOS	level of service
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEC	National Electric Code
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NO ₂	nitrogen dioxide
NRHP	National Register of Historic Places
O&M	operations and maintenance
PCS	power conversion system
PHS	Priority Habitats and Species
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
POI	point of interconnection
Project	Wautoma Solar Energy Project
PSD	Prevention of Significant Deterioration
PV	photovoltaic
RCW	Revised Code of Washington
SCADA	supervisory control and data acquisition
SEPA	State Environmental Policy Act
SO ₂	sulfur dioxide
SPCC Plan	Spill Prevention, Control, and Countermeasure Plan
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WNHP	Washington Natural Heritage Program
WSDOT	Washington State Department of Transportation

PART 1 – OVERVIEW/SUMMARY

A. Basic Information

A.1. Applicant

Name/Contact:

Innergex Renewable Development USA, LLC c/o Laura O'Neill

Mailing address:

3636 Nobel Drive, Suite 260
San Diego, CA 92122

Phone: (604) 633-9990

Email: Loneill@innergex.com

A.2. Preparer

(if different from applicant)

Name/Contact:

Tetra Tech, Inc.
c/o Linnea Fossum

Mailing address:

19803 North Creek Parkway
Bothell, WA 98011

Phone: (~~425~~503) ~~482-7823~~727-8062

Email: linnea.fossum@tetrattech.com

A.3. Property Owner

(if different from applicant; attach a list of owners if applicable; identify if the property is under lease, and identify any nonprivate owners)

Name/Contact: See the Applicant's response to Part 1, Section A.4 below.

Mailing address: See the Applicant's response to Part 1, Section A.4 below.

Phone: N/A

Email: N/A

The table provided in the Applicant's response to Part 1, Section A.4 identifies property owners of the 35 assessor parcels encompassed by the Project Lease Boundary (see Part 2 Section A.2 for definition of terms used in this Application for Site Certification [ASC]). The Applicant has executed a Lease Agreement with each identified property owner. All of the parcels in the Project Lease Boundary are privately owned. The Applicant is also pursuing easements/crossing/road use agreements with the Bonneville Power Administration (BPA) and one other landowner for Project access roads and collection line crossings of existing easements, as well as a transmission interconnection agreement (refer to Part 2, Section A.2 Project Description for additional details).

A.4. Location of Proposed Site

(attach a list of additional properties, if applicable)

Street address: N/A

County: Benton County

County Assessor's number(s): See below

Township/Range/Section Number: See below

Legal description: See Attachment C

The table below provides the description of the assessor parcels encompassed by the Project Lease Boundary and Project easements. The location of these parcels is shown on Figure A-2 in Attachment A.

Assessor Parcel Number ^{1/}	Property Owner	Mailing Address					PLSS
		Street	City	State	Zip	County	
119241012749001	Ford, Robert and Marilyn	5804 W Walnut St	Yakima	WA	98908	Benton	T12N R24E S19
119243000001001	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S19
119244000001001	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S19
119244000001002	Wautoma Valley LLC	5305 MacLaren Ct	Yakima	WA	98908	Benton	T12N R24E S19
119244000002000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S19
120241000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S20
120242000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S20
120243000002000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S20
120243000003000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S20
120243000004000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S20
120243011787001	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S20
120244000000000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S20
121241000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S21
121243000000000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S21
122241000000000	Robert, Et Al Michael V	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S22
122242000000000	High Valley Land LLC	1221 Plateau Dr	Richland	WA	99352	Benton	T12N R24E S22
122243000001000	High Valley Land LLC	1221 Plateau Dr	Richland	WA	99352	Benton	T12N R24E S22
122243000002000	High Valley Land LLC	1221 Plateau Dr	Richland	WA	99352	Benton	T12N R24E S22
127240000000000	High Valley Land LLC	1221 Plateau Dr	Richland	WA	99352	Benton	T12N R24E S27
128241000000000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S28
128243000000000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S28

Wautoma Solar Energy Project

Assessor Parcel Number ^{1/}	Property Owner	Mailing Address					PLSS
		Street	City	State	Zip	County	
129241000000000	Robert, Jean Emile	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S29
129242000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S29
129243000001000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S29
129244000000000	Robert, Robin	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S29
130241000000000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S30
130242000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S30
130242000003000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S30
130244000000000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S30
132241000001000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S32
132241000002000	Wautoma Energy LLC	2448 76th Ave SE Suite 220	Mercer Island	WA	98040	Benton	T12N R24E S32
133240000000000	Robert Ranch 5+1 LLC	1521 Wautoma Rd	Sunnyside	WA	98944	Benton	T12N R24E S33
11924100555555 ^{2/}	United States Government (BPA)	-	-	-	-	-	T12N R24E S17
11724300555555 ^{3/}	United States Government (BPA)	-	-	-	-	-	T12N R24E S19
120241000002000 ^{4/}	United States Government (BPA)	PO Box 61409	Vancouver	WA	98666	Benton	T12N R24E S20, 21

1/ Assessor parcel information is based on current Benton County assessment records last updated by the County on 3/3/2022.

2/ Parcel associated with the easement for access road and collection across an existing transmission line in the northwest corner of the Project.

3/ Parcel associated with the Wautoma Substation access road and access to the northern solar array and point of interconnection (POI).

4/ Parcel associated with the transmission line POI at the Wautoma Substation and access road to the northern solar array and POI.

B. Project Summary

Innergex Renewable Development USA, LLC (Applicant) proposes to construct and operate the Wautoma Solar Energy Project (Project) located in unincorporated Benton County, Washington (Attachment A, Figure A-1). The Project is a 470-megawatt¹ (MW) solar photovoltaic (PV) generation facility coupled with a 4-hour, 470-MW battery energy storage system (BESS), as well as related interconnection and ancillary support infrastructure.

The Project's solar PV system will convert energy from the sun into electric power. The solar PV system will consist of a series of solar PV panels mounted on a solar tracker racking system and related electrical equipment. The system includes the solar panels, tracker racking system, posts, collector lines, and power conversion systems (PCS), which consists of the BESS, inverters, and transformers. The BESS can either store electricity for future use or, as required based on grid demand, convert direct current (DC) electricity to alternating current (AC) electricity and send the AC electricity to the step-up transformer. The solar PV system and BESS system are further described in Part 2, Section A.2.a.

The Project also includes the following supporting components: Project substation, overhead 500-kilovolt (kV) generation-tie transmission line (gen-tie line), operations and maintenance (O&M) building, associated Project access roads, and perimeter fencing. Chain-link fencing will be installed around the perimeter of the solar array, Project substation, and O&M building area. The point of interconnection (POI) is the Bonneville Power Administration (BPA) transmission system at the BPA Wautoma Substation, which is located on BPA federal lands surrounded by the Project Area. An approximately 0.25-mile-long overhead 500-kV transmission line will extend from the Project substation to the POI. Project-supporting components are further described in Part 2, Section A.2.a.

The Project's construction is anticipated to begin in the second quarter of 2024⁸, with a Commercial Operations Date planned for the first quarter of 2026³⁰ (22-month construction schedule).

¹ Megawatt rating provided in alternating current (MWac)

C. Site Summary

The Project is generally located 12.5 miles northeast of the city of Sunnyside and 1 mile south of the State Route (SR) 241 and SR 24 interchange in Benton County, Washington (see Attachment A, Figure A-1). The Project Lease Boundary encompasses approximately 5,852 acres across 35 privately owned assessor parcels listed in Part 1, Section A.4. The Applicant has executed a Lease Agreement with the underlying properties within the Project Lease Boundary for adequate acreage to accommodate the Project. The Applicant is also pursuing easements/crossing/road use agreements with BPA for Project access roads, collection lines, and transmission interconnection. The Project Area is a subset of the Project Lease Boundary within which surveys have been conducted and Project facilities may be constructed, in compliance with conditions that may be imposed by the Site Certification Agreement. The Project Area encompasses approximately 4,573 acres. Within the Project Area, a smaller area will be permanently or temporarily disturbed by Project construction, as described in Part 2 of this ASC.

Lands in the Project Area have historically been utilized for agricultural activities (crop cultivation and grazing), although the areas used for these activities have varied over time. The Project is located entirely on land within the Benton County Growth Management Act Agricultural District (GMAAD). Existing land uses in the Project Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Project Area are similar and also include scattered rural residences, vineyard, rangelands, state highways, and the Hanford Reach National Monument. Project consistency with local land use codes and policies is addressed in Part 4, Section 4.14 and in Attachment D.

Habitat surveys identified nine habitat types within the Project Area, including agricultural land, developed/disturbed, eastside (interior) grassland, irrigated hedgerows, non-native grassland and forbland, planted grassland, rabbitbrush shrubland, shrub-steppe, and talus. As shown in Table 4.8-1, approximately 93 acres of eastside (interior) grassland, 63 acres of shrub-steppe, and 3 acres of talus habitat occur within the Project Area. As shown in Attachment A, Figure A-9, eastside (interior) grassland habitat is most prevalent in the southern and eastern portions of the Project Area, shrub-steppe habitat is most prevalent in the north-central portion, and talus slopes are found in the southwest corner. See the Wildlife and Habitat Survey Report (Attachment G) for additional details on habitat types observed within the Project Area as well as their distribution in the area.

As discussed in Part 4, Section 4.3, there are three palustrine emergent wetlands and 34 ephemeral stream segments within the Project Area. The Project Area contains a creek located in the 100-year floodplain listed on the Federal Emergency Management Agency (FEMA) maps. However, no flow in this creek has been observed during Project surveys, and per discussions with a Project participant landowner, it is extremely rare for the creek to have visible flows. Further, a Riparian Analysis Memo prepared in 2020 for Benton County's critical areas update stated that Dry Creek was among several named streams in the County that were not measured

due to lack of visible flows (AC Geospatial LLC 2020). The Project is designed to avoid and minimize impacts to ephemeral streams to the extent feasible.

Slopes within the Project Area range from zero to 51 percent. In general, the Project Area is on relatively flat terrain with slopes of less than 3 percent. Soils with slopes greater than 30 percent account for less than 3 percent of the Project Area. Steeper terrain is also located in areas to the south, east, and north outside of the Project Area. Geology, soils, slope, topography, and potential geological hazards relative to the Project Area are evaluated in Part 4, Section 4.1.

The visual setting of the Project Area is agricultural land with a mix of irrigated cropland, dryland agriculture, and open rangeland with a low number of related agricultural buildings and rural residential development. Where the Project is visible, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape lines (fencing, roadway, substation, transmission towers and lines, utility poles and lines, agricultural structures) and would not block views of the surrounding hills. The Project will not introduce a source of light that will significantly impact views in the area. The glare analysis (Attachment H) concluded the Project will not introduce a source of glare that will significantly impact motorists, residents, or views in the area. Additional discussion of light, glare, and aesthetics are addressed in Part 4, Section 4.16.

Some changes to stormwater drainage may occur as a result of new impervious surfaces developed as part of this proposal (e.g., gravel roads, foundations for solar array posts, battery storage container pads, pads for substation components, etc.). Overall, impervious surfaces are a low percentage of the total Project Area (approximately 3 percent of the Project Area; see Part 2, Section B.2). The Project will be designed and constructed to comply with Benton County and the Washington State Department of Ecology (Ecology) requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow, and the Project's Erosion and Sediment Control Plan (ESCP), Construction Stormwater Pollution Prevention Plan (SWPPP), Permanent Stormwater Control Plan, and Vegetation and Weed Management Plan will provide specific measures to minimize erosion and sedimentation during and after construction. Additional discussion of stormwater best management practices (BMPs) and design considerations for stormwater runoff are addressed in Part 4, Section 4.5.

During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrub-steppe habitat and will avoid talus slopes (i.e., Priority Habitats). As described above, the Applicant sited the Project to avoid the population of the state sensitive Columbia milk-vetch documented during surveys conducted for the Project. In addition, the Applicant incorporated passageways through the solar panel array fencing to allow big game to pass through the Project Area.

Incorporating a number of conservative assumptions, acoustic modeling results indicate that the Project will comply with the 50-decibel nighttime limit at all non-participating noise sensitive receptors (i.e., residences). In addition, the Project is predicted to comply with all the applicable Washington Administrative Code (WAC) regulatory limits at the Project Lease Boundary implementing either BESS design configuration. WAC 173-60-050 exempts temporary construction noise from the state noise limits; however, BMPs will be implemented to reduce off-site construction noise impacts. Noise associated with Project construction and operation is addressed in Part 4, Section 4.16a.

The Project has been designed to avoid direct impacts to cultural resources that are eligible or unevaluated/potentially eligible for listing on the National Register of Historic Places (NRHP). As currently designed, the Project has no direct impacts to such resources, which are avoided by a minimum of 30 meters. The Applicant would continue to coordinate with the Tribes regarding the archaeological sites and the potential impacts of the Project on these sites. The current design does not avoid eight archaeological sites of historic-era refuse scatters or farm equipment pieces that have been recommended in confidential Attachment Q as not eligible for listing on the NRHP. The sites are not considered significant register-eligible resources and, pending concurrence by the Department of Archaeology and Historic Preservation (DAHP), any impacts on them would not be considered significant impacts and would not require a permit under Revised Code of Washington (RCW) 27.53. If any pre-contact-era archaeological site or any NRHP-eligible or unevaluated/potentially eligible historic-era site would be impacted by the Project's final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53. Archaeological and historic resources and cultural resources are addressed in Part 4, Section 4.18 and Section 4.19, respectively.

A Traffic Control Plan will be prepared in coordination with the Washington State Department of Transportation (WSDOT) and the Benton and Yakima Counties Public Works Departments to mitigate transportation hazards during the construction of Project accesses to public right-of-way. Operations traffic would be negligible since there will be four or fewer permanent employees. The limited number of daily trips anticipated during Project operations would be negligible relative to current and projected level of services. Traffic management during Project construction is addressed in Part 4, Section 4.20.

Based on the information provided herein, the State of Washington Energy Facility Siting Evaluation Council (EFSEC) may find that the Project complies with applicable laws under RCW 80.50 for energy facility site locations and with applicable rules under WAC 463-60 for evaluation of this streamlined solar ASC. EFSEC may also find under WAC 197-11 that with mitigating conditions and compliance with applicable County, state, and federal regulations and permit requirements, the Project will not result in significant adverse impacts on the environment.

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.

	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	N/A	Yes	Yes	N/A
5. Water Quality – Stormwater Runoff	Yes	Yes	Yes	Yes	Yes
6. Water Quantity – Water Use	No	N/A	Yes	Yes	N/A
7. Water Quantity – Runoff, Stormwater, Point Discharge	No	N/A	Yes	Yes	Yes
8. Plants	Yes	Yes	Yes	Yes	Yes
9. Animals	Yes	Yes	Yes	Yes	Yes
10. Energy and Other Natural Resources	No	N/A	Yes	Yes	N/A
11. Waste Management	No	N/A	Yes	Yes	N/A
12. Environmental Health – Existing Site Contamination	No	N/A	Yes	Yes	N/A
13. Environmental Health – Hazardous Materials	Yes	N/A	Yes	Yes	Yes

	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	N/A	Yes	Yes	N/A
16. Noise, Light, Glare, and Aesthetics	Yes	Yes	Yes	Yes	Yes
17. Recreation	No	N/A	Yes	Yes	N/A
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	No	N/A	Yes	Yes	N/A
22. Utilities	No	N/A	Yes	Yes	N/A

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.

Report No.	Topic	Name of Report and Location for Review	Status (e.g., scoping, contracting for, started)	Date of Completion (past or expected)
Attachment D	Land Use	Land Use Consistency Review	Complete	April 2022
Attachment F	Vegetation	Botanical Survey Report	Complete	January 2022
Attachment G	Wildlife and Vegetation Habitat	Habitat and General Wildlife Survey Report	Complete	January 2022
Attachment H	Glare	Solar Glare Analysis Report	Complete	April 2022
Attachment I	Wetlands and Surface Waters	Wetland Delineation Report	Complete	November 2021
Attachment J	Water Quality	Preliminary Stormwater Management Report	Complete	January 2022
Attachment K	Water Quality	Preliminary Hydrology Report	Complete	December 2021
Attachment L	Wildlife	Raptor Nest Survey Report	Complete	January 2022
Attachment N	Socioeconomic	Socioeconomic Review	Complete	April 2022
Attachment O	Noise	Acoustic Assessment Report	Complete	April 2022
Attachment P	Visual and, Aesthetics	Visual Impact Assessment Report	Complete	April 2022
Attachment Q (Confidential)	Archaeological, Historical, and Cultural	Cultural Resources Survey Report and Unanticipated Discovery Plan	Complete	April 2022
Attachment S	Earth	Preliminary Geotechnical Engineering Report	Complete	February 2022
TBD Attachment G	Wildlife and Vegetation Habitat	Habitat and General Wildlife Survey Report Addendum	Planned for Spring 2022 Complete	June-August 2022
TBD Attachment F	Vegetation	Botanical Survey Addendum	Planned for Spring 2022 Complete	June-August 2022
TBD	Environmental Health	Phase 1 Environmental Site Assessment	Pending	Prior to construction; TBD

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 ^{1/}	Contact (name, program)	Areas of Discussion	Status of Engagement ^{2/}
State Government	Washington Department of Fish and Wildlife (WDFW)	Mike Ritter and Jason Fidorra	Wildlife, surveys, and general biological resources.	Ongoing
State Government	Washington Energy Facility Siting Evaluation Council (EFSEC)	Sonia Bumpus and Ami Hafkemeyer	General, permitting, project description, and application process.	Ongoing
State Government	Washington State Department of Ecology (Ecology)	Lori White	Wetland and waters delineation.	Ongoing
State Government	Washington Department of Archaeology and Historic Preservation (DAHP)	Allyson Brooks	Review of Cultural Resource Survey Report.	Anticipated upon report submittal
Tribal Government	Confederated Tribes of the Warm Springs Reservation of Oregon	Christian Nauer	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Samish Indian Nation	Tom Wooten	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Wanapum Tribe	General mailing address	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Confederated Tribes and Bands of the Yakama Nation	Casey Barney and Phil Rigdon	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Confederated Tribes of the Colville Reservation	Cody Desautel and Michael Findlay	General introduction to the Project.	Ongoing
Tribal Government	Confederated Tribes of the Umatilla Indian Reservation	Teara Farrow Ferman	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Local Government	Benton County	Greg Wendt, County Commissioners, County Communications Officer	Land use and local permits, arranging for Innergex to present the project at a Benton County Commissioner's Meeting in Q2 2022.	Ongoing
Property Owners	Property Owners	See Part 1, Section A.4	The Applicant has executed a Lease Agreement with each identified property owner within the Project Lease Boundary.	Ongoing

1/ Entities typically consulted include Ecology, WDFW, Washington Department of Natural Resources (DNR), DAHP, tribal governments, the Department of Defense, neighboring property owners, 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.

2/ for example: Intend to contact, contacted, ongoing engagement, engagement complete

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PART 2 – CORE INFORMATION

A. Project Basics

A.1. Project Name

Wautoma Solar Energy Project (Project)

A.2. Project Description

A.2.a Describe Proposal

Include all components of land use.
Include activities occurring during project phases.

1.0 INTRODUCTION

The Applicant proposes to construct and operate the Project located in unincorporated Benton County, Washington (Attachment A, Figure A-1). The Project is a 470-megawatt¹ solar PV generation facility coupled with a 4-hour BESS sized to the maximum capacity of the Project, as well as related interconnection and ancillary support infrastructure. The Project is generally located 12.5 miles northeast of the city of Sunnyside and 1 mile south of the SR 241 and SR 24 interchange in Benton County, Washington.

This streamlined solar ASC uses the following terms to describe areas associated with Project development:

- **Project Lease Boundary:** The approximately 5,852-acre area that encompasses 35 privately owned assessor parcels for which the Applicant has executed a lease agreement with the underlying property owner (Attachment A, Figure A-2). Construction and operation of the Project are limited to the Project Area described below and shown on Figure A-1 in Attachment A.
- **Project Area:** The approximately 4,573-acre area that includes all of the Project facilities, including solar PV system and BESS, Project substation, transmission line, O&M facility, and associated access roads.
- **Fenced Area:** The estimated 2,974 acres within the Project Area that will be enclosed by fencing, including solar arrays, Project substation, and the O&M facility.

Current land uses in the Project Area include irrigated agriculture, rangeland, undeveloped land, local roads, and existing electrical utility infrastructure. Lands within the Lease Boundary and to the north, west, and south are zoned for agricultural purposes in Benton and Yakima counties with similar land uses as the Project Lease Boundary, as well as several rural residences. The Hanford Reach National Monument Rattlesnake Unit is located to the east.

¹ Megawatt rating provided in alternating current (MWac)

The Applicant is considering various design layouts within the Project Area. The preliminary layout of the PV solar system and supporting components accounts for the Project's generating capacity, topography, and other constraints; however, the precise equipment and layout have not yet been finalized and the Applicant seeks to permit a range of technology to preserve design flexibility. Therefore, this ASC analyzes the largest anticipated temporary and permanent disturbance area within the Project Area. While the final Project design is not anticipated to disturb the entire Project Area, the entire Project Area is evaluated to allow for design flexibility. For these reasons, the Applicant is requesting flexibility to microsite² the Project and its associated supporting components anywhere within the Project Area, provided the final layout does not exceed the Project Area evaluated in this ASC and allowed for in the Site Certification Agreement.

The Project is located entirely on parcels in unincorporated Benton County within the GMAAD zone, defined by Benton County Code (BCC; 2022). The Project is consistent with Benton County's definition of a "solar power generator facility, major" under BCC 11.03.010(167). Prior to December 21, 2021, the Project would have required a conditional use permit (CUP) in the GMAAD per BCC 11.17.07(cc). On December 21, 2021, Benton County passed Ordinance Amendment 2021-004, which, among other changes, removed "solar power generation facility, major" from the list of uses requiring a conditional use permit in the GMAAD zone and effectively prohibits this type of use in the GMAAD zone. Therefore, the Project is not consistent with, nor is it in compliance with, the county zoning ordinances.

Though the Project is currently not in compliance with BCC 11.17 after the passage of Ordinance Amendment 2021-004, the Applicant demonstrates in its Land Use Consistency Review, Attachment D, how the Project is substantially consistent with the applicable standards of the Comprehensive Plan and BCC. Based on the primacy of the state when siting energy facilities as provided by RCW 80.50.110(1), and the state's express preemption and occupation of the field pursuant to RCW 80.50.110(2), the Applicant is therefore requesting preemption of the local land use regulations under WAC 463-28-020.

The Project Area was selected by the Applicant for its favorable site suitability characteristics, including high solar energy resource, topography, proximity to electrical infrastructure, compatible zoning and adjacent land uses, and low resource conflicts. The Project will have a number of benefits to the local community and Washington state. Based on similar projects, it is anticipated that the construction of the Project will support approximately 515 jobs during peak construction and up to 4 permanent jobs during operations. The Applicant will solicit experienced Washington-based contractors with the intention of a proportionally high locally hired workforce. The Applicant is developing a strategy to ensure that local benefits reach the community, local landowners, local skilled workers, as well as local businesses. A campaign will be run during construction to maximize local construction worker hiring (i.e., within 1-hour from the Project and within Washington). This strategy includes a local procurement policy, community event sponsorship, and participation throughout the Project's life cycle. The Project

² Micrositing is the process of placing facilities (such as solar panels) in locations that achieve optimal power production while considering land constraints such as terrain and sensitive environmental areas.

will also provide Benton County with additional tax revenue (refer to Socioeconomic Review in Attachment N). In addition, construction of this renewable energy resource will help Washington meet its goal of 100 percent clean electricity supply as set forth in the Clean Energy Transformation Act, passed by the Washington legislature in 2019.

2.0 PROJECT COMPONENTS

This section identifies the components, structures, and systems incorporated in the Project's design. The Project solar PV system and associated supporting components are shown on the Preliminary Site Plan (Attachment A, Figure A-1). The Preliminary Site Plan is based on studies and facility design done to date and is subject to change following outstanding technical studies and design and stakeholder consultations. A set of Construction Plans and Specifications will be provided to the State of Washington EFSEC for approval at least 60 days prior to the beginning of construction.

2.1 Solar Photovoltaic System

The solar PV system will consist of a series of solar panels mounted on a solar tracker racking system and related electrical equipment. The system includes the solar panels, tracker racking system, posts, collector lines, and PCS, which consists of the DC-coupled BESS, inverters, and transformers. The Applicant is considering a range of technologies to preserve design flexibility and incorporate rapidly changing advances in solar technology. During the final engineering design, the Applicant will consider micro-siting factors and solar technology available at that time to design the most efficient and effective solar PV system. However, the actual equipment and layouts included in the final design will be selected to ensure that they do not exceed the Project Area evaluated in this ASC.

2.1.1 Solar Panels and Racking Systems

The solar PV panels, or modules, will be bifacial panels comprised of cells of mono-crystalline, poly-crystalline, cadmium telluride, or a combination thereof, used to generate electricity by converting sunlight into DC electrical energy. The electrical generation from a single module varies by module size and the number of cells per module. The cells are contained within antireflective glass panels and a metal frame and are linked together with factory-installed wire connectors. The solar PV panels in portrait orientation will be organized in rows (or "tables") within several solar array areas (or "blocks") mounted on a racking system. The length of each row may vary by topography and the number of panels that the racking system can hold. The row-to-row spacing will be approximately 36 feet (with approximately 15 to 21 feet of open space between adjacent rows). The panels themselves will be approximately 6.6 feet long by 4.1 feet wide and 2 inches thick.

The racking system will be on a single axis, oriented on a north-south axis that will allow the panels to follow the sun in order to maximize power output. The racking system will be designed to support the panels, snow loads, and prevent wind uplift. Once mounted on the racking system, the highest point of the panels is expected to extend approximately 9 to 14 feet above the ground surface, with an average of approximately 2 to 5 feet of ground clearance below the panels. Project impact assumptions in this ASC are based on the use of 15,812 racking systems

for the 470-MWac solar array. The actual number of racking systems will depend on the system selected.

The racking system will be supported by steep posts spaced approximately every 16 feet and installed to a depth of approximately 6 to 10 feet, with a maximum depth of 20 feet depending on specific soil conditions. Steel posts could be round hollow posts or pile-type posts. For the purposes of this ASC, the Applicant assumes that approximately 169,453 posts will be installed. The actual number of posts and foundation method may vary depending on the final racking system, topography, height of the solar modules, and site-specific geological conditions. Post locations will be determined based on geotechnical investigations and will be installed in soil or in concrete foundations, depending on geological conditions.

Figure A-1 in Attachment A depicts the Project's proposed solar array layout for purposes of analyzing impacts. The preliminary design incorporates key components and assumptions for currently available technology. The final number of panels will be determined by power ratings and optimization (in watts) of the specific panels chosen prior to construction and may be fewer than the number of panels included in the preliminary design. As a result, the Project impact assumptions in this ASC are conservatively based on the use of 1,292,376 panels, which is anticipated to be the maximum number of panels needed. For the purposes of illustration, a schematic drawing of the solar PV panel and racking system are shown on Figure B-1 in Attachment B.

2.1.2 Direct Current Electrical Collector Lines

The solar panels will produce DC electricity at a low voltage. Within each solar array area, the DC electricity from the panels will be transmitted to one of the power conversion systems distributed throughout the solar array areas via electrical wiring mounted on the racking or buried underground. The underground DC electrical wiring will be installed within trenches approximately 3 feet wide and 4 feet deep; however, final trench design will be determined by thermal resistivity studies. In areas where the desired depth cannot be achieved (due to bedrock or other prohibitive subsurface conditions), the collector lines may be housed in above-ground cable trays or covered with concrete slurry in accordance with the applicable National Electric Code (NEC) provisions. Installation of buried cables associated with the fenced solar array will temporarily disturb a corridor for each cable. Because the entire area inside the fence line will be temporarily disturbed during construction, this temporary impact is not calculated separately. All areas inside the fence line are included in the estimated altered habitat associated with the fenced solar array (i.e., no separate temporary impacts are calculated for buried cables inside the perimeter fence).

2.1.3 Power Conversion Systems

The Project layout includes 159 PCSs distributed throughout the solar array areas. Each PCS includes up to five DC-coupled BESS units and a step-up transformer installed on a foundation approximately 50 feet (wide) by 150 feet (length). A DC-coupled BESS unit is a self-contained and standalone unit that combines a battery system (such as nickel manganese cobalt, nickel cobalt aluminum, lithium-ion, or lithium iron phosphate), inverter, and controller that can either

store electrical energy for future use, or as required based on grid demand, convert DC electricity to AC electricity and send the AC electricity to the step-up transformer. Lithium-ion batteries are a type of rechargeable battery in which lithium ions, suspended in an electrolyte, move from negative to positive electrodes and back when charging and recharging. Batteries experience a degradation of performance over time and are gradually replaced over time.

Each DC-coupled BESS unit is approximately 11 feet (height) by 6 feet (width) by 30 feet (length). The DC-coupled BESS will be positioned in groups of up to five around a single step-up transformer, which is approximately 12 feet (height) by 11 feet (width) by 16 feet (length). The step-up transformer increases the AC voltage from the DC-coupled BESS units to 34.5 kV where it will then be conveyed via AC medium voltage collector lines and combiner boxes to the Project substation where it is transformed to grid voltage. All components of the PCSs will be mounted on concrete pads or beam foundations. Each PCS unit will include and incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards.

For the purposes of this ASC, the Applicant conservatively assumes that up to 159 PCSs will be needed to convert the DC from the modules to produce 470 MW_{ac}. The final number of PCSs may vary depending on final design of the solar array and selection of PCS technology.

The Applicant is additionally considering an optional design in which a centralized AC-coupled BESS will be used in place of the distributed DC-coupled system described above. Under this option, AC-coupled BESS units would be placed within a centralized approximately 18- to 20-acre area located near the Project substation. The AC-coupled BESS area would replace panels in this area, thereby reducing the number of solar panels and increasing the area that would be permanently impacted. If this option is selected, up to 20 acres within the Fenced Area would contain concrete pads instead of solar panels. This adjustment would be accounted for in the final design impact calculations and required habitat mitigation. The AC-coupled BESS units will be of a similar design and dimensions as that described above for the DC-coupled BESS. To provide flexibility in the final design, this ASC analyzes both BESS options.

2.1.4 Alternating Current Medium Voltage Collector Network

The AC medium voltage (34.5 kV) collector network will convey the electricity from the medium voltage step-up transformers located at each PCS to the Project substation where the electricity will be transformed to 500 kV by one or more main power transformer(s) for final distribution to the grid via the Project's gen-tie line. Similar to the underground DC electric collector lines, the AC medium voltage collector lines will be installed underground within a trench approximately 3 feet wide and 4 feet deep, with final design determined by thermal resistivity studies. Areas with multiple circuits running in parallel will have approximately 20 feet between each circuit, resulting in a wider temporary trench area. At stream crossings, collector lines will be bored underneath the streambed to a minimum depth of 48 inches. Advanced electrical engineering, as well as further studies related to thermal dissipation, have not yet been performed. These studies will inform the number of circuits and trenches, as well as the distance between them.

The estimate of 20 feet between circuits represents the greatest possible impact (most conservative estimate). Following analysis from the thermal dissipation study and detailed electrical engineering, the distance between trenches may decrease. It is likely that, should this distance be decreased, the same trench could be used for several circuits (i.e., fewer, larger trenches throughout the site).

Similar to the DC collector network, the buried cables included in the estimated altered impacts associated with the fenced solar array (i.e., no separate temporary impacts are calculated for buried cables inside the perimeter fence). Buried cables exterior to the perimeter fence will be constructed within a 50-foot-wide construction corridor. A larger construction corridor is required where multiple cables run in parallel to one another (up to 25 feet on either side of the outermost cables). Where buried collector lines are located outside of the fenced area, these disturbances are considered to be temporary for purposes of estimating impacts to habitat and vegetation.

2.1.5 Project Substation

The Project substation will function to further increase the voltage in order to match the voltage of the BPA transmission system of 500 kV. The Project substation and associated interconnection infrastructure will include equipment such as free-standing steel switch-rack structures, one or more main power transformer(s), breakers, power meters, and associated electrical lines. Backup power for the Project substation will be provided by sealed 2x10 12-volt valve-regulated lead-acid cell battery packs housed in the control enclosure building. The Project substation will be constructed on an approximately 8.5-acre area and will include concrete foundations. The Project substation will be separately fenced for electrical safety. The substation equipment will generally range in height from 15 feet to 25 feet above ground level.

2.1.6 Overhead Transmission Line

An approximately 0.25-mile long overhead 500-kV transmission line will extend from the Project substation to the point of interconnection (POI) with the existing BPA transmission system at the BPA Wautoma Substation, which is located in on BPA federal lands surrounded by the Project Area. Interconnection to a BPA transmission system is subject to review under the National Environmental Policy Act. BPA will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.

A preliminary transmission line alignment is shown on Figure A-1 in Attachment A. The route alignment will be finalized prior to construction. The line will be suspended above ground on H-frame steel structures that will be approximately 60 to 150 feet tall and installed on drilled concrete piers. The transmission line will span Dry Creek and associated 100-year floodplain, which is located between the Project substation and the POI. A temporary 50-foot-wide access corridor across the floodplain will be used during construction of the overhead line. To minimize impacts to this area, only vehicles equipped to carry the transmission wires (conductor, shield wire, etc.) and matting will be allowed.

The transmission line will be constructed in compliance with codes and standards from the following: National Electrical Safety Code (NESC; 2017 Edition, Grade B Construction), Washington Administrative Code (WAC), American National Standards Institute, National Electrical Manufacturers Association, American Society for Testing and Materials, Avian Power Line Interaction Committee, as well as other applicable laws and construction codes. Ground clearances for the suspended portion of the line will conform to the NESC standards.

2.1.7 Operations and Maintenance Building

The Project may include an O&M building that will consist of a single-story structure with office space, warehousing space, a bathroom, and breakroom facilities. The O&M building could be up to 4,500 square feet in size on an approximately 1-acre area including an on-site 10,000-square-foot graveled area for parking for employees and visitors (approximately 10 parking spaces) and an open staging area. The O&M building will be surrounded by a security fence separate from the solar array perimeter fence.

The O&M building will be equipped with fire extinguishers as well as smoke detectors tied to the supervisory control and data acquisition (SCADA) system. In addition to fire extinguishers, the O&M building will have basic firefighting equipment for use on-site during maintenance activities including shovels, beaters, portable water for hand sprayers, and personal protective equipment. In addition, the Project's O&M area may include a 10,000-gallon water cistern to store water for fire suppression needs.

Water for operations use will either be obtained from an existing on-site well with a valid water right, hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right), or obtained through a new permit-exempt groundwater well (using less than 5,000 gallons per day). Wastewater will be managed using a permitted onsite septic system or portable restroom (the impact assessment used in this ASC assumes a permitted on-site specific system is used). Local utilities will provide electrical and communications/telephone connections.

Relevant building permits will be obtained for the O&M building, including for the well and septic system, from Benton County and the Benton-Franklin Health District (see Section 3.6 [Water Quantity – Water Use] and the Land Use Consistency Review [Attachment D] for additional permitting details).

2.1.8 Access Roads

The Project will be accessed primarily from SR 241 and Wautoma Road. A new approach from SR 241 will be constructed in the northwest corner of the Project. The northern solar array blocks and the POI will be accessed via the existing Black Rock Substation access road. The Applicant will consult with the WSDOT, Yakima County (for the portion of Wautoma Road in Yakima County), and Benton County regarding the preferred approach and the necessary permits required for upgrading an approach from SR 241. The Applicant will obtain a General Permit from WSDOT prior to upgrading the approach. The applicant has also consulted with BPA regarding access roads and collection and will obtain easements or crossing agreements from BPA, where required, prior to construction.

Access roads within the Project Area will consist of improvements to existing roads and new access road. Improvements to existing roads may include drainage upgrades, smoothing, and graveling as needed to accommodate construction vehicles. New access roads may require excavation and fill to achieve acceptable grades. Access roads will have a compacted gravel surface, with a permanent width of approximately 24 feet as well as the required clearance and turning radius needed for emergency response vehicles, in accordance with fire code. The final layout will be provided to the Benton County Fire Marshal's Office. The access roads will provide primary access to each of the solar array blocks, including each PCS, as well as the Project substation. The spacing between the rows of panels will allow for localized access within each of the solar array areas. A schematic drawing of the typical access road design is included in Figure B-2 in Attachment B.

2.1.9 Fencing and Lighting

Fencing will be installed around the perimeter of the Project for general security purposes and public safety. The fence is expected to be a 7-foot-tall chain-link fence, or other fence meeting the requirements of NEC. Fencing around the Project substation will extend to the ground and will be topped by barbed wire consistent with the fencing around the existing BPA substation. Solar array perimeter fencing will be designed to have an average gap between the bottom of the fence and the ground surface of approximately 4 inches and will not be topped with barbed wire. The top of the solar array perimeter fence will therefore be approximately 7 feet 4 inches above ground surface. Gates 20 to 24 feet wide will be installed for approved pedestrian and vehicular access. In the southeast corner of the Project Area where an ephemeral drainage corridor bisects the Project Area, the area east of the drainage will be fenced separately from areas on the west side of the drainage. An access road and gates will be used to provide pedestrian and vehicular access between these fenced areas. A schematic drawing of the typical fence design is included in Figure B-3 in Attachment B.

Lighting is needed at the O&M building for security and occasional after-hours work; however, the Applicant will limit the amount of lighting and will shield lighting as needed. In addition, applicable lighting will include motion-detector-activated lighting to minimize the amount of time lights need to be active. Lighting is also needed at the Project substation in accordance with North American Electric Reliability Corporation (NERC) standards.

2.1.10 Temporary Laydown Areas

Six temporary laydown (i.e., staging) areas (approximately 5 acres each) will be established within the fenced solar array area. Some grading may be needed to level the ground surface, with geotextile materials and compacted gravel installed as needed. Temporary laydown areas will be replaced by the solar array as the Project is built out.

3.0 CONSTRUCTION

The Project's construction is anticipated to begin in the second quarter of 2024⁸, with a Commercial Operations Date planned for the first quarter of 2026³⁰ (22-month construction schedule). The Project may be built in phases up to the maximum Project generation capacity of 470 MWac. Construction phasing will be determined based on final offtake discussions with

energy customers and contractual arrangements. If the Project is built in phases, the initial phase will likely include construction of the substation, transmission line, O&M building, along with a subset of solar arrays, PCSs, and access roads, and site entrance road improvements. Subsequent phases will then consist of construction of the remaining solar panels with their associated PCSs and access roads. If construction is phased, the average and peak number of construction workers on site at a given time may be less than estimated here, but the total duration of construction may be longer and may include an interim period during which little construction work is done. The construction of the Project will include transport and delivery of Project equipment and materials, site preparation, equipment installation, and revegetation and landscaping. Each of these activities is generally described below.

3.1 Construction Staff

During construction, an estimated average of 225 people will be employed at the Project, with an estimated maximum of 515 employees. Most construction workers will be employees of construction and equipment manufacturing companies under contract to the Applicant. The construction workers will consist of approximately 45 to 65 percent of locally hired workers and a limited number of specialized workers for specific construction tasks (for example, construction management). The Applicant will solicit experienced Washington-based contractors with the goal of hiring construction workers from local communities. All employees hired directly by the Applicant may go through U.S.-wide background checks, including criminal record check, credit rating check, and employment/professional references, as applicable.

3.2 Transport and Delivery

Heavy vehicles delivering equipment and materials are expected to travel from ports in western Washington and Oregon (Port of Vancouver, Port of Portland, Port Westward, Port of Seattle, etc.) or driven to the Project Area from manufacturing facilities or warehouses in the United States. Deliveries will access the Project via SR 241. Deliveries will generally access the site from north via Interstate 90 (I-90) and I-82 to SR 24 at Yakima, Washington or SR 241 in Sunnyside, Washington. Deliveries from the south will generally access the site from I-84 to I-82 at Hermiston, Oregon to SR-241 at Sunnyside or I-182 in Richland, Washington. Worker commutes are anticipated to follow similar routes to SR 24 and SR 241, with the majority of workers arriving at the site from the north (Richland or Yakima areas). It is anticipated that an average of approximately 289 vehicles/day (289 roundtrips), including worker vehicles and truck deliveries, will be added to the roadway network during construction and commissioning (a 22-month period). Peak traffic numbers will occur over a 3-month period, with the numbers tapering up and down before and after the peak. Road approach improvements to access the site from the SR 241 site entrance, and at SR 241 and Wautoma Road, are expected to be required to accommodate the equipment transport. Refer to Part 4 Section 4.20 for further details on transportation and delivery, including detailed traffic estimates over the course of the construction period.

3.3 Site Preparation

Initial site preparation will involve grubbing and vegetation clearing within the Project Area, along with installation of BMPs as described in Section A.5. Clearing and grubbing will be phased, and soil will be temporarily stabilized. Following clearing and grubbing, laydown/staging

areas and access roads will be established. Some grading may be needed to level the ground surface of the laydown/staging areas and geotextile materials and compacted gravel will be installed as needed. Similarly, installation of new access roads will also involve grading, subgrade preparation and compacted gravel. Clearing, grubbing, and grading will be conducted using equipment such as bulldozers, excavators, compactors, graders, and front-end loaders. Water trucks will be used to provide moisture for compaction as well as dust control during construction as required. Depending on the moisture levels, up to approximately of 53 million gallons of water could be used throughout the construction for dust suppression. Water use for Project construction will be obtained from an existing on-site well with a valid water right (to be verified in coordination with Ecology) or will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). If needed, a combination of the options identified above may be used to obtain water for Project construction. Refer to Section B.8d for further discussion of water use and source. Construction activities that include the use of major excavating and earth-moving machinery will be conducted during normal weekday hours to the extent feasible.

3.4 Installation of Project Equipment

Following site preparation activities, the general sequence for construction will involve installation of the following equipment: foundations, the racking system, solar PV panels and associated wiring, electrical collector lines, concrete equipment pads and foundations, DC-coupled BESS units, step-up transformers, collection substation equipment, and transmission line.

Overall, the extent of ground disturbance associated with the solar array areas is expected to be relatively minimal since the single axis tracking system will be installed using structural steel posts (as opposed to larger foundations) and can tolerate slopes up to 15 percent (based on the manufacturers' specifications). The Project is being designed to accommodate as much as possible the existing topography of the site in order to minimize the amount of earthwork needed. In general, grading for the Project will primarily occur in areas where new access roads, concrete equipment pads, retention areas, and the Project substation will be sited. Where grading is required, soils excavated from one area will be used as fill for other areas to minimize or eliminate the need for imported fill material.

The foundation posts for the racking system will be installed using a hydraulic pile driver and/or auger for pre-drilling to depths of approximately 6 to 10 feet, with a maximum depth of 20 feet depending on soil conditions. In areas where the desired depth cannot be achieved, foundations will be pre-drilled and supported with concrete slurry or cast in place concrete spread footings.

The panel frames and other components of the racking system will be bolted to the posts, with the solar PV panels affixed to the frames. For any electrical wiring or collector lines to be installed belowground, trenches will be excavated with track-mounted excavators (or similar) or specific trenching machines, and will be approximately 3 feet wide and 4 feet deep; following placement of the electrical lines, the excavated soil will be backfilled into the trench and tamped back to the appropriate level of compaction per the design specifications. In areas where the desired depth cannot be achieved (due to basalt rock or other prohibitive subsurface conditions), the collector lines may be placed in above-ground cable trays in accordance with

the applicable NEC provisions. In cases where adequate space for undergrounding the collector lines is limited, the collection system may go overhead similar to a transmission line.

The equipment pads and Project substation foundation will involve excavation up to approximately 6 feet in depth and installation of concrete. Excavated soil will be used elsewhere within the Project Area. Concrete for the pads and foundations will be delivered in ready-mix concrete trucks; the Project will not include a concrete batch plant. Once the concrete equipment pads and Project substation foundation have been installed, the DC-coupled BESS units, transformers, and various electrical equipment will be installed. All electrical equipment and wiring will be installed and inspected in accordance with applicable code requirements and best industry practices.

3.5 Revegetation and Post-Construction Site Control

Following construction, areas that have been temporarily disturbed will be revegetated for soil stabilization and erosion control purposes. It is anticipated that revegetation will involve application of hydroseeding, with a suitable mix of non-invasive grass species and/or species currently found throughout the site. In addition to revegetation of temporarily disturbed areas, permanent BMPs will be implemented to address long-term stormwater requirements.

4.0 OPERATIONS AND MAINTENANCE

Periodic maintenance and inspection of the infrastructure will occur intermittently over the course of Project operations. Typical maintenance will follow basic monthly inspections, preventative quarterly inspections, and an in-depth annual maintenance program. Four full-time personnel will be based at the site, and limited additional temporary staff will be on site periodically depending on the type of maintenance scheduled per month. On average, four vehicle trips per day are anticipated during operations. Approved technicians will service electrical equipment, primarily the DC-coupled BESS units and transformers, on average once per month. A performance audit and inspection to assess the quality of equipment will be conducted annually. If any equipment needs to be replaced before the Project's end-of-life, the Applicant will seek the most environmentally responsible route for reuse, recycling, or disposal. No material quantities of chemicals or fuels will be stored at the O&M facility. Only negligible amounts of lubricating oils, greases, and hydraulic fluids for solar tracking arrays, and negligible amount of raw materials for component parts maintenance of solar panels and batteries, will be stored onsite at the O&M facility.

Typical maintenance of the solar PV panels will include surface cleaning to remove accumulated dust and dirt to optimize performance. Based on environmental conditions and rainfall, it is anticipated panel washing may occur once per year across approximately 20 percent of the panels. A variety of equipment is available on the market for cleaning solar panels. Typical utility-scale solar projects utilize water trucks with an assortment of hoses and support personnel to scrub down panels with heavier soiling. If panel washing occurs, the wash water will not contain additives and will not be discharged into nearby water bodies (i.e., it is expected infiltrate into the ground surface at and near the point of application). The amount of water needed for cleaning will be dependent on the extent of the soiling but is estimated to be approximately 120,000 gallons per wash. During operations panel washing, approximately 1 to

2 water truck trips are anticipated per day over a period of 2 to 3 weeks. Other more innovative waterless and dry brushing techniques will be explored as an option.

Vegetation within the Project fence line will be managed throughout the life of the Project. A Vegetation and Weed Management Plan that will be developed prior to construction (Part 3, Section 3.8 and Part 4, Section 4.8) will be followed during operation to ensure that vegetation does not overgrow the solar panels, preventing solar radiation from reaching them. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project substation, and along the Project's fence line. Mechanical vegetation control such as mowing, trimming, and pruning will be the primary means for vegetation management. Mowing frequency is anticipated to be once per month during the growing season. Herbicides may be utilized for vegetation control; however, an effort will be made to minimize use and only apply bio-degradable, U.S. Environmental Protection Agency (EPA) registered, organic solutions that are non-toxic to wildlife and used in a manner that fully complies with all applicable laws and regulations.

5.0 DECOMMISSIONING

The Project is expected to have an operational life of approximately 35 years, following which the Project may be re-powered with new equipment (under subsequent permits/certification) or retired and restored adequately to a useful, non-hazardous condition. The Project will be decommissioned following the end of its useful life. Pursuant to WAC 463-72-040, the Applicant will provide EFSEC with an Initial Site Restoration Plan at least 90 days prior to beginning Project site preparation. The Initial Site Restoration Plan will follow the proposed retirement steps provided in the Applicant's Decommissioning Summary and Estimate (Attachment R). The Initial Site Restoration Plan will address provisions for funding or bonding arrangements to meet the retirement costs identified in Attachment R.

Decommissioning will be conducted in accordance with EFSEC's rules and the Site Certification Agreement for this Project and will involve removal of all equipment associated with the Project and returning the area to substantially the same condition as existed prior to Project development. Decommissioning will include consideration of local environmental factors to minimize effects such as erosion during the removal process, and the recycling of materials demolished or removed from the site to the extent feasible. The activities that may occur as part of decommissioning are summarized below.

- Decommissioning will commence once the Project has been fully de-energized and isolated from all external electrical connections.
- Consistent with the measures described for construction and operation of the Project, BMPs will be implemented and maintained throughout the decommissioning phase as needed to avoid and minimize potential impacts to the surrounding environment, particularly those related to dust, erosion, and stormwater.
- Once the site has been adequately prepared for decommissioning, the following equipment will be removed: solar PV panels and racking system, including steel piles, power conversion systems (including BESS units and step-up transformers), electrical

wiring and connections, Project substation components, communication equipment, and fencing. All above-grade foundations will be removed to a level of no less than 3 feet below the ground surface unless requested to be maintained by the property owner. The extent of which access roads will be removed will be coordinated with the landowners at the time of decommissioning.

- Equipment and materials will be salvaged or recycled to the extent feasible and in coordination with licensed subcontractors, local waste haulers, and/or other facilities that recycle construction/demolition waste; the remaining materials will be disposed of by the contractor at authorized sites, in accordance with applicable laws. Reuse or recycling of materials will be prioritized over disposal. Recycling is an area of great focus in the solar industry, and programs for both batteries and solar panels are advancing every year. Panels and batteries will most likely be shipped to recycling facilities. All waste requiring special disposal (e.g., transformers) will be handled according to regulations that are in effect at the time of disposal.
- Following removal of Project equipment, site restoration will be conducted such that the physical conditions of the area are returned to substantially the same condition that existed prior to Project development. These activities will include removal of gravel and other aggregate material, localized grading and disking to match surrounding elevations, replacement of topsoil from on-site stockpiles, and revegetation of disturbed areas with an appropriate hydroseed mix.

During decommissioning, the Applicant will adhere to federal, state, and local requirements, including obtaining and adhering to applicable permits and authorizations. The Applicant's Decommissioning Summary and Estimate is provided in Attachment R and will inform the Initial Site Restoration Plan.

6.0 SOCIOECONOMIC REVIEW

The Applicant prepared a Socioeconomic Review (Attachment N) for consideration under WAC 463-60-535. The document contains information about population and labor force impacts as well as housing. The document demonstrates that, at peak construction, the locally available workforce will be sufficient to meet demand for local direct workers, which are expected to account for about 45 to 65 percent of the total construction workforce. Local workers are those who normally reside within daily commuting distance of the Project site (within 1 hour of the site) and will commute daily to the Project site from their homes. Non-local workers hired from outside the area are expected to temporarily relocate to the vicinity of the Project for the duration of their employment. There is sufficient capacity in the region to house permanent and temporary workers.

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

Phase	Proposed Timing	Duration	Employee Numbers on Site & Frequency	Public Access (yes/no)
Site preparation	2028 4	60 days		No
Construction	2028 4 to 2029 5	22 months	On average 225; with a peak construction workforce of 515.	No
Operation/use	2030 26	35 years	Up to 4	No
Closure/reclamation	2065 4	6 months	Similar to, or less than, those required for construction (average of 225 with a peak of 515).	No

A detailed Construction Schedule would be submitted to EFSEC at least 30 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

	The Project will not exceed 470 MWac. The Project may be built in phases up to the maximum Project generation capacity. Construction phasing will be determined based on final offtake discussions with energy customers and contractual arrangements.
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A.4. Site Maps and Plans

Attachment A contains site maps referenced in this ASC. Additional maps are included in the detailed studies and reports provided in other attachments. The list below consists of the maps provided in Attachment A.

Map #	Map Name	Purpose and Description	Completed?
A-1	Preliminary Site Plan	Preliminary layout and map book showing Project components	Yes
A-2	Assessor Parcels	Provide parcel numbers for Project Lease Boundary	Yes
A-3	Soils	Mapped soil types throughout the Project Area	Yes
A-4	Slopes and Project Impacts	Present LiDAR mapped topography and slopes greater than 15 percent within the Project Area and vicinity	Yes
A-5	Geologic Hazards	Identify active faults and historic earthquake locations within 25 miles of the Project Area	Yes

Map #	Map Name	Purpose and Description	Completed?
A-6	Surface Waters and Floodplain	National Hydrographic Database, National Wetlands Inventory, and FEMA flood hazard mapping within the Project Area and vicinity	Yes
A-7	Critical Aquifer Recharge Areas	Identify locations of features identified by Benton County as Critical Aquifer Recharge Areas	Yes
A-8	Habitat Types within the Project Area	Mapped habitat classifications based on site-specific habitat surveys	Yes
A-9	Elk Big Game Habitat Areas in the Project Area	Priority Core and Linkage Areas developed by the Washington Wildlife Habitat Connectivity Working Group	Yes
A-10	Transportation Routes	Road network providing access to the Project Area	Yes

A.5. Mitigation Measures Summary

Mitigation Measure	Description	Expert Agency Participation
Earth		
Implementation of Geotechnical Recommendations	<p>The Applicant will follow all geotechnical recommendations provided in the Final Geotechnical Engineering Report. Recommendations included in the Preliminary Geotechnical Engineering Report (Attachment S) include the following.</p> <p>Recommendations for shallow foundations are included in Section 5.2 of the Preliminary Geotechnical Engineering Report (Attachment S). Shallow foundations must have a minimum embedment of 1.5 feet below finish site grade. Other alternatives are non-frost susceptible fill under foundations or thermal insulation to protect against frost. At some locations, soft silt soils require remediation for bearing capacity. Where remediation is necessary, the continuous or square footings should bear on a minimum of 2 feet of compacted structural fill materials. The over-excavation should extend a minimum lateral distance of about 1 foot beyond the edge of the footings. Anticipated settlement of the foundations under service loads will be on the order of about 1 inch or less. Shallow foundations should be adequately reinforced and proportioned to resist adfreezing forces associated with the frost depth. Shallow foundations should be adequately reinforced and proportioned to resist swell/uplift forces associated with the near surface clay soils.</p> <p>The subgrade preparation and compaction recommendations in Section 5.3 of the Preliminary Geotechnical Engineering Report (Attachment S) will be followed to mitigate the risks associated with corrosive soils.</p> <p>The Project will provide seismic design using 2018 International Building Code (IBC). Site Class C will be used</p>	EFSEC

Mitigation Measure	Description	Expert Agency Participation
	<p>for very dense soils and bedrock conditions. The Mapped Spectral Response Acceleration for the 1 second (S1) and short periods (SS) were computed in the Preliminary Geotechnical Engineering Report using the Applied Technology Council Seismic Design Maps, which is a web-based application program.</p> <p>Native sand and silt material can be used as general site grading fill, provided they do not contain significant amounts of organics. After site clearing and grubbing, the general fill should be placed in loose lifts not exceeding 12 inches in thickness and compacted to a minimum of 90 percent of the ASTM D698 maximum dry unit weight. If the general site grading is located below proposed pavement, foundations, or equipment pads, then other compaction requirements apply.</p> <p>Structural fill should consist of a non-expansive, well-graded material with sufficient binder for compaction purposes and meet the requirements of 2020 Standard Specifications, Publication No. M41-10, Division 9 Materials, "Item 9-03-10 Aggregate for Gravel Base" issued by the Washington Department of Transportation. The Project would make structural fill interchangeable with flexible road base.</p> <p>Structural fill should be compacted to a minimum of 95 percent of maximum dry density determined by ASTM D1557. The structural fill should be moisture conditioned within 2 percent of optimum moisture content. Lift thickness is a function of energy, equipment, and ideal moisture. Typically, 9-inch lifts are a maximum, but if a contractor is able to complete thicker lifts and it can be verified that full densification occurs throughout the lift, then lifts up to 12 inches are possible.</p>	
<p>Best Management Practices (BMPs) - Erosion</p>	<p>As further described in Part 4, Section 4.5, the Applicant will implement an Erosion and Sediment Control Plan (ESCP), a Construction Phase SWPPP, and an Operations Phase SWPPP, in compliance with local stormwater regulations. These plans will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington (Ecology 2019). Benton County has adopted Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review.</p> <p>Per RCW 17.10.140, the Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC for the control of noxious and problem weeds prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.</p>	<p>Ecology, EFSEC</p>
<p>Building Permits</p>	<p>The Applicant will provide grading plans and obtain necessary building permits from Benton County Building Division if needed.</p>	<p>Benton County Building Division and Washington State Building Code Council</p>

Mitigation Measure	Description	Expert Agency Participation
	Seismic design parameters that will be used to design the Project are included in the 2018 IBC and American Society of Civil Engineers (ASCE) 7-10 and ASCE 7-16. These parameters are consistent with the Washington State Building Codes. The Project will comply with the current codes at the time of construction, demonstrating compliance with WAC 463-62-020.	
<u>Soil Monitoring</u>	<u>The Applicant will prepare a Soil Monitoring Plan to monitor soil compaction, assess topsoil depth, and measure nutrient, organic matter, and pH levels of the soil to assess whether the Project is having a positive or adverse impact on soil health. The plan will include adaptive management actions that could be implemented if there is a decline in soil conditions.</u>	<u>EFSEC</u>
Air Quality		
Implementation of Best Management Practices (BMPs) and Standard Construction Practices	<p>Washington Administrative Code sections addressing air quality include:</p> <ul style="list-style-type: none"> • WAC 173-400-040(3) Fallout • WAC 173-400-040(4-4a) Fugitive emissions • WAC 173-400-040(5) Odors • WAC 173-400-040(9)(a) Fugitive Dust <p>To adhere to these codes, the Applicant would implement BMPs and standard construction practices, including the following:</p> <ul style="list-style-type: none"> • Vehicles and equipment used during construction would be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use would be implemented. • Watering or other fugitive dust-abatement measures would be used as needed to control fugitive dust generated during construction. When applied, the Applicant will use water or a water-based environmentally safe dust palliative such as lignin for dust control. • Construction materials that could be a source of fugitive dust would be covered when stored. • Traffic speeds on unpaved roads would be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds would be covered when transporting dirt or soil. • Carpooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures would be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas would be conducted during and after construction to reduce wind-blown dust. 	N/A
Water Quality – Wetlands and Surface Waters		
Avoidance	The Project would not impact wetlands or wetland buffers and is consistent with WAC 463-62-050. Ephemeral	N/A

Mitigation Measure	Description	Expert Agency Participation
	streams and stream buffers were avoided to the greatest extent feasible as described above.	
Stream crossing construction best management practices	<p>Minimization of temporary water quality impacts (WAC 220-660-120; Stormwater Management Manual for Eastern Washington (Chapter 173-204 WAC); and Construction Stormwater General Permit (Chapter 90.48 RCW) will be implemented on site during construction and operations and include the following best management practices:</p> <ul style="list-style-type: none"> • Staging of materials and equipment to prevent contamination of waters of the state • Development of the Stormwater Pollution Prevention, Erosion and Sediment Control, and Spill Prevention Countermeasures and Control plans • Installation and maintenance of temporary erosion and sediment control measures • Completing work in the dry with no water present 	Ecology, WDFW, EFSEC
Hydraulic Project Approval	The Applicant is using the JARPA to obtain a Hydraulic Project Approval (HPA) permit per WAC 20-660-050.	WDFW, EFSEC
Special Flood Hazard Development Permit	The Applicant will obtain a Special Flood Hazard Development Permit from Benton County prior to construction.	Benton County
Water Quality – Stormwater Runoff		
Construction Stormwater General Permit	<p>In compliance with WAC 173-200, the Applicant will obtain a Construction Stormwater General Permit (CSWGP) from Ecology EFSEC. The CSWGP requires an ESCP and a SWPPP. Benton County has adopted Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review. In compliance with SWMMEW, the proposed development will require storage onsite for any increase in runoff for the 100-year, 24-hour storm. The basin design for any required storage will also follow the requirements outlined in the SWMMEW. As the Project design advances, the post-construction stormwater management should be reviewed in further detail with the County Engineer.</p> <p>The following requirements will be met for the Project:</p> <p>Stormwater quantity control will be provided so that proposed conditions peak runoff rates and volumes must be equal to or less than existing conditions. The 2-year, 10-year, 25-year, and 100-year 24-hour stormwater events must meet these requirements.</p> <p>The aim of Core Element #5 of the SWMMEW is to treat at minimum 90 percent of runoff from pollution-generating impervious surfaces (PGIS). A surface is considered a PGIS if it is being regularly used by vehicles. Since the access roads on the Project site are primarily for O&M, it is assumed that this Project is exempt from the Core Element #5 requirements.</p> <p>Water quality will be addressed using the Full Dispersion BMP (SWMMEW, Table 6.10).</p>	Ecology, EFSEC

Mitigation Measure	Description	Expert Agency Participation
	Proposed culverts and low water crossings will be sized for the 10-year 24-hour stormwater event.	
Best Management Practices - Stormwater	<p>The ESCP and SWPPPs (both for construction and operation) will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from Ecology’s Stormwater Management Manual for Eastern Washington (Ecology 2019).</p> <p>The Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.</p> <p>Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. Permanent basins will be provided at each discharge location that has an increase in runoff due to the proposed development in critical discharge locations. Each basin will have a minimum depth of 3.5 feet, a length-to-width ratio of 3:1 to 6:1, and a pond riser outlet structure to provide treatment per State of Washington requirements. These basin locations are shown in Exhibit 5 of Attachment J.</p>	Ecology, EFSEC
Preventative procedures to avoid spills	<p>Substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation. The Applicant will prepare a Construction Phase Spill Prevention Control and Countermeasure Plan (SPCC Plan), consistent with requirements of 40 Code of Federal Regulations (CFR) Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential water quality issues. <u>Preventative measures will include best management practices, such as not fueling within the Ordinary High Water Mark of waterbodies to reduce the potential for spills going into water courses. Appropriate containment and spill response kits will be present on site.</u></p> <p>The Applicant will also prepare an Operations Phase SPCC Plan in consultation with Ecology and pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402 (a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080.</p>	NA
Plants		
Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrub-steppe habitat and will avoid talus slopes (i.e., Priority Habitats). As described above, the Applicant sited the Project to avoid the population of the state sensitive Columbia milk-vetch documented during surveys conducted for the Project.	WDFW
Habitat Management Plan	Per WAC 463-60-332(3) and consistent with requirements in the BCC 15.14.030 for the Applicant to provide a habitat assessment and discuss the habitat avoidance,	WDFW, EFSEC

Mitigation Measure	Description	Expert Agency Participation
	<p>minimization, and mitigation measures proposed for the Project, the Applicant has prepared a Draft Habitat Management Plan (Attachment M). This plan will provide details regarding mitigation measures for impacts to habitat types from Project construction and operation including impacts to “habitats and species off local importance” (i.e., shrub-steppe habitat), per BCC 15.14.030.</p> <p>A Final Habitat Management Plan will be prepared prior to construction.</p>	
Revegetation and Noxious Weed Control	<p>Per RCW 17.10.140, the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Benton County Noxious Weed Control Board prior to construction. Herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations; herbicides will only be directly applied to localized spots and will not be applied by broadcasting techniques (RCW 17.21).</p>	EFSEC, Benton County Noxious Weed Control Board
BMPs	<p>The Applicant will implement the Project’s ESCP, Construction SWPPP, and Permanent Stormwater Control Plan. These plans will help reduce erosion and impacts to vegetation.</p>	Ecology; WDFW, EFSEC
Animals		
Avoidance and Minimization Measures	<p>During siting and design, the Applicant took several measures to avoid and minimize impacts to wildlife and habitat. The Applicant coordinated with WDFW prior to conducting surveys, and used the feedback obtained during this coordination to inform surveys and the assessment of impacts. As described above, the Applicant avoided talus slopes (i.e., a Priority Habitat) by 125 feet and burrowing owl nests by 2,800 feet, and minimized impacts to shrub-steppe habitat to the extent feasible. Additionally, the Project is sited primarily on currently disturbed lands, which minimizes impacts to wildlife and habitat.</p> <p>The Applicant has modified the layout of the Project’s perimeter fence to include separate smaller fenced units versus one large fenced array in order to allow for wildlife movement through the area. The layout of the perimeter fence was also modified to maintain open access to the ephemeral drainages within the Project Area (see Attachment I) that are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line ROWs through the project would also be left unfenced to maintain movement corridors along these existing transmission lines. With the exception of fencing around the Project substation which will extend to the ground, perimeter fencing will be designed to be at least 4 inches above ground. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW. The applicant is also in discussions with WDFW and affected landowners to see if existing artificial water sources that were primarily developed for livestock can be moved outside of the fenced areas in order to maintain wildlife access (including access for elk and mule deer) to these water sources.</p>	WDFW, EFSEC
Construction and Operations BMPs	<p>Unnecessary lighting will be turned off at night to limit attraction of migratory birds to the area. This includes using lights with timed shutoff, downward-directed lighting to</p>	WDFW, EFSEC

Mitigation Measure	Description	Expert Agency Participation
	<p>minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights.</p> <p>If construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance.</p> <p>Evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife.</p> <p>Prior to construction, construction personnel will be instructed on wildlife resource protection measures, including: 1) applicable federal and state laws (e.g., those that prohibit animal collection or removal); and 2) the importance of these resources and the purpose and necessity of protecting these resources. Construction personnel will be trained in the following areas when appropriate: awareness of biological resources (including Priority Habitats and special status species), potential bird nesting areas, and general wildlife issues.</p> <p>The Applicant will prepare an ESCP that would include BMPs to minimize surface water runoff and soil erosion. Appropriate stormwater management practices will be implemented in accordance with the SWPPPs. The Applicant will prepare SPCC Plans to be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release (see Part 4, Section 4.3 for more details).</p> <p>Vehicle speeds will be limited to 25 miles per hour on internal Project access roads to avoid wildlife collisions. Existing posted speed limits on county and private roads will be followed outside of the Project Area.</p> <p>If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012).</p> <p>Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, and allowing smoking only in designated areas per the requirements of WAC 463-60-352. The Applicant will prepare an Emergency Management Plan that contains fire safety measures, which will be developed with input from applicable agencies (see the "Fire" section above for more details).</p> <p>Following decommissioning, reclamation of the Project Area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas.</p> <p>Section 4.8.D contains additional measures targeted at successfully restoring vegetation communities.</p>	

Mitigation Measure	Description	Expert Agency Participation
	Implementation of these Vegetation mitigation measures will have indirect benefits to wildlife species as well.	
Compensatory Mitigation	In order to achieve “no net loss of habitat functions and values” as required by WAC 463-62-040, the Applicant will continue to work with the WDFW and EFSEC to determine appropriate compensatory mitigation. The Applicant has prepared a Draft Habitat Management Plan (Attachment M), which provides a framework for determining the compensatory mitigation required to achieve “no net loss.” A Final Wildlife Habitat Management and Mitigation Plan will be prepared prior to construction.	WDFW, EFSEC
Environmental Health – Hazardous Waste		
Emergency Management Plan	<p>Prior to Project construction and operations, the Applicant will develop an Emergency Management Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control. This plan will provide safety guidelines and procedures for potential emergency-related incidents during the Project’s construction, operation, and decommissioning phases. This includes coordination with emergency service providers and fire suppression measures associated with the Project. Specifically, the plan will be developed with input from, and in coordination with, the Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division.</p> <p>Applicable laws/codes include:</p> <ul style="list-style-type: none"> • WAC 463-60-352 (2 through 4), which addresses fire and explosion, hazardous materials release, and safety standards compliance. • WAC 463-60-352(6), which describes emergency plans to ensure public safety and environmental protection. • 49 CFR §173.185m, which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. <p>International Fire Code</p>	Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division
Best Management Practices – Fire Prevention	<p>To minimize the risk of fire or explosions, the Project will implement BMPs to be detailed in the Emergency Management Plan noted above. Typical BMPs will include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Equip construction vehicles with fire extinguishers, spark arrestors and heat shields, as appropriate. • Establish roads before accessing the site to minimize vehicle contact with grass. • Use diesel construction vehicles instead of gasoline vehicles, where feasible, to prevent potential ignition by catalytic converters. • Prohibit vehicles from idling in grassy areas. • Restrict the use of high-temperature equipment in grassy areas. • Install lightning protection measures to protect generators and other equipment. • Install fire protection equipment in accordance with Washington state fire code. • Notify the local fire district of construction plans and access to Project equipment. 	Benton County Fire Marshall and DNR Wildland Fire Management Division

Mitigation Measure	Description	Expert Agency Participation
	<ul style="list-style-type: none"> • Provide mutual assistance in the case of fire in or around the Project during construction. • Monitor wildfire activity during Project construction and operations and, if necessary, modify Project activities, change the schedule, cease construction operations, or remove equipment. • Prevent and control potential fires inside the Project Area with trained staff who have 24-hour access to the site. <p>A Vegetation and Weed Management Plan will be prepared and will include revegetation management and noxious weed control measures.</p>	
BESS design	The BESS will contain a fire suppression and detection 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.	NFPA
Construction Stormwater General Permit (CSWGP), Construction Phase Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sediment Control Plan (ESCP)	<p>As described in Part 4, Section 4.5, the Applicant will obtain a CSWGP from Ecology EFSEC, which requires a SWPPP and ESCP. These plans will contain measures to minimize the risk of spills and stormwater pollution, as well as to reduce the effects of erosion to ensure compliance with state and federal water quality standards.</p> <p>Applicable laws/codes include the following:</p> <ul style="list-style-type: none"> • RCW 90.48, which establishes general stormwater permits for Ecology under the Water Pollution Control Act • WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington <p>Clean Water Act (33 United States Code 1251)</p>	Ecology, EFSEC
SPCC Plan	The Applicant will prepare an SPCC Plan, consistent with requirements of 40 CFR Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential risks to water quality.	Ecology
Use of approved herbicides	In compliance with RCW 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the EPA.	EPA and the Benton County Noxious Weed Control Board
Land Use		
Based on the information provided in Section 4.14.C and in the Land Use Consistency Review (see Attachment D), the Project will have no significant adverse effects on land use. Therefore, no land use mitigation or monitoring measures are proposed. Mitigation measures specific to other topics (e.g., wetlands and surface waters, wildlife habitat, or geological hazards) are addressed in their respective resource sections in Part 3 and Part 4 of this application.		
Noise, Light, Glare, and Aesthetics		
BMPs-Noise	<p>WAC 173-60-050 exempts temporary construction noise from the state noise limits; however, BMPs will be implemented to reduce off-site construction noise impacts.</p> <p>Since construction equipment operates intermittently, and the types of machines in use at the Project change with the stage of construction, noise emitted during construction will be mobile and highly variable, making it challenging to control.</p>	EFSEC

Mitigation Measure	Description	Expert Agency Participation
	<p>Project construction will generally occur during the day, Monday through Friday. Furthermore, reasonable efforts will be made to minimize the impact of noise resulting from construction activities, including implementation of standard noise reduction measures listed below. Due to the infrequent nature of loud construction activities at the site, the limited hours of construction, and the implementation of noise mitigation measures, the temporary increase in noise due to construction is considered to be a less than significant impact.</p> <p>The construction management protocols will include the following noise mitigation measures to minimize noise impacts:</p> <ul style="list-style-type: none"> • Maintain construction tools and equipment in good operating order according to manufacturers' specifications. • Limit use of major excavating and earth-moving machinery to daytime hours. • To the extent practicable, schedule construction activity during normal working hours on weekdays when higher sound levels are typically present and are found acceptable. Some limited activities, such as concrete pours, will be required to occur continuously until completion. • Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks. • For construction devices that use internal combustion engines, ensure the engine's housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers' guidelines, if possible. • Limit possible evening shift work to low-noise activities such as welding, wire pulling, and other similar activities, together with appropriate material-handling equipment. <p>Use a complaint resolution procedure to address any noise complaints received from residents.</p>	
BMPs – Light, Glare and Aesthetics	<p>The Facility will implement BMPs including:</p> <ul style="list-style-type: none"> • Downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. • Utilizing solar panels with an anti-reflective coating to minimize glare. <p>Maintenance of revegetated surfaces until the vegetation has been established.</p>	N/A
Archaeological, Historic, and Cultural Resources		
Avoidance of Protected Sites	<p>Given protection under RCW 27.53 of sites 45BN1286, 45BN2121, 45BN2195, 45BN2196, 45BN2198, 45BN2202, 45BN2203, 45BN2204, 45BN2205, and 45BN2212, and IFs 45BN2208, and 45BN2209, WA-BB-02, WA-BB-03, WA-BB-10, WA-BB-11, WA-BB-12, and WA-BB-13, WA-BB-ISO-01, WA-BB-ISO-02, and WA-BB-ISO-03, these archaeological resources are recommended to be avoided by the Project's final layout.</p>	<p>DAHP, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon</p>

Mitigation Measure	Description	Expert Agency Participation
	A minimum avoidance buffer of 30 meters (100 feet) around the sites has been recommended in confidential Attachment Q and is achieved in the current Project design. If avoidance of these buffers is infeasible during final design, monitoring of construction activities within the buffer may be necessary. If avoidance of the sites themselves is infeasible, an Excavation Permit from DAHP will be required under RCW 27.53	
Archaeological Excavation Permit	Pre-contact archaeological sites, regardless of register eligibility, or NRHP-eligible or unevaluated historic-era archaeological sites that cannot be avoided in the Project's final layout/design, require an archaeological excavation permit from DAHP under RCW 27.53.060 before they can be disturbed. This requirement is limited to the site boundaries themselves. Based on the register eligibility evaluations in confidential Attachment Q, no such sites will be impacted by the current design and no permit is necessary for the current design.	DAHP, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon
Unanticipated Discovery Plan	In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find should be halted and directed away from the discovery until it can be assessed in accordance with steps in the Unanticipated Discovery Plan (provided as Appendix G in Attachment Q). This appendix does not contain any confidential information and can be shared with Project personnel and contractors.	DAHP, County, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon
Continued Coordination with Native Americans	<p>Only regulatory agencies can formally consult with tribes. Informal communications are included with this ASC as part of resource identification efforts and as due diligence.</p> <p>Coordination and open communications will continue with interested tribes during Project permitting and design to incorporate tribal input regarding avoidance of potential impacts to cultural resources, including traditional use areas or other areas of significance to tribes. Lines of communication will remain open to better facilitate any response to unanticipated discoveries during construction.</p>	DAHP, County, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon
Traffic and Transportation		
WSDOT Oversize and Overweight Permit	A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including RCW 46.44 and WAC 468-38.	WSDOT
WSDOT Right of Way Access Permit	Per WAC 468-51, the Applicant will obtain a General Permit from WSDOT to upgrade the portion of the approach off SR 241 that is within the WSDOT right-of-way.	WSDOT
Benton County and/or Yakima County Right of Way Access Permit	Based on final Project design, the Applicant will obtain access permits to construct approaches to County road right-of-way from Benton and Yakima Counties pursuant to County Standards.	Benton County Public Works Department, Yakima County Public Works Department
Traffic Control Plan	A Traffic Control Plan will be prepared in consultation with WSDOT for traffic management during improvement of highway access. This plan would contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and would be in accordance with 23 CFR §655 Subpart F that provides for the Federal Highway Administration to maintain the Manual on Uniform Traffic Control Devices for Streets and Highways, which defines standards for traffic control.	WSDOT, Benton County Public Works Department, Yakima County Public Works Department

Mitigation Measure	Description	Expert Agency Participation
	A Traffic Control Plan will be prepared in coordination with Benton County and Yakima County Public Works Departments for traffic management during construction and for construction of access approaches from county right-of-way.	

A.6. Project Plans and Submittals

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Preliminary Site Plan	Shows the preliminary Project design in relation to the Project Lease Boundary and Project Area.	Completed (Attachment A; Figure A-1)	N/A
Construction Stormwater General Permit (CSWGP) and Notice of Intent (NOI)	In compliance with WAC 173-200 and WAC 463-76, the Applicant will obtain a CSWGP. The Construction Stormwater General Permit requires an ESCP and a SWPPP.	Prior to site preparation	EFSEC with input from Ecology
Erosion and Sediment Control Plan (ESCP)	The ESCP will be prepared to control erosion and sediment discharges during construction and will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants.	Prior to site preparation	EFSEC with input from Ecology
Construction Phase Stormwater Pollution Prevention Plan (SWPPP)	The Construction Phase SWPPP will be based on Ecology's SWPPP template and will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington.	Prior to site preparation	EFSEC with input from Ecology
Construction Phase Spill Prevention Control and Countermeasure (SPCC) Plan	The Construction Phase SPCC Plan will be prepared to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address/prevent potential water quality issues. The plan will be prepared pursuant to the requirements of CFR Part 112, as well as Sections 311 and 402 of the Clean Water Act, and Section 402(a)(1) of the Federal Water Pollution Control Act.	Prior to site preparation	EFSEC with input from Ecology
Emergency Management Plan	The Emergency Management Plan will address worker health and safety, as well as fire prevention and control measures for construction and operation.	Prior to site preparation	Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division.

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Traffic Control Plan	A Traffic Control Plan will be prepared in coordination with Washington State Department of Transportation, Benton County, and Yakima County for traffic management during construction and for construction of access approaches from WSDOT right-of-way. The plan will be developed consistent with WDOT and Benton County design standards.	Prior to site preparation	With input from WSDOT, Benton County, and Yakima County
Construction Schedule	Final construction schedule.	Prior to site preparation	EFSEC
Construction Plans and Specifications	A set of construction plans, specifications, drawings, and design documents that demonstrate the Project is in compliance with applicable conditions of the Site Certificate Agreement.	Prior to site preparation	EFSEC
Operations Phase SWPPP	The Operations Phase SWPPP will be based on Ecology's SWPPP template and will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington.	Prior to commercial operations	EFSEC with input from Ecology
Operations Phase SPCC Plan	The Operations Phase SPCC Plan will be prepared to prevent spills during operations and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address/prevent potential water quality issues. The plan will be prepared pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402(a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080.	Prior to commercial operations	EFSEC with input from Ecology
Habitat Management Plan (HMP)	The Habitat Management Plan will specify the avoidance, minimization, and mitigation obligations and implementation plans, including those for Project construction, operations, and decommissioning. The plan will address the applicable requirements of WAC 463-60-332 and applicable guidelines such as WDFW's Mitigation (M-5002) Policy.	The Draft HMP is provided with this ASC (Attachment M) The HMP will be revised in coordination and with input from EFSEC and WDFW and completed prior to site preparation	EFSEC with input from WDFW
Revegetation and Weed Management Plan	The Revegetation and Weed Management Plan will address vegetation management activities related to the Project's construction and operation and specify methods that will be implemented for effective revegetation of temporarily disturbed areas and noxious weed control.	Prior to site preparation	EFSEC with input from WDFW and the Benton County Noxious Weed Control Board

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Unanticipated Discovery Plan	Plan to address situations when an unanticipated archaeological resource is discovered during construction. In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find will be halted and directed away from the discovery until it can be assessed per the measures outlined in the plan.	Completed (confidential Attachment Q)	EFSEC, DAHP, and Tribes
Initial Site Restoration Plan	Consistent with WAC 463-72-040, the Applicant will provide EFSEC with an Initial Site Restoration Plan at least 90 days prior to beginning Project site preparation. The Initial Site Restoration Plan will generally follow the proposed retirement steps provided in the Applicant's Decommissioning Summary and Estimate (Attachment R). The plan will include provisions for dismantling and removing aboveground solar array components and other aboveground associated supporting components described in Part 2, Section A.2.a. In areas where foundations are removed, the surface will be recontoured reasonably similar to the pre-construction condition, and the area will be reseeded with a seed mixture reasonably acceptable to the property owner.	At least 90 days prior to site preparation	EFSEC
<u>Soil Monitoring Plan</u>	<u>In order to assess potential impacts on soil health from Project development, the Applicant will prepare a Soil Monitoring Plan to monitor soil compaction, assess physical characteristics, and measure nutrient levels in the soil. The plan will include a selection of potential adaptive management actions that could be taken if soil health declines due to Project development and operation.</u>	<u>At least 90 days prior to site preparation</u>	<u>EFSEC</u>

A.7. Federal and State Requirements

Per WAC 463-60-297, Table A.7-1 below lists the federal and state statutes, rules and permits potentially applicable to the Project, and where compliance is addressed in the ASC. The Applicant’s Land Use Consistency Review addresses local statutes and requirements (Attachment D).

Table A.7-1. List of Federal and State Permits and Regulations Potentially Applicable to the Project

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Federal		
Record of Decision/ National Environmental Policy Act Compliance	Bonneville Power Administration National Environmental Policy Act, Section 102 (42 U.S.C. § 4332); 40 CFR § 1500. The POI with the BPA transmission system is subject to review under the National Environmental Policy Act. BPA will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.	Part 2, Section A.2.a
Threatened or Endangered Species	U.S. Fish and Wildlife Service Endangered Species Act of 1973 (16 U.S.C., Section 1531, et seq.) and implementing regulations. Designates and provides for protection of threatened and endangered plants and animals and their critical habitat. Section 7, 9, and 10 Consultation under the Endangered Species Act and Bald and Golden Eagle Protection Act (BGEPA).	Part 4, Sections 4.8 and 4.9
Migratory Birds	U.S. Fish and Wildlife Service Migratory Bird Treaty Act (16 U.S.C., 703-711).	Part 4, Sections 4.8 and 4.9
Eagles	U.S. Fish and Wildlife Service Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). Eagle permit regulations (50 CFR 22)	Part 4, Sections 4.8 and 4.9
Air Quality	U.S. Environmental Protection Agency (EPA) Clean Air Act (42 USC 85, Section 7401, et seq.; 40 CFR 60).	Part 4, Section 4.2
Waters of the United States	U.S. Army Corps of Engineers (USACE), Seattle District Clean Water Act of 1972 (40 CFR 230) Section 404. The need for a Section 404 permit is pending coordination with the USACE. The Applicant submitted a request for an approved jurisdictional determination to the USACE on December 13, 2021 (reference number NWS-2021-1146)	Part 4, Section 4.3
Aviation	Federal Aviation Administration Construction or alteration requiring notice (14 CFR 77.9), Form 7460-1.	Part 4, Section 4.16b

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
State		
Electrical Construction Permit	Washington Department of Labor and Industries WAC 296-46B, Washington Department of Labor and Industries Safety Standards—Installing Electrical Wires and Equipment— Administration Rules.	Part 2, Section A.7
Noise Control	Washington Department of Ecology RCW 70A.20 Noise Control; WAC 173-58, Sound Level Measurement Procedures. WAC 173-60, Maximum Environmental Noise Levels; WAC 463-62-030, Noise Standards.	Part 4, Section 4.16a
Air Quality	Washington Department of Ecology WAC-173-400, General Regulations for Air Pollution Sources. WAC 173-441, Reporting of Emissions of Greenhouse Gases. WAC 173-476, Ambient Air Quality Standards.	Part 4, Section 4.2
Water Quality Storm Water Discharge	Washington Department of Ecology RCW 90.48, Water Pollution Control Act, establishes general stormwater permits for the Washington Department of Ecology National Pollutant Discharge Elimination System (NPDES) Permit Program. Construction Stormwater General Permit for NPDES (through EFSEC jurisdiction, WAC 463-76). WAC 173-201A, Washington Department of Ecology Water Quality Standards for Surface Waters of the State of Washington, which regulates water quality of surface waters. Federal statute(s) and regulations implemented by the above state statute(s) and regulations include: Federal Clean Water Act, 33 U.S.C. 1251; 15 CFR 923-930.	Part 3, Sections 3.3, 3.5; Part 4, Sections 4.3 and 4.5
Water Quality Waters of the State	Washington Department of Ecology Section 401 Water Quality Certificate, Joint Aquatic Resource Permit Application (JARPA).	Part 4, Section 4.3
Shorelines of the State	Washington Department of Ecology WAC 173-18, Shoreline Management Act, Streams and Rivers Constituting Shorelines of the State. WAC 173-22, Adoption of Designations of Shorelands and Wetlands Associated with Shorelines of the State. JARPA and shoreline CUP for fill in wetlands associated with Shorelines of the State.	Part 2, Section B.6; Not anticipated to be required for the Project.
Fish and Wildlife	Washington Department of Fish and Wildlife WAC 220-610, defines State species status and protections. RCW 77.55, Hydraulic Code for in-water work; Hydraulic Project Approval (HPA).	Part 4, Sections 4.8 and 4.9 (for WAC 220-610) Part 4, Section 4.3 (for RCW 77.55 and HPA)
SEPA	RCW 43.21C, Washington Environmental Policy Act WAC 197-11, Washington Department of Ecology State Environmental Policy Act (SEPA) Rules, which establish uniform requirements for compliance with SEPA.	Parts 3 and 4

Wautoma Solar Energy Project

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Archaeology and Historic Preservation	Washington State Departments of Archaeology and Historic Preservation RCW 27.53, Archaeological Sites and Resources.	Part 4, Section 4.18
Energy Site Certification	Energy Facility Site Evaluation Council RCW 80.50 Energy Facilities – Site Locations.	This ASC addresses the site location review requirements for a Site Certification Agreement
Transportation	Washington State Department of Transportation (WSDOT) General Permit, WAC 468-51. Oversize and Overweight Permit, WAC 468-38-075.	Part 4, Section 4.20
Local		
Special Flood Hazard Development Permit	Benton County Development within special flood hazard area, BCC Chapter 3.26.	Part 3, Section 3 and Part 4, Section 4.3

B. Project and Site Information

B.1. Earth and Ground Disturbance

B.1.a. Soils and Slopes

Soil types	Soils in the Project Area are shown on Figure A-3 in Attachment A and listed in Attachment E. Burke silt loam, 0 to 5 percent slopes Burke silt loam, shallow, 0 to 5 percent slopes Esquatzel silt loam, 0 to 5 percent slopes Finley fine sandy loam, 0 to 15 percent slopes Finley stony fine sandy loam, 0 to 30 percent slopes Hezel loamy fine sand, 0 to 30 percent slopes Kiona very stony silt loam, 0 to 30 percent slopes Kiona very stony silt loam, 30 to 65 percent slopes Ritzville silt loam, 0 to 5 percent slopes Ritzville silt loam, 15 to 30 percent slopes, severely eroded Ritzville silt loam, 30 to 65 percent slopes Scootenev silt loam, 0 to 5 percent slopes Shano silt loam, 0 to 5 percent slopes Shano very fine sandy loam, 15 to 30 percent slopes, eroded Warden silt loam, 0 to 5 percent slopes Warden silt loam, 15 to 30 percent slopes, severely eroded Warden very fine sandy loam, 0 to 15 percent slopes
Steepest slope	51%
Range of Slopes	0 to 51%

B.1.b. Demolition, Grade and Fill

Would any demolition or renovation occur during construction?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
	Method:
	Waste Use or Disposal site:

Would any demolition or renovation occur during operation?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
	Method: N/A
	Waste Use or Disposal Site: N/A

Would any grade, fill, or excavation in upland areas occur during construction?		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	The extent of grading and fill that will be used as well as the source of fill material is pending final Project design. The values provided below are preliminary and will be revised with final Project design. The Applicant will specify the final quantity and source of fill in the Construction Plans and Specifications which will be provided to EFSEC for review prior to site preparation and once the final engineering design is completed.	
	<input checked="" type="checkbox"/> Grading	Cubic yards proposed: Approximately 451,600
	<input checked="" type="checkbox"/> Filling (import material to site)	Cubic yards proposed: Approximately 25,300
		Source of fill: Unknown
	<input type="checkbox"/> 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?		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Grading	Cubic yards proposed: N/A
	<input type="checkbox"/> Filling (import material to site)	Cubic yards proposed: N/A
		Source of fill: N/A
	<input type="checkbox"/> Excavating (Export material off site)	Cubic yards proposed: N/A
		Disposal site or use: N/A

Is fill or excavation proposed within surface waters, wetlands, or frequently flooded areas?	
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
	<p>The Project has been designed to avoid wetlands and wetland buffers. No fill or excavation will occur within ephemeral streams, stream buffers, and frequently flooded areas. Project components that will intersect with waterways (ephemeral streams) and Benton County critical areas ordinance regulated steam buffers include:</p> <ul style="list-style-type: none"> • A temporary 100-year floodplain and stream crossing for the installation of the overhead transmission lines. • Collection lines will be bored underneath the ephemeral waterways in four locations. All four of the borings will be located outside of the stream buffers. One of the borings, which is located outside of the stream buffer, will also be outside of the associated 100-year floodplain. • The temporary and permanent widening of an existing access road that lies in between two ephemeral drainages. All temporary and permanent impacts associated with the road widening are located outside of the adjacent ephemeral

	<p>drainages and stream buffers. This road widening is co-located with one of the boring locations.</p> <p>The impacts associated with these components are described in greater detail in Part 4, Section 4.3 and Attachment T Joint Aquatic Resources Permit Application (JARPA). The final extent of excavation and fill that will be used is pending final Project design, which will be completed once the construction contractor has been selected following issuance of the Project SCA. The values provided below are preliminary and will be revised with final Project design. The Applicant will specify the final quantity in the Construction Plans and Specifications which will be provided to EFSEC for review prior to site preparation and once the final engineering design is completed.</p> <p>As described in Part 4, Section 4.3.C, because ephemeral streams within the Project Area are not fish-bearing, the Applicant will engage with the Washington Department of Fish and Wildlife (WDFW) to determine if a Hydraulic Project Approval (HPA) is necessary based on final Project design (i.e., per WAC 220-660-010, the purpose of the HPA is to ensure that construction or performance of work is done in a manner that protects fish life). A JARPA has been prepared as part of this ASC (Attachment T)</p>
<input checked="" type="checkbox"/> Fill	<p>Cubic yards:</p> <ul style="list-style-type: none"> • Wetlands: No fill is proposed within wetlands or wetland buffers. • Ephemeral streams, stream buffers, and frequently flooded areas: No fill is proposed within ephemeral streams, stream buffers, and frequently flooded areas. • A total of 424 cubic yards of fill is proposed for a permanent road widening and culvert between two ephemeral waterways that, while outside of the waterways and their regulated buffers, is included because the WDFW has indicated that this type of crossing may require an HPA.
	<p><input checked="" type="checkbox"/> Excavation/ Dredging</p> <p>Cubic yards:</p> <ul style="list-style-type: none"> • Wetlands: No excavation is proposed within wetlands or wetland buffers. • Ephemeral streams, stream buffers, and frequently flooded areas: No excavation is proposed within ephemeral streams, stream buffers, and frequently flooded areas.
<p>Describe area(s) where this would occur: See Part 4, Section 4.3 and Attachment T</p>	

B.2. Surface Types and Acreage

		Acreage	
Project Site Areas		Pre-Construction, within the Project Area	Post-Construction, within the Project Area
Roads, buildings, and other impervious surfaces		33	161
Altered Habitat (revegetated area inside the solar array fenceline)		0	2,954
Wetlands	Emergent wetland	0.1	0.1

Project Site Areas		Acreage	
		Pre-Construction, within the Project Area	Post-Construction, within the Project Area
	Scrub Shrub wetland	0	0
	Forested wetland	0	0
	Open Water (do not include any area already listed in previous categories)	0	0
Vegetated Uplands	Agriculture	793	29
	Eastside (interior) Grassland	93 41	87 37
	Non-native Grassland and Forbland	1,319	696
	Shrub-steppe	63 118	61 114
	Irrigated Hedgerow	9	1
	Rabbitbrush Shrubland	129	37
	Planted Grassland ¹¹	2,128	542
Unvegetated	<i>such as rock, earth, or fill</i>		
Other	Ephemeral Streams	3	3 2
	Talus slopes	3	3
TOTAL:		4,573	4,573

B.3. Plants and Habitats

Are there any plants or habitats present on the site?		
<input type="checkbox"/> None	<input checked="" type="checkbox"/> Yes See the Botanical Survey Report (Attachment F) and the Habitat and General Wildlife Survey Report (Attachment G) for additional details regarding plants and habitats found within the Project Area. Appendix B of the Botanical Survey Report provides a complete list of vascular plants observed within the Project Area.	
	Deciduous trees: such as alder, maple, aspen	
	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
	Specify: Deciduous trees observed within the Project Area were all non-native planted species, primarily located in irrigated hedgerows/windbreaks. Species observed included: Russian-olive (<i>Elaeagnus angustifolia</i>), cherry (<i>Prunus</i> spp.), black locust (<i>Robinia pseudoacacia</i>), and Siberian elm (<i>Ulmus pumila</i>).	
	Evergreen trees: such as fir, cedar, pine:	
	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
	Specify: The only evergreen tree observed within the Project Area was western juniper (<i>Juniperus occidentalis</i>). These juniper trees were also observed within the irrigated hedgerows/windbreaks.	
	Shrubs, grass, pasture	

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<p>Specify: Non-native grassland and forbland; species observed in this habitat type include:</p> <ul style="list-style-type: none"> Grasses: bulbous bluegrass (<i>Poa bulbosa</i>), cheatgrass (<i>Bromus tectorum</i>), cereal rye (<i>Secale cereale</i>) Forbs: blue mustard (<i>Chorispora tenella</i>), common stork's bill (<i>Erodium cicutarium</i>), tall tumbledustard (<i>Sisymbrium altissimum</i>), yellow salsify (<i>Tragopogon dubius</i>) <p>Eastside (interior) grassland; species observed in this habitat type include:</p> <ul style="list-style-type: none"> Grasses: bluebunch wheatgrass (<i>Pseudoroegneria spicata</i>), Idaho fescue (<i>Festuca idahoensis</i>), needle-and-thread (<i>Hesperostipa comata</i>), Sandberg bluegrass (<i>Poa secunda</i> ssp. <i>secunda</i>), cheatgrass, bulbous bluegrass Forbs: Carey's balsamroot (<i>Balsamorhiza careyana</i>), desert-parsley (<i>Lomatium</i> spp.), threadleaf fleabane (<i>Erigeron filifolius</i>), long-leaf phlox (<i>Phlox longifolia</i>), lupine (<i>Lupinus</i> spp.), woolly plantain (<i>Plantago patagonica</i>) <p>Rabbitbrush shrubland; species observed in this habitat type include:</p> <ul style="list-style-type: none"> Shrubs: rubber rabbitbrush (<i>Ericameria nauseosa</i>), green rabbitbrush (<i>Chrysothamnus viscidiflorus</i>) Grasses: big bluegrass (<i>Poa secunda</i> ssp. <i>juncifolia</i>), bluebunch wheatgrass, crested wheatgrass (<i>Agropyron cristatum</i>), cheatgrass, bulbous bluegrass Forbs: hawksbeard (<i>Crepis</i> spp.), hoary-aster (<i>Dieteria canescens</i>), lupine, threadleaf fleabane, common stork's bill, tall tumbledustard 		
Shrub-steppe: such as sage brush, native grasses		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<p>Specify: Shrub-steppe; species observed in this habitat type include:</p> <ul style="list-style-type: none"> Shrubs: big sagebrush (<i>Artemisia tridentata</i>), threetip sagebrush (<i>Artemisia tripartita</i>), green rabbitbrush, rubber rabbitbrush Grasses: Sandberg bluegrass, squirreltail (<i>Elymus elymoides</i>), bulbous bluegrass, cheatgrass, crested wheatgrass Forbs: hawksbeard, hoary-aster, threadleaf fleabane, woollypod milkvetch (<i>Astragalus purshii</i>) 		
Wet soil plants: such as cattail, buttercup, bulrush, skunk cabbage		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<p>Specify: Wet soil plants were observed in wetlands that formed from leaking irrigation pipes. Species observed include: cattail (<i>Typha latifolia</i>), barnyard grass (<i>Echinochloa crus-galli</i>)</p>		
Water plants: such as water lily, eelgrass, milfoil		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Specify:		
Other vegetation types: Planted grassland; Agricultural lands		

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<p>Specify: Planted grassland; species observed in this habitat type include:</p> <ul style="list-style-type: none"> • Shrubs: rubber rabbitbrush (low cover of shrubs) • Grasses: crested wheatgrass, bluebunch wheatgrass, big bluegrass, bulbous bluegrass, cheatgrass • Forbs: hawksbeard, fiddleneck (<i>Amsinckia</i> spp.), common stork's bill, tall tumbled mustard, yarrow (<i>Achillea millefolium</i>) <p>Agricultural land:</p> <ul style="list-style-type: none"> • Fallow and active wheat fields • Alfalfa fields • Livestock and horse pastures <p>Irrigated hedgerows/planted windbreaks; species include those listed under deciduous trees above.</p>		
Other habitat types:		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<p>Specify: Talus: sparsely vegetated scree and talus on steep slopes. Vegetation observed included bluebunch wheatgrass, Sandberg bluegrass, needle-and-thread, cheatgrass, bulbous bluegrass, Carey's balsamroot and butterfly bearing biscuit-root (<i>Lomatium papilioniferum</i>).</p> <p>Developed/disturbed: includes roads, structures, and other areas disturbed in association with agricultural and ranching activities.</p>		
<p>Do you know of any at-risk plant species on the site:</p> <ul style="list-style-type: none"> • <i>Threatened or endangered</i> • <i>Species of local importance</i> • <i>Federal or state listed</i> • <i>Federal or state priority</i> • <i>Tribal-specific plant resources present on the site where abundance is limited elsewhere</i> 		
<input type="checkbox"/> None known	<input checked="" type="checkbox"/> Yes	
	Species Name	Listing Status
	<p>One population of the state sensitive species, Columbia milk-vetch (<i>Astragalus columbianus</i>), was observed during surveys conducted for the Project. Subsequent to these surveys, the Project Area was revised to avoid this population. Additional details on this population can be found within the Botanical Survey Report (Attachment F).</p> <p>No other at-risk plant species were observed. Additional surveys for at-risk plant species will be conducted in the spring of 2022 within the portions of the Project Area that were not surveyed during surveys conducted in May 2021.</p>	

	<p>Name the sources that were checked, or work done to identify the at-risk species: See the Botanical Survey Report (Attachment F) and the Habitat and General Wildlife Survey Report (Attachment G).</p>
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B.4. Forest Harvest

Is a forest practice or timber harvest proposed on any sites associated with the proposal?		
<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Acres proposed:	N/A

B.5. Fish and Wildlife

Are there any animals that have been observed or are known to be on or near the site?		
<input type="checkbox"/> None known	<input checked="" type="checkbox"/> Yes See the Habitat and General Wildlife Survey Report (Attachment G) for additional details regarding animals found within the Project Area. Appendix A and Appendix C of the Habitat and General Wildlife Survey Report (Attachment G) provide a list of special status wildlife species with potential to occur within the Project Area and wildlife species and sign observed during field surveys, respectively.	List species that use the site as a travel corridor.
	Birds: <i>such as hawk, heron, eagle, songbirds</i>	
	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes

	<p>Specify:</p> <p>The Habitat and General Wildlife Survey Report (Attachment G) lists the 36 avian species identified during the general wildlife surveys (either through direct observation or through signs). These included: American goldfinch (<i>Spinus tristis</i>), American robin (<i>Turdus migratorius</i>), barn swallow (<i>Hirundo rustica</i>), black-billed magpie (<i>Pica hudsonia</i>), Brewer's blackbird (<i>Euphagus cyanocephalus</i>), Bullock's oriole (<i>Icterus bullockii</i>), California quail (<i>Callipepla californica</i>), cliff swallow (<i>Petrochelidon pyrrhonota</i>), common raven (<i>Corvus corax</i>), Eurasian collared dove (<i>Streptopelia decaocto</i>), European starling (<i>Sturnus vulgaris</i>), ferruginous hawk (<i>Buteo regalis</i>), golden-crowned kinglet (<i>Regulus satrapa</i>), golden eagle (<i>Aquila chrysaetos</i>), grasshopper sparrow (<i>Ammodramus savannarum</i>), great-horned owl (<i>Bubo virginianus</i>), green-winged teal (<i>Anas crecca</i>), horned lark (<i>Eremophila alpestris</i>), house finch (<i>Haemorhous mexicanus</i>), house sparrow (<i>Passer domesticus</i>), killdeer (<i>Charadrius vociferus</i>), lark sparrow (<i>Chondestes grammacus</i>), long-billed curlew (<i>Numenius americanus</i>), mourning dove (<i>Zenaida macroura</i>), northern harrier (<i>Circus cyaneus</i>), red-breasted nuthatch (<i>Sitta canadensis</i>), red-tailed hawk (<i>Buteo jamaicensis</i>), red-winged blackbird (<i>Agelaius phoeniceus</i>), rock pigeon (<i>Columba livia</i>), savannah sparrow (<i>Passerculus sandwichensis</i>), Swainson's hawk (<i>Buteo swainsoni</i>), turkey vulture (<i>Cathartes aura</i>), vesper sparrow (<i>Poocetes gramineus</i>), western kingbird (<i>Tyrannus verticalis</i>), western meadowlark (<i>Sturnella neglecta</i>), and yellow warbler (<i>Setophaga petechia</i>).</p> <p>Additional surveys for avian species were conducted as part of the Raptor Nest Surveys (see Attachment L). Species and their nests identified during the Raptor Nest Surveys included burrowing owls (<i>Athene cunicularia</i>), common ravens, great horned owls (<i>Bubo virginianus</i>), and Swainson's hawks.</p>	<p>See Section 4.9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional information regarding species occurrence in the area.</p>
	<p>Mammals: <i>such as deer, bear, elk, beaver</i></p>	
	<p><input type="checkbox"/> No <input checked="" type="checkbox"/> Yes</p>	

	<p>Specify: The Habitat and General Wildlife Survey Report (Attachment G) lists the mammal species identified during the general wildlife surveys (either through direct observation or through signs). These included: coyote (<i>Canis latrans</i>), mountain lion (<i>Puma concolor</i>), mule deer (<i>Odocoileus hemionus</i>), and elk (<i>Cervus canadensis nelson</i>). No small mammals were directly observed; however, unidentified small mammal scat and sign were observed.</p>	<p>See Section 4.9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional information regarding species occurrence in the area.</p>
<p>Fish: such as bass, salmon, trout, herring, shellfish</p>		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	N/A
<p>Specify: N/A</p>		
<p>Other:</p>		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	N/A
<p>Specify: An unknown snake was observed during the Habitat and General Wildlife Survey Report (Attachment G); however, surveyors were not able to identify it to species.</p>		
<p>Do you know of any at-risk animal species on or near the site?</p>		
<ul style="list-style-type: none"> Threatened or endangered Species of local importance Federal or state listed 		<ul style="list-style-type: none"> Federal or state priority Tribal-specific fish, plant, or wildlife resources present on the site where abundance is limited elsewhere
<input type="checkbox"/> None known	<input checked="" type="checkbox"/> Yes	
	Species Name	Listing Status¹
	Birds	
	Burrowing owl	C
	Ferruginous hawk	E, PS
	Golden eagle	BGEPA, PS
	Northern harrier	BCC
	Mammals	
	Elk	PS
	Mule deer	PS

	<p>C = State Candidate; E = State Endangered; PS = WDFW Priority Species; BGEPA = Bald and Golden Eagle Protection Act; BCC = Bird of Conservation Concern.</p> <p>Name the sources that were checked, or work done to identify at-risk species:</p> <p>The list above indicates the special status species identified during surveys (i.e., “known” to occur “on or near the site”); however, Appendix A in Attachment G lists the special status wildlife species with a potential to occur at the Project. The following data sources were used to develop the list of special status wildlife species with a potential to occur at the Project.</p> <ul style="list-style-type: none"> • Tetra Tech Wautoma Solar Wetland Delineation Report (Tetra Tech 2022) • U.S. Fish and Wildlife Service (USFWS) federally listed species list for Project location in Benton County (USFWS 2021a) • USFWS Birds of Conservation Concern (USFWS 2021b) • Washington State Listed and Candidate Species (WDFW 2020) • WDFW Priority Habitats and Species (PHS) List (WDFW 2008) • WDFW PHS on the Web (WDFW 2021a) • WDFW Threatened and Endangered Species Profiles (WDFW 2021b) • WDFW PHS Distribution by County (WDFW 2021c)
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B.6. Property/Site Designations

Provide information for these 7 items	
Comprehensive Plan (name, date, pertinent sections):	<p>Benton County Comprehensive Plan (Benton County 2018, as amended though 2021)</p> <p>Pertinent sections include:</p> <ul style="list-style-type: none"> Chapter 2, Goals and Policies Chapter 3, Land Use Element Chapter 4, Natural Resources Element Chapter 5, Economics Element Chapter 6, Housing Element Chapter 7, Transportation Element Chapter 10, Utilities Element <p>Consistency with the Benton County Comprehensive Plan is reviewed in Part 4, Section 4.14 and Attachment D.</p>
Current Zoning:	GMAAD – GMA Agriculture
Planning Area:	GMAAD
Shoreline Master Plan:	Benton County Shoreline Master Program (Benton County 2021).
Designation:	None in the Project Area
Closest Surface Water:	The closest named stream is Dry Creek located within the Project Area. Dry Creek and other unnamed stream segments in the Project Area are ephemeral streams as described in the wetland delineation report (Attachment I; Part 4, Section 4.3).

Distance:	See above	
WRIA #:	37 – Lower Yakima	
Is the site within a mapped FEMA Flood Zone?		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Zone name: There is one mapped Zone A (100-year floodplain) associated with the named ephemeral stream, Dry Creek, which crosses through the northern portion of the Project Area. See Part 4, Section 4.3 for additional details.	
Is the site a designated Natural Resource Land? <i>Designated by the county or city</i>		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Forest land:	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Agriculture: The Project is located in the GMAAD zone, which is a designated agricultural land of long-term commercial significance by Benton County (Benton County 2021).	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Mineral:	
Is the site, or land within 300 feet of the site, in a designated Critical Area? <i>Designated by the county or city</i>		
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Wetland: See Part 4, Section 4.3 for additional details.	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Frequently flooded: See Part 4, Section 4.3 for additional details.	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Aquifer recharge: See Part 4, Section 4.5 for additional details.	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Geologic hazard: See Part 4, Section 4.1 for additional details.	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Fish/wildlife habitat conservation: See Part 4, Section 4.9 for additional details.	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Other	
On a Local, State, or Federal Historic Register?		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	See Part 4, Section 4.19
	<input checked="" type="checkbox"/> Listed	<input checked="" type="checkbox"/> Proposed
Identified as a Local, State, or Federal Cultural Site?		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	See Part 4, Section 4.19
	<input type="checkbox"/> Listed	<input type="checkbox"/> Proposed
Are there tribes that may have or claim particular rights to all or part of the project area?		

<input type="checkbox"/> None known	<input checked="" type="checkbox"/> Yes The Applicant consulted DAHP’s Interactive Tribal Map, which identified the Confederated Tribes of the Warm Springs Reservation of Oregon, Samish Indian Nation, Wanapum Tribe, and Confederated Tribes and Bands of the Yakama Nation as tribes with traditional territories in the Project Area.		
	Tribe	Contact Made or Attempted, Who/When/method of contact	
		Outcome of Contact including Right Asserted (if any)	
	Confederated Tribes of the Warm Springs Reservation of Oregon	Christian Nauer, via letter on 8/11/2021, to discuss cultural resources, surveys, and general introduction to the Project. A Project update letter was sent on March 1, 2022.	
		A draft copy of the survey report was provided for review. Outreach is ongoing.	
	Samish Indian Nation	Tom Wooten, via letter on 8/11/2021, to discuss cultural resources, surveys, and general introduction to the Project. A Project update letter was sent on March 1, 2022.	
		In response to our letter of March 1, 2022, Jackie Ferry (Chelángen Director/Tribal Historic Preservation Officer, Samish Indian Nation) indicated they are not interested in engaging on cultural resources on this project. Outreach is ongoing.	
	Wanapum Tribe	Rex Buck Jr., via letter on 8/11/2021, to discuss cultural resources, surveys, and general introduction to the Project. A Project update letter was sent to Wanapum Tribe's general mailing address on March 1, 2022.	
		In response to our letter of March 1, 2022, Jackie Ferry (Chelángen Director/Tribal Historic Preservation Officer, Samish Indian Nation) indicated they are not interested in engaging on cultural resources on this project. Outreach is ongoing.	
	Confederated Tribes and Bands of the Yakama Nation	Casey Barney, via letter on 8/11/2021, to discuss cultural resources, surveys, and general introduction to the Project. A Project update letter was sent on March 1, 2022. A draft copy of the survey report was provided for review. Outreach is ongoing.	
		Phil Rigdon, from September 2021 through March 2022, via numerous emails and phone conversations to discuss a general introduction to the Project. Outreach is ongoing.	
		Shannon Adams, Habitat Coordinator, via email on 3/3/2022, to discuss a potential opportunity for a habitat mitigation plan. No response received to date.	
	Confederated Tribes of the Colville Reservation	Cody Desautel and Michael Findlay via phone message. No response received to date. Outreach is ongoing.	
	Confederated Tribes of the Umatilla Indian Reservation	Teara Farrow Ferman, via letter on 03/11/2022, to discuss cultural resources, surveys, and general introduction to the Project.	

Other applicable plans or local/state/federal designations that apply to the site?		
<input checked="" type="checkbox"/> None known	<input type="checkbox"/> Yes	
	Names:	N/A

B.7. Land Uses

Identify the following.

Existing Land Uses	Dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), scattered unoccupied structures (e.g., agricultural storage).	
Past Known Land Uses	Agriculture, rangeland, undeveloped land, scattered unoccupied structures.	
Existing Adjacent Uses	North:	Dryland and irrigated agriculture, scattered rural development, local roads, and state highways.
	South:	Undeveloped areas and dryland agriculture.
	West:	Dryland and irrigated agriculture, vineyard, scattered rural development, local roads, and state highways.
	East:	Rangeland, undeveloped areas, local roads, state highways, and Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve).

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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Source of runoff:	Compacted soils and construction areas. See Part 3, Section 3.5 for additional information.
	Quantity of runoff:	A Preliminary Stormwater Management Report is provided in Attachment J. Drainage basins and other erosion control measures have been incorporated into the Project design to address construction runoff.
	Method of collection:	Ground infiltration through undisturbed native vegetation, as well as temporary drainage basins and erosion control measures.
	Drain/ discharge to:	<input checked="" type="checkbox"/> Onsite <input type="checkbox"/> Overland flow <input checked="" type="checkbox"/> Engineered infiltration

		Describe: A Preliminary Stormwater Management Report is provided in Attachment J. Drainage basins have been incorporated into the Project design to address construction runoff. Temporary basins during construction will be located throughout the Project Area as needed pending final engineering.
	<input type="checkbox"/> Offsite	<input type="checkbox"/> Utility Name:
		<input type="checkbox"/> Other
		Describe: N/A
Is a new facility, system, or line required?		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Describe and locate on site map: N/A		

B.8.b Stormwater Management - Operations

Would there be stormwater runoff during operations?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Source of runoff	New impervious surfaces will be developed as part of this proposal (e.g., gravel roads, solar array posts, foundations for PCS, O&M building, substation components, etc.). However, these impervious surfaces are a small percentage of the total Project Area and stormwater will generally infiltrate across the site by infiltrating through vegetation or, where necessary, through permanent detention basins with outlet culverts to allow water to slowly release and infiltrate. Overall impervious surfaces are anticipated to be approximately 3.8 percent of the total Project Area (see Part 2, Section B.2). See Part 3, Section 3.5 for additional information.
	Quantity of runoff	A Preliminary Stormwater Management Report is provided in Attachment J. Permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development.
	Method of collection	In general, there will be minimal grading across the site and existing drainage patterns and natural infiltration will be retained. Temporary disturbance areas will be revegetated following construction. Permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development.
	Drain/ discharge to:	<input checked="" type="checkbox"/> Onsite
		<input checked="" type="checkbox"/> Engineered infiltration
		Describe: Permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development.
	<input type="checkbox"/> Offsite	<input type="checkbox"/> Utility Name: <input type="checkbox"/> Other

		Describe: N/A
Is a new facility, system, or line required?		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
		Describe and locate on site map: N/A

B.8.c Energy

Would there be energy consumption?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<input checked="" type="checkbox"/> Electricity ⇒ Utility name: Local utility, Benton County Rural Electric Association		
<input type="checkbox"/> Natural gas ⇒ Utility name:		
<input type="checkbox"/> Fuel ⇒ type:		
Is a new facility, generator, line, or connection required?		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
		Describe and locate on site map: Local utility connection to Benton Rural Electric Association at the Project substation and O&M building. The Project substation and O&M area are shown on Figure A-1 in Attachment A.

Would there be energy production?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
<input checked="" type="checkbox"/> Electricity ⇒ Receiving utility name: Unknown at this time. The Applicant is actively pursuing offtake discussions with customers for delivery of the Project's power generation.		
Is a new facility, generator, line, or connection required?		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
		Describe and locate on site map: An approximately 0.25-mile-long overhead 500-kV transmission line will extend from the Project substation to the POI at the existing the BPA transmission system at the BPA Wautoma Substation, which is located on BPA federal lands surrounded by the Project Area. The line will be suspended above ground on H-frame steel structures that will be approximately 60 to 150 feet tall and installed on drilled concrete piers.

B.8.d Water Use - Construction

Would there be water use during construction?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<p>Gallons per day proposed: Approximately 53 million gallons over the 22-month construction period, or approximately 80,000 gallons/day.</p> <p>Water use for construction is primarily associated with dust control. Concrete used for the Project will be brought to the site by ready-mix trucks and water is not anticipated to be used on-site for the mixing of concrete. Water trucks will be used to provide moisture for compaction as well as dust control during construction as required. Depending on soil moisture levels, up to approximately of 53 million gallons of water could be used throughout the construction for dust suppression.</p>	
<p>Water source: Water use for Project construction will be obtained from an existing on-site well with a valid water right (to be verified in coordination with Ecology) or will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). If needed, a combination of the options identified above may be used to obtain water for Project construction. The Applicant or the Applicant's construction contractor will verify the source and availability of water from a permitted source prior to construction.</p>	
<input checked="" type="checkbox"/> Utility	Name: Unknown (Yet to be determined)
<input type="checkbox"/> Surface water	Name:
<input checked="" type="checkbox"/> Private well	
<input type="checkbox"/> Private water system	Name:
Is a new well, diversion, line, or connection required?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
<p>Describe and locate on site map: The Applicant or the Applicant's construction contractor will verify the well location and availability of water from a permitted source prior to construction.</p>	

B.8.e Water Use - Operation

Would there be water use during operation?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<p>Gallons per day: Approximately 120,000 gallons per year.</p> <p>Water will be used during operation for domestic uses at the O&M building and during operations for panel washing.</p> <p>The Project is expected to use less than the groundwater permit-exempt well threshold of 5,000 gallons a day (RCW 90.44.050 sets a maximum withdrawal of up to 5,000 gallons per day [or 5.6 acre-feet per year] for permit exemption). Using a groundwater permit-exempt well, a maximum of 1,825,000 gallons per year could be used during operation (i.e., if the maximum permitting threshold of 5,000 gallons of water a day was used); however, it is estimated that the likely actual use will be 120,000 gallons per year. This total includes the water use related to the potential panel washing (i.e., if 20 percent of the panels are washed once per year).</p>	
<p>Water source: Water use for Project operations will either be obtained from an existing on-site well with a valid water right, hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right), or obtained through a new permit-exempt groundwater well.</p>	
<input checked="" type="checkbox"/> Utility	Name: Unknown (Yet to be determined)
<input type="checkbox"/> Surface water	Name:
<input checked="" type="checkbox"/> Private well	
<input type="checkbox"/> Private water system	Name:
Is a new well, diversion, line, or connection required?	
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<p>Describe and locate on site map: The Applicant or the Applicant's construction contractor will verify the well location and availability of water from a permitted source prior to operations.</p>	

B.8.f. Sanitary Waste Management

Would there be a need for sanitary waste management?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<p>Gallons per day: The O&M facility will be served by an on-site septic system. Up to four operations employees are anticipated, and therefore, the expected use of the on-site septic system will be less than the permitting threshold of 3,500 gallons per day.</p>	
Discharge to: On-site septic system	
<input type="checkbox"/> Utility	Name: N/A
<input checked="" type="checkbox"/> Septic system: On-site septic system to be permitted through Benton County.	
<input type="checkbox"/> Other	
Is a new system, line, or connection required?	
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes

	Describe and locate on a site map: A new on-site septic system will be installed at the O&M facility.
--	--

B.9. Emergency Service Providers

Identify the providers for the following services for the project site:

Police Services:	Benton County Sheriff's Office
Fire Services:	Washington Department of Natural Resources (DNR) Wildland Fire Management Division
Other Emergency Services:	Benton County Emergency Management Astria Sunnyside Hospital Prosser Memorial Hospital

B.10. Transportation

Will transportation methods other than roads/motorized vehicles be used to access the site? (air, water, rail, pedestrians, bicycles, etc.)	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Describe: N/A	

What are the arterial roads serving the area of the project site?	The Project will be accessed via SR 241 and Wautoma Road. See Part 3, Section 20 and Part 4, Section 4.20 for additional details.
--	---

Vehicular traffic generated by project:				
During:	Round trips per day		Peak hour trips/day	Timing of peak hours
	Vehicles	Heavy equipment/material deliveries		
Construction	225 (average)	20 (average) equipment deliveries 44 (average) water truck deliveries	450 trips (i.e., 225 roundtrips) per day	6 a.m. to 7 a.m., 5 p.m. to 6 p.m.
Operation/use	1 to 4	Infrequent, as needed 1 to 2 water truck deliveries per day during panel washing (once per year over a period of 2 to 3 weeks)	N/A	N/A

Are new public roads proposed?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes

Are any public road improvements proposed?	
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
	Location/description: There are no anticipated changes or improvements to existing transportation infrastructure except for the proposed temporary access road improvements at site entrances from SR 241 and Wautoma Road. The Applicant will obtain County Right of Way Access Permits and a WSDOT Right of Way Access Permit for the proposed Project approaches on County and State Routes within the Project Area based on final design.
Parking	Existing spaces: N/A
	Spaces after project: Parking for O&M employees will be provided at the O&M facility. Parking area will accommodate up to 10 spaces.

B.11. References

Benton County. 2018. Benton County Comprehensive Plan Update. Prepared by Anchor QEA LLC and Oneza & Associates. February.

Tetra Tech (Tetra Tech, Inc.). 2022. Wautoma Solar Wetland Delineation Report. Prepared for Innergex Renewable Development USA, LLC. January 2022.

USFWS. 2021a. IPaC – Information for Planning and Consultation: Species list for Project location in Benton County, Washington. Available online at: <https://ecos.fws.gov/ipac/location/7TJMIIJWFZBSPK5CG7Q373UM5Y/resources>. Accessed May 2021.

USFWS. 2021b. Birds of Conservation Concern 2021. United States Department of Interior, Fish and Wildlife Service, Migratory Birds Program, Arlington, Virginia. 48 pp. Available online at: <https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>. Accessed August 2021.

WDFW (Washington Department of Fish and Wildlife). 2008. Priority Habitats and Species List, Revised February 2021. Available online at: <https://wdfw.wa.gov/sites/default/files/publications/00165/wdfw00165.pdf> Accessed May 2021.

WDFW. 2020. State Listed Species and State Candidate Species, Revised February 2020. Available online at: https://wdfw.wa.gov/sites/default/files/2020-02/statelistedcandidatespecies_02272020.pdf. Accessed May 7, 2021.

WDFW. 2021a. Priority Habitats and Species (PHS) on the Web. Available online at: <https://wdfw.wa.gov/conservation/phs/>. Accessed May 2021.

WDFW. 2021b. Threatened and endangered species profiles. Available online at: <https://wdfw.wa.gov/species-habitats/at-risk/listed>. Accessed May 7, 2021.

WDFW. 2021c. 2021 PHS Distribution by County Spreadsheet. Available online at:
<https://wdfw.wa.gov/publications/00165>. Accessed May 7, 2021.

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PART 3 – SCREENING QUESTIONS

3.1 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

3.1.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?	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

Portions of the Project Area are mapped by Benton County as geologically hazardous areas, including areas of combined erosion hazard and steep slopes greater than 15 percent, moderate to high liquefaction, and alluvial fan intermediate risk. The Applicant has prepared a Preliminary Geotechnical Report that describes the geology, soils, topography, and existing erosion patterns of the Project Area (Attachment S). The Preliminary Geotechnical Report provides information regarding geologic hazards that may affect the Project, including seismic hazards (e.g., ground shaking, surface fault rupture, soil liquefaction, and other secondary earthquake-related hazards), slope instability, flooding, ground subsidence, collapsible soils, corrosive soils, and erosion.

The analysis in Part 4 describes the geological and soil conditions within the Project Area, including any geologically hazardous area designated by Benton County as critical areas, as well as the mitigation strategies that will be implemented to minimize the risks associated with potential geological hazards. The Part 4 analysis also address relevant factors identified in WACs 463-60-265, 463-60-302(1)-(2), and 463-62-020.

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)

And considering other relevant factors addressed in:

- 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)
- 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

3.2 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

3.2.a Screening Question – Air Quality

Will the project have: <ul style="list-style-type: none"> 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 	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project will use heavy construction equipment, which will result in air pollution emissions related to vehicle emissions as well as generate dust within construction areas and along Project roads. Dust will be mitigated using standard dust control practices including, but not limited to, spraying water or a binding agent, and/or applying gravel as necessary.

The analysis in Part 4 addresses the anticipated air pollution emissions generated during construction/operations, as well as the measures that will be implemented to avoid or minimize these impacts. In doing so, the analysis addresses each topic identified by WAC 463-60-312, which includes air quality, odor, climate, climate change, and dust. Pursuant to WAC 463-60-225(1), any emissions subject to regulation by local, state, or federal agencies are quantified.

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

- | | |
|---|--|
| <ul style="list-style-type: none"> 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 | And considering other relevant factors addressed in: <ul style="list-style-type: none"> WAC 463-62-070 regarding air quality laws and regulations WAC 463-60-225 (1) through (3) |
|---|--|

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

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

3.3.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?	<input type="checkbox"/> No	⇒ <i>Explain below why you believe “No” is the appropriate answer.</i>
	<input checked="" type="checkbox"/> Yes	⇒ <i>Explain below what aspect of the question triggered a “Yes” response;</i> <i>AND</i> ⇒ <i>Complete Part 4 - Detailed Analysis</i>
	<input type="checkbox"/> Maybe	⇒ <i>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.</i>

Explanation:

The Project Area contains steep slopes and areas of unstable soils (see response to Part 3, Section 1 above). A Preliminary Geotechnical Report has been conducted to determine the extent of these areas within most of the Project Area (Attachment S), as well as identify any applicable mitigation strategies that will be implemented in regard to these unstable areas (e.g., avoidance of applicable areas, development of targeted erosion control devises/strategies, or refinement of the Project’s engineering design).

A wetland delineation was conducted within the Project Area from March 15 to 18 and October 4 to 5, 2021, to determine the extent of wetlands and waterbodies within the area. The Wetland Delineation Report is provided in Attachment I and was provided to Ecology for review on April 13, 2022. [Ecology provided comments on the delineation report and ASC on June 27, 2022. A call was held between Ecology, EFSEC, and Innergex on September 19, 2022, and Ecology visited the site on May 12, 2023. The comments and discussion did not result in any changes to the Wetland Delineation Report.](#) Three palustrine emergent wetlands and 34 ephemeral drainages were identified within the Project Area. There is also one mapped Zone A (100-year floodplain) associated with a named ephemeral stream, Dry Creek, which crosses through the northern portion of the Project Area.

The Project has been designed to avoid wetlands, and no wetland or wetland buffers impacts (temporary or permanent) are proposed in the current Project layout. Some Project impacts for temporary crossings would occur within ephemeral streams and frequently flooded areas (refer

to the JARPA in Attachment T). The following activities would occur within waterways (ephemeral streams) and Benton County critical areas ordinance regulated stream buffers:

- A temporary 100-year floodplain and stream crossing at Dry Creek for the installation of the overhead transmission lines.
- Collection lines will be bored underneath the ephemeral waterways in four locations.
- The temporary and permanent widening of an existing access road that lies in between two ephemeral drainages. All temporary and permanent impacts associated with the road widening are located outside of the adjacent ephemeral drainages and stream buffers.

The analysis in Part 4 describes the full extent of waterbodies and floodplains within the Project Area, describes the extent of steep slopes and areas of unstable soils (based on information developed for the Part 4 Earth analysis), and describes the impacts the Project would have to ephemeral waterbodies and floodplains and the proposed mitigation strategies that would be implemented.

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 463-62-060-060 regarding water quality standards
 - WAC 463-60-255, 463-60-322 (1-5), and 463-60-333

3.4 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	Yes	Yes	Yes	N/A

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

Will the proposal discharge wastewater (septic systems, process waters, washing of solar panels, etc.) to onsite or offsite surface waters, wetlands, or the ground? (do not include discharges to utilities, and county approved septic systems)	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

Portable restrooms will be used during construction. During operations, the Project will include an O&M building that may include a bathroom, breakroom, and sink(s) that will drain into a new on-site septic system. The on-site septic system will be permitted, installed by a licensed professional, and maintained in compliance with applicable regulations including WAC 246-272A and Benton-Franklin Health District rules and regulations for on-site sewage systems. The on-site septic system will be designed to accommodate the anticipated needs of the O&M facility and up to four operations employees (sized to approximately 500 gallons per day). No wastewater will be discharged to on-site or off-site surface waters, wetlands, or the ground outside of the constructed septic system.

The Applicant will obtain an Onsite Sewage Construction Permit for the on-site septic system from the Benton-Franklin Health District prior to construction. The on-site septic system will be consistent with the Benton-Franklin Health District’s design and construction criteria (BFHD 2022). Because the septic system will manage wastewater flows of less than 3,500 gallons per day, it is not considered a large on-site sewage system and will not require a permit from the Department of Health (WAC 246-272B). The required permit for the on-site septic system will ensure that septic wastewater will not adversely impact area groundwater or surface water quality.

Panel washing (which, if required, may use up to approximately 120,000 gallons of water per year) would not be expected to generate runoff from the site or cause erosion. Most water used for washing would evaporate from the panels before reaching the ground. That said, the total amount of water used for panel washing (120,000 gallons) is equivalent to 0.37 acre-foot.

Spread over the 2,974-acre Fenced Area, even if no evaporation occurs and all panel washing water reached the ground at one time, the depth of water on the ground would be approximately 0.0015 inch. Although the water dripping off panels would be concentrated over smaller areas, the conservative calculation demonstrates the relatively small quantity of water involved in this process relative to the size of the area containing solar panels. This amount of water would easily infiltrate into the vegetated ground around the panels and is not expected to run off to surface water bodies nor impact aquifers. Furthermore, washing of solar panels, if required, would be done with water only, and no surfactants or other chemicals would be added. Because the panel wash water would not contain added chemicals and the water is expected to evaporate with only minimal amounts potentially reaching the ground, no adverse impacts to water quality would occur, and therefore no mitigation would be required.

Therefore, a detailed Part 4 analysis is not required for wastewater discharges.

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

3.5 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

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

Does the proposal involve any potential sources of stormwater contamination from: <input type="checkbox"/> Drainage from impervious surfaces <input checked="" type="checkbox"/> Erosion from disturbed soils, lost vegetation, etc. <input type="checkbox"/> Animal wastes <input type="checkbox"/> Fertilizers or decomposing organic material <input type="checkbox"/> Pesticides or other chemical usage Other	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project may result in some stormwater drainage as a result of new impervious surfaces developed and identified in Part 2, Section B.2 (e.g., gravel roads, solar array posts, foundations for PCS, O&M building, substation components, etc.). Because solar panels are spaced apart from each other and the full area including the surface under the rotating panels would be revegetated, allowing natural infiltration of rainwater, the panels themselves are not considered impervious surfaces and are not included in the impervious surface calculation. The total new impervious surface area is a small portion (approximately 142 acres, or 3 percent of the total Project Area), and stormwater will generally infiltrate across the full area of the site.

In general, there will be minimal grading across the site, and existing drainage patterns and natural infiltration will be retained. Although classified as impervious surfaces, stormwater will generally infiltrate through the gravel roads, but at a reduced rate compared to most soils in the area. The vegetated area between panel rows is greater in area than the width of the rows of panels. The panels themselves would rotate, meaning the area underneath the panels would directly receive rainwater depending on the rotational status of the tracker system at the time of rainfall; any runoff from panels would flow onto and across vegetation, so infiltration is maintained.

A Preliminary Stormwater Management Report is provided in Attachment J. The Project will also prepare an Erosion and Sediment Control Plan (ESCP), Stormwater Pollution Prevention Plan (SWPPP), and Vegetation and Weed Management Plan prior to construction that will include measures to minimize soil erosion and stormwater runoff.

The Part 4 analysis provides detailed information regarding the type and extent of impervious surfaces that will be created; the infiltration rates of the soils within the affected areas; and the best management practices from the ESCP, SWPPP, and the Vegetation and Weed Management Plan that will be implemented to minimize the effects of 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 463-62-060 regarding water quality standards
- WAC 463-60-215 and 463-60-322

3.6 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

3.6.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 use for construction is primarily associated with dust control. Concrete used for the Project will be brought to the site by ready-mix trucks, and water is not anticipated to be used on-site for the mixing of concrete. Water trucks will be used to provide moisture for compaction as well as dust control during construction as required. Depending on soil moisture levels, up to approximately of 53 million gallons of water could be used throughout the construction for dust suppression. The water trucks on site for dust control would also be available for fire suppression if needed.

The Applicant is evaluating several options for sourcing construction water. These include obtaining water from an existing on-site well with a valid water right (to be verified in coordination with Ecology) or purchasing water from a permitted off-site source (i.e., municipal water source or vendor with a valid water right). If water is purchased from an off-site source, it will be hauled to the Project.

Water will be used during operation for domestic uses at the O&M building and during operations for panel washing. The Project is expected to use less than the groundwater permit-exempt well threshold of 5,000 gallons per day (RCW 90.44.050 sets a maximum withdrawal of up to 5,000 gallons per day [or 5.6 acre-feet per year] for permit exemption). Using a groundwater permit-exempt well, a maximum of 1,825,000 gallons per year could be used during operation (i.e., if the maximum permitting threshold of 5,000 gallons of water per day was used); however, it is estimated that the likely actual use will be 120,000 gallons per year. This total includes the water use related to the potential panel washing (i.e., if 20 percent of the panels are washed once per year). In addition, the Project Area may include a 10,000-gallon water cistern to store water for fire suppression needs.

The Applicant or the Applicant's construction contractor will verify the well location and availability of water from a permitted source prior to Project construction and operations. Therefore, a detailed analysis of water use under Part 4 is not warranted.

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

3.7 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

3.7.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.	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

No changes to the flow or volume of any water body or aquifer are anticipated as a result of the Project. Because slopes within the Fenced Area are generally very flat, the grading required will be minimal and will maintain existing drainage patterns. During construction, supplemental stormwater management measures will be implemented to prevent stormwater from flowing offsite. BMPs for stormwater management will be addressed in the Project’s Erosion and Sediment Control Plan and Construction Stormwater General Permit. Following construction, disturbed areas will be revegetated in accordance with a Vegetation and Weed Management Plan. Impervious surfaces will be a small percentage of the overall area and will not significantly alter stormwater infiltration patterns (see response to Part 3 Section 5). In addition, the minimal water discharge to the ground from periodic solar panel washing is not expected to infiltrate an aquifer (see response to Part 3, Section 4), and all water used for the Project would be obtained from existing or otherwise permitted sources in compliance with all applicable regulations (see response to Part 3, Section 6).

As described above in the response to Part 3, Section 3, some Project impacts will occur within ephemeral streams and frequently flooded areas for temporary and permanent access road crossings (see Attachment T). The Project’s transmission line between the Project substation and POI will span Dry Creek and associated 100-year floodplain. A temporary 50-foot-wide access corridor across the floodplain will be used during construction of the overhead line. To minimize impacts to this area, matting or other BMPs will be used to minimize disturbance of the floodplain area, and only vehicles equipped to carry the transmission wires (conductor, shield wire, etc.) will be allowed. Impacts in this area will be

temporary and because Dry Creek almost never contains surface water flow, no impacts to surface water flow are anticipated.

As described in Part 4, Section 4.3 and Attachment T (JARPA), an existing access road will be improved within the Benton County critical areas buffer of a delineated stream channel to accommodate Project construction and operations. Because the existing road is not within the delineated stream channel and its improvements will be designed so as to not alter or impede the flow of stream courses or floodplain, no change to surface water flow or volume would occur. Because construction and operations of the Project would not change the flow or volume in any waterbody or aquifer, a detailed analysis of water quantity under Part 4 is not warranted. Mitigation actions and best management practices will be implemented during construction, such as revegetating disturbed soils to minimize erosion/runoff, and implementing an ESCP, SWPPP, and Vegetation and Weed Management Plan.

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

3.8 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

3.8.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))?	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Applicant conducted habitat and botanical surveys within the Project Area from May 10 through 14, 2021, with additional habitat surveys conducted in October 12 and 13, 2021. Supplemental surveys for a portion of the Project Area (approximately 990 acres) not previously surveyed for botanical resources in 2021 ~~will be~~ was surveyed in ~~the spring of~~ May 2022. A supplemental survey report ~~will be~~ was provided ~~to EFSEC in August 2022~~ following completion of this additional survey. The habitat surveys mapped and characterized the habitat types observed within the Project Area, while the botanical surveys focused on rare vascular plant species and noxious weeds in the Project Area. Note that the term “rare plant” in this context refers to federally listed and candidate vascular plant species, as well as vascular plant species that are listed in Washington state as endangered, threatened, or sensitive by the Washington Natural Heritage Program. Details regarding the habitat surveys are provided in the Habitat and General Wildlife Survey Report and Addendum (Attachment G) while details regarding the botanical surveys are provided in the Botanical Survey Report and Addendum (Attachment F).

The Applicant mapped nine habitat types within the Project Area: agriculture, developed/disturbed, eastside (interior) grassland, irrigated hedgerows, non-native grassland and forbland, planted grassland, rabbitbrush shrubland, shrub-steppe, and talus. The vast majority (approximately 93 percent) of the Project Area consists of three of these habitat types: planted grassland, non-native grassland and forbland, and agriculture. Planted grassland is the most prevalent habitat type within the Project Area, and although this habitat type was observed in locations throughout the Project Area, it was most widespread in the eastern portion of the Project Area. Non-native grassland and forbland was the second most prevalent habitat type, and although this habitat type was also noted throughout the Project

Area, it is most widespread in the northern portion of the Project Area. Agricultural land in the area (which consist of fallow and active wheat and irrigated alfalfa fields, and livestock and horse pastures) occurs primarily in the central portion of the Project Area.

Three of the nine habitat types found in the Project Area are considered Priority Habitats or Priority Habitat Features by the WDFW, including eastside (interior) grassland (i.e., eastside steppe), shrub-steppe, and talus (WDFW 2008). The eastside (interior) grassland type was primarily found on hillslopes and crests of hills where topography precludes agricultural production. Patches of shrub-steppe habitat are found along hillslopes and crests of hills or along ephemeral drainages within the Project Area. One small (approximately 4 acres) area of talus was mapped in the southwestern portion of the Project Area.

No federally listed plant species were identified within the Project Area during surveys; however, one state sensitive species (i.e., Columbia milkvetch; *Astragalus columbianus*) was found during surveys. This population consisted of approximately 125 individuals and covered approximately 3 acres of the spring 2021 survey area; it was documented within eastside (interior) grassland habitat on a slope and crest of a hill in the southwest portion of the survey area. In addition, nine noxious weeds were documented during field surveys: jointed goatgrass (*Aegilops cylindrica*), kochia (*Bassia scoparia*), diffuse knapweed (*Centaurea diffusa*), rush skeletonweed (*Chondrilla juncea*), field bindweed (*Convolvulus arvensis*), Russian olive (*Elaeagnus angustifolia*), Russian knapweed (*Rhaponticum repens*), cereal rye (*Secale cereale*), and medusahead (*Taeniatherum caput-medusae*).

The Applicant has been in contact with WDFW regarding this Project, including via a virtual conference on March 8, 2021, during which the Applicant introduced the Project to WDFW and described planned wildlife, habitat, and rare plant surveys. At the meeting, WDFW concurred with the proposed survey timing and approach, as well as gave a verbal description of sensitive biological resources that may occur in the Project vicinity. The input from WDFW provided during this meeting was used to inform the biological background review and field surveys conducted for the Project. The Applicant additionally provided copies of survey reports to WDFW and met with WDFW representatives on February 16, 2022, to present survey results and solicit input on the Project. The input provided from WDFW during this meeting was used to inform the Part 4 analysis and Draft Habitat Management Plan (Attachment M). WDFW provided comments to EFSEC on the project and habitat survey report on August 30, 2022. The Applicant's responses to these comments, along with revised survey reports, were provided to EFSEC on October 31, 2022. This Revised ASC includes the updated reports with changes as requested by WDFW.

The Part 4 analysis is based on the information obtained during the habitat and rare plant surveys as well as site-specific feedback from ~~the~~ WDFW. The Part 4 analysis also outlines applicable mitigation measures, where necessary, based on the survey results.

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

3.9 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

3.9.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))?	<input type="checkbox"/> No	⇒ <i>Explain below why you believe “No” is the appropriate answer.</i>
	<input checked="" type="checkbox"/> Yes	⇒ <i>Explain below what aspect of the question triggered a “Yes” response;</i> AND ⇒ <i>Complete Part 4 - Detailed Analysis</i>
	<input type="checkbox"/> Maybe	⇒ <i>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.</i>

Explanation:

The Applicant conducted three rounds of ground-based raptor nest surveys within the Project Area; the first round of surveys was conducted on March 13, 2021, the second round was conducted in May 10-12, 2021, and the third round was conducted on October 2, 2021. Details regarding these raptor nest surveys are provided in the Raptor Nest Survey Report (Attachment L). A total of 15 nests were detected during these surveys, including three in-use burrowing owl (*Athene cunicularia*) nests, two in-use Swainson’s hawk (*Buteo swainsoni*) nests, one in-use red tailed hawk (*Buteo jamaicensis*) nest, one in-use great horned owl (*Bubo virginianus*) nest, five in-use common raven (*Corvus corax*) nests, and three small inactive nests with unknown species determinations. No eagles or federal or state-listed threatened or endangered species were documented during these raptor nest surveys; however, WDFW has designated the burrowing owl as a candidate for state listing, and thus, it is a WDFW priority species. No ferruginous hawk (*Buteo regalis*) individuals or ferruginous hawk nests were observed during the survey; however, a single ferruginous hawk was observed briefly soaring in an area of native grassland habitat in the far southwestern edge of the Project during the habitat and general wildlife survey (Attachment G).

The Applicant conducted habitat/wildlife surveys within the Project Area from May 10 through 14, 2021, with additional surveys conducted in October 12 and 13, 2021 and May 9-10, 2022. Details regarding the habitat/wildlife surveys are provided in the Habitat and General Wildlife Survey Report and Wildlife Survey Addendum (Attachment G). Additional general wildlife observations will also be collected during the planned spring 2022 supplemental surveys for approximately 990 acres of the Project Area (see response to “8. Plants”). Thirty-six bird species and one mammal species were detected within the Project Area during the habitat/wildlife surveys. Of these, one bird species (i.e., the ferruginous hawk) has a special

status (i.e., designated state threatened at the time of surveys and has been subsequently up-listed to endangered).

Prior to the surveys, WDFW and PHS data indicated that the Project may be important to elk (*Cervus canadensis*), particularly in the winter. During surveys, suitable habitat for two priority big game species was documented (i.e., elk and mule deer - *Odocoileus hemionus*), and indirect evidence (i.e., scat) indicate that these species use the Project Area. Potentially suitable habitat for these species within the Project Area is generally limited to portions of the area that occur outside of agricultural or other developed land.

Three palustrine emergent wetlands and 34 ephemeral drainages were identified within the Project Area (refer to response “3. Water Quality – Wetlands and Surface Waters”; Attachment I). A 100-year floodplain also occurs in the Project Area. The stream segments within the Project Area were not identified as fish streams (Attachment I).

The Applicant has been in contact with WDFW regarding this Project, including via a virtual conference on March 8, 2021 during which the Applicant introduced the Project to WDFW and described planned wildlife, habitat, and rare plant surveys. At the meeting, WDFW concurred with the proposed survey timing and approach, and gave a verbal description of wildlife resources that may occur in the Project vicinity. The input from WDFW provided during this meeting was used to inform the biological background review and field surveys conducted for the Project. The Applicant additionally met with WDFW on February 16, 2022, to present survey results and solicit input on the Project. Following submittal of the ASC to EFSEC, the Applicant met with EFSEC and WDFW on August 18, 2022 to discuss survey findings and the proposed Draft Habitat Management Plan. The input provided from WDFW during ~~this~~ these meetings was used to inform the updated Part 4 analysis and Draft Habitat Mitigation Plan (Attachment M).

The Part 4 analysis is based on the information obtained during surveys as well as site-specific feedback from the WDFW. The Part 4 analysis also outlines applicable mitigation measures, where necessary, based on the survey results.

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

3.10 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

3.10.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

As a solar generation facility coupled with a BESS, the Project will provide a new source of clean, renewable electricity. The Project is designed to take advantage of the region’s renewable solar energy resources and adjacent transmission interconnection with the existing BPA transmission system. The Project design minimizes impacts to adjacent properties and will not limit or otherwise affect the potential use of solar energy by adjacent properties.

The Project will not require consumption or removal of substantial quantities of natural resources during construction or operations; however, some natural resources will be consumed in the form of non-renewable construction materials (see Part 2). Non-renewable fossil fuels will also be required to fuel construction vehicles, equipment, and operational vehicles. Fossil fuel quantities consumed will be typical of commercial construction facilities of a similar size. Electricity for the Project’s O&M building will be provided by the local utility, Benton Rural Electric Association. Local service providers will be able to accommodate the materials, electricity, and fuel needs of the Project.

No detailed Part 4 analysis is warranted because the Project will not require the consumption or removal of substantial quantities of energy or natural resources during construction or operations. 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
- And considering other relevant factors addressed in:

Wautoma Solar Energy Project

- Conservation methods
- Use of renewable vs. non-renewable resources
- WAC 463-60-342(1)-(4)

3.11 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	N/A	Yes	Yes	N/A

3.11.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project will not generate large quantities of waste during construction or operations.

During Project construction, quantities of solid waste generated will be similar to commercial construction projects of a similar size. Wastes generated during construction will typically include discarded building materials such as metal, concrete, wood, and wiring scraps, and waste plastic packaging. Construction waste materials will be recycled to the extent practicable. Portable restrooms will be used during construction.

During operations, low volumes of solid waste will be generated at the O&M building, including paper, cardboard, plastic, and food waste. Wastewater will be managed using an on-site septic system (see response to “3. Water Quality – Wastewater Discharges”). Maintenance and replacement of Project components such as solar modules and batteries will also produce low volumes of solid waste during operations.

Minimal solid waste produced during construction and operation of the Project will be handled by a licensed contractor in accordance with applicable regulations (see also Part 3, Section 21).

The BESS options described in Part 2 may generate incidental solid waste from repair or from the replacement of batteries made necessary by the normal degradation of those batteries over time. Required environmental, health, and safety protocols will be followed for disposal of battery components. Used batteries and components will be recycled or disposed of at an approved facility by a licensed vendor. With increasing demand for BESS technology, recycling companies are increasing capacity and advancing technology to respond to the growing use.

As described in Part 2.A.2, either a distributed (DC-connected) or centralized (AC-connected) battery system may be installed. Final selection of battery technology has not yet been made. For purposes of the analyses presented in this ASC, specifications for ~~The Applicant plans to use~~ Tesla Megapack batteries ~~for this project~~ are presented. According to their 2020 Impact Report (Tesla 2021), Tesla is currently recycling 100 percent of its scrapped batteries. Battery packs manufactured by Tesla are either re-manufactured or recycled in-house, and no battery components go to landfills.

Solar modules typically have a useful lifetime of over 30 years and will be replaced infrequently if necessary. RCW 70.355 requires manufacturers of solar modules to provide effective recycling options for all solar modules purchased after July 1, 2017. As a result, recycling of the solar modules will be done to the extent that recycling is available and feasible.

The Project will not generate large quantities of waste during either construction or operation; therefore, a detailed Part 4 analysis or mitigation is not warranted 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

3.12 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	N/A

3.12.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

No direct studies have been conducted to date regarding existing environmental contamination within the Project Area. A site-specific Phase 1 Environmental Site Assessment will be conducted prior to construction (refer Part 1.E List of Studies).

A review of Ecology’s cleanup site database (Ecology 2022a) and historical aerial photographs (Google Earth 2022) found no evidence that the Project Area contains potentially hazardous materials, including toxic chemicals, volatile gases, or other poisonous or hazardous substances. However, no direct studies have been conducted to date regarding existing environmental contamination within the Project Area.

The Project Area contains a mix of dryland and irrigated agricultural use, rangeland, transmission and electrical infrastructure, and undeveloped areas. Based on available historic aerial imagery, the land use in the Project Area has been consistent with current conditions for at least the past 30 years (Google Earth 2022). As a result, historical use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in agricultural production areas in the Project Area. The application of fertilizers, pesticides, and herbicides is assumed to have occurred according to manufacturer guidance, in a relatively uniform and generally consistent manner typical of agricultural practices. The concentrations of fertilizers and pesticides are likely to be similar to other dryland and irrigated agricultural operations. Risks to human health and the environment associated with soil disturbance during Project development are assumed to be low and similar to those associated with agricultural operations such as tiling. Therefore, potential past applications of fertilizer, herbicides, and

pesticides pose little to no concern of adverse environmental impact with respect to Project development.

Because potentially hazardous materials are unlikely to occur within the Project Area, a Part 4 analysis is not warranted. Further, a site-specific Phase 1 Environment Site Assessment will be conducted prior to construction to verify this assessment.

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.

3.13 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	N/A	Yes	Yes	Yes

3.13.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?	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

Most materials used in construction of the Project will not be hazardous or dangerous, and the risk of fire, spills, or other dangers to public health and the environment will be low. However, the Project will include a PCS system with a DC-coupled BESS and/or an AC-coupled BESS option (refer to Part 2.A2 Project Description). The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards.

If improperly handled or stored, the batteries in the BESS could be considered hazardous materials. Improperly stored or disposed of batteries could leak hazardous substances such as mercury, lead, cadmium, and sulfuric acid (Ecology 2022b). Spent batteries may be considered dangerous wastes; however, when properly recycled, batteries can be managed as universal wastes (Ecology 2022b). The Project will properly handle, store, and dispose of or recycle spent batteries at an appropriate facility in order to minimize risks to the public. As an example, The the Tesla Megapack batteries planned for use in this project presented for purposes of analysis in this ASC are recycled or re-manufactured by the manufacturer (Tesla 2021); see Part 3, Section 11.a for additional information.

The Part 4 analysis presents more detailed information regarding potential BESS technologies and their respective risks as well as the associated control measures that will be implemented to protect public health and the environment. The Part 4 analysis also discusses the Project’s compliance with fire safety measures, spill control measures, and regulations for

solar energy generation facilities. Mitigation measures are also discussed in the Part 4 analysis.

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)

3.14 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

3.14.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.) <ul style="list-style-type: none"> • Change in land use • Change in intensity of land use • Provide new or improved service to an area (e.g. transportation, utilities, entertainment, etc.) 	<input type="checkbox"/> No	⇒ <i>Explain below why you believe “No” is the appropriate answer.</i>
	<input checked="" type="checkbox"/> Yes	⇒ <i>Explain below what aspect of the question triggered a “Yes” response;</i> AND ⇒ <i>Complete Part 4 - Detailed Analysis</i>
	<input type="checkbox"/> Maybe	⇒ <i>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.</i>
<p>Explanation:</p> <p>The Project Area was selected by the Applicant for its favorable site suitability characteristics, including high solar energy resource, topography, proximity to electrical infrastructure, compatible zoning and adjacent land uses, and low resource conflicts. Existing land uses in the Project Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses around the Project Area are similar and also include scattered rural development, vineyard, state highways, and Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve).</p> <p>The proposed solar power generating facility will result in a change in the type and intensity of the existing land use in the Project Area. The Project is located entirely on parcels in unincorporated Benton County within the Growth Management Act Agricultural District (GMAAD) zone, defined by Benton County Code (BCC). The GMAAD zone is designated as agricultural lands of long-term commercial significance by Benton County (Benton County 2018).</p> <p>The Project is consistent with Benton County’s definition of a “solar power generator facility, major” under BCC 11.03.010(167). Prior to December 21, 2021, the Project would have required a conditional use permit (CUP) in the GMAAD per BCC 11.17.07(cc). On December 21, 2021, Benton County passed Ordinance Amendment 2021-004, which, among other</p>		

changes, removed “solar power generation facility, major” from the list of uses requiring a conditional use permit in the GMAAD zone and effectively prohibits this type of use in the GMAAD zone. Therefore, the Applicant requests that EFSEC preempt this element of Benton County’s zoning ordinance for the reasons presented in Section 4.14 and Attachment D to this ASC.

The Land Use Consistency Review (Attachment D) provides a complete review of the Project’s compliance with the Benton County Comprehensive Plan and County Code. The Part 4 analysis addresses the Project’s potential effects to existing and nearby land uses, as well as the Project’s compliance with relevant local land use regulations. Outside of complying with landowner lease agreements and EFSEC conditions, no land use mitigation requirements are anticipated for the Project.

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

3.15 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	N/A	Yes	Yes	N/A

3.15.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project is located in a sparsely populated rural area of Benton County outside of designed urban growth boundaries. It is anticipated that the construction of the Project will provide jobs for an estimated peak of 515 workers during peak construction, with an average of 225 workers during the 22-month construction period. Up to 4 permanent jobs are expected during operations. The Applicant will primarily solicit experienced Washington-based contractors with the intention of a proportionally high locally hired workforce. The non-local share of the workforce is estimated to be approximately 35 to 55 percent, with non-local workers expected to temporarily relocate to the vicinity of the Project for the duration of their employment. As a result, an estimated average of 79 to 124 workers are expected to seek temporary accommodation in the Project vicinity, with an estimated peak of 180 to 283 workers.

In compliance with WAC 463-60-535, a Socioeconomic Assessment that provides information regarding population, labor force, and housing impacts has been prepared for the Project (Attachment N). As described in Attachment N, the estimated number of housing units required for Project construction conservatively constitutes approximately 5 to 8 percent of the normally available supply of temporary housing. Non-local workers are expected to seek a range of temporary accommodations, including rental housing (houses, apartments, mobile homes), hotel/motel rooms, and RV parks/campgrounds, as well as other special living situations such as Airbnb units and spare bedrooms. The review of temporary housing resources presented in Attachment N indicates that temporary housing resources in the study area include approximately 2,100 housing units that are vacant and available for rent, with additional units classified for seasonal, recreational, or occasional use that may also be available. Temporary housing is also available in the form of hotel and motel rooms. Available

estimates indicate that there are about 7,100 hotel and motel rooms in the vicinity of the Project. Hotels in the Tri-Cities had an overall average occupancy rate of 62.5 percent from December 2016 to November 2017. In Yakima, there were 30 hotels and motels in 2017, with an estimated total of 2,400 guestrooms. Occupancy rates in the area have historically averaged around 55 to 60 percent. Temporary accommodation in the study area also includes recreational vehicle (RV) parks and campsites. Facilities in Benton and Franklin counties within 1 hour of the Project area include 15 RV parks and campgrounds, with a total of 1,640 RV spaces. Parks and campgrounds are located in Richland, West Richland, Pasco, Prosser, Benton City, and Vantage. An additional six RV parks and campgrounds, with a total of 390 spaces, are located within 1 hour of the Project area in Yakima County, including locations in Yakima, Sunnyside, and Selah.¹ Assuming a peak occupancy of 77 percent suggests that a minimum of approximately 1,630 rooms are normally empty and available for rent. Therefore, temporary housing needs during construction can be accommodated by existing available temporary housing options.

Operation and maintenance of the Project is anticipated to employ up to four workers. These workers and their families are likely to reside within daily commuting distance and will either already reside in the area or permanently relocate. Up to four workers and their family members could potentially relocate. The average U.S. family household consisted of 3.13 people per family in 2021 (U.S. Census Bureau 2021). Applying this average family household size results in an estimated maximum of 13 people in four households that could permanently relocate to the Project vicinity to support Project operation; in fact, some or all of the permanent operations staff may be hired locally. Therefore, given the available housing described in Attachment N, there is sufficient existing available housing to accommodate new permanent residents in the Project vicinity.

The Project is not anticipated to displace or otherwise affect existing or future housing during construction or operations; therefore, a Part 4 detailed analysis of housing impacts is not anticipated. 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

¹ Data on RV parks and campsites were compiled from a number of online sources, including visittri-cities.com, rvshare.com, goodsam.com, and campgroundreviews.com, as well as individual campground web sites.

3.16 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

3.16.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?	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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, noise will be generated by construction equipment at levels typical for commercial projects of a similar size (including other solar facilities of a similar size). During operations, light and glare may be generated by the Project, and noise will be generated by transformers as well as potentially heating, ventilation, and air conditioning equipment associated with battery storage. Views of the Project Area will be altered due to the change in land use from primarily open rangeland and agricultural fields to a commercial solar facility.

The Applicant has completed a Visual Impact Assessment (Attachment P), Solar Glare Analysis Report (Attachment H), and an Acoustic Assessment (Attachment O) and incorporated these analyses into the Part 4 detailed discussion. For the Part 4 analysis, maximum Project noise levels were modeled to evaluate compliance with state noise regulations protecting sensitive noise receptors (WAC 173-60). Potential effects of the Project are disclosed in the Part 4 analysis, along with proposed mitigation measures, where necessary, based on the analysis.

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)

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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	N/A	Yes	Yes	N/A

3.17.a Screening Question – Recreation

Will the project occur in an area or location that includes the following? <input type="checkbox"/> Existing designated and informal recreation opportunities in the immediate vicinity <input type="checkbox"/> Displace or otherwise affect any existing recreational uses during construction or operation	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project Area is located entirely on privately owned lands. The Project parcels are located within the Blackrock Valley hunting grounds (site 295), which are part of the private lands hunting access program that provides access to private lands where WDFW has a management agreement with the owner that regulates hunting (WDFW 2022a). Hunters are required to obtain written permission from landowners prior to hunting in this area. One existing hunting shed is located within the Project Area and will be relocated outside of the fenced solar array prior to construction. No hunting blinds or tree stands are provided or allowed. The landowners in the Project Area have indicated that hunting usage is low and limited to guided elk hunts. Outside of hunting, there are no formal recreational opportunities within the Project Area.

During construction, hunting would be excluded from the private lands within the Project Area except in areas or times agreed upon by the landowners and the Applicant where hunting can be conducted without health and safety risks (e.g., if it would occur far enough from active construction zones as to not incur health and safety risks to personnel or equipment). During operations, hunting would be excluded from within the Fenced Area, which represents approximately 23 percent of the 12,502-acre Blackrock Valley hunting grounds. Hunting will still be allowed with written permission in a majority of the Blackrock Valley hunting grounds. To ensure the safety of personnel and equipment, Innergex will communicate with the landowners of adjacent parcels to ensure they are aware of routine and scheduled maintenance activities by O&M staff, as well as requesting that the landowners inform Innergex of scheduled hunting activities.

There are no other formal recreation areas on lands adjacent to or within 5 miles of the Project Area. The Hanford Reach National Monument is approximately 1 mile east of the Project Area; however, this area of the Monument is part of the Fitzner-Eberhardt Arid Lands Ecology Reserve, use of which is limited to agency-approved ecological research and environmental education activities, and no general public use is allowed (USFWS 2022). There are several scattered and checkerboard WDNR state trust and Bureau of Land Management (BLM)-managed parcels located within 5 miles of the Project Area (USGS 2020; WDNR 2022). There are no formal recreation sites on these parcels; however, some limited public use may occur, such as off-highway vehicle use or hunting (BLM 2022; WDFW 2022b). Due to a lack of formal recreation opportunities and limited roads accessing these parcels (Google Earth 2022), public use of these areas is likely minimal to low. The closest designated recreation sites are the Hanford Manhattan Project National Historical Park located approximately 13 miles to the northeast of the Project Area within the Hanford Reach National Monument and various city parks located in Sunnyside, Washington approximately 12 miles southwest of the Project Area.

Given the limited designated or informal recreation opportunities within or near the Project Area, the Project would not adversely affect existing recreational uses. 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

3.18 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

3.18.a Screening Question – Archaeological and Historical Resources

Will the project occur in an area or location that includes the following? <i>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.</i> <input type="checkbox"/> Archaeological Site or Built Environment Property over 50 years in agricultural resource site <input type="checkbox"/> Any known landmarks or evidence of historic, archaeological, scientific or cultural importance <input type="checkbox"/> Is listed or is eligible to be listed on a local, state, or federal historic register	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 desktop survey was completed on September 15, 2021, and archaeological field investigations were conducted for the Project in September and October 2021. The methods and results of the desktop review and field surveys are presented in the Cultural Resources Survey Report provided as an attachment to the ASC (confidential Attachment Q), as well as in the Part 4 analysis.

The Applicant intends to avoid disturbing archeological and historical resources. However, if a resource is unavoidable, the Applicant will obtain the necessary permits prior to any direct impacts. An Unanticipated Discovery Plan has been prepared that set procedures in the event an unidentified archeological or historical resource is encountered during construction or operations of the Project (confidential Attachment Q).

The Part 4 analysis discloses the potential impacts of the Project to archaeological and historical resources, and summarizes the proposed mitigation measures, based on the findings presented in the studies described above.

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

3.19 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

3.19.a Screening Question – Cultural Resources

Will the project occur in an area or location that includes the following? <ul style="list-style-type: none"> 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 	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

As noted above, a cultural resources survey was conducted in the Project Area from September 25 through October 18, 2021, with a systematic subsurface survey completed in July 2023. The methods and results of the desktop review and field surveys are presented in a Cultural Resources Survey Report (confidential Attachment Q), as well as in the Part 4 analysis. The draft report was reviewed by the Department of Archaeology and Historic Preservation (DAHP) and the Yakama Nation Cultural Resources Program, and the updated report, which has been approved by DAHP, is provided in Attachment Q to this revised ASC.

The Part 4 analysis discloses the potential impacts of the Project to cultural resources and proposed mitigation measures, based on the findings presented in the studies described above. ~~In addition, the Applicant is conducting ongoing outreach to the Confederated Tribes of the Warm Springs, Wanapum, Samish, and Yakama Nation, which were all identified by the Washington Governor’s Office of Indian Affairs as tribes with traditional interests in the Project Area. In addition, the Applicant is also conducting ongoing outreach with the Confederated Tribes of the Colville Reservation and the Confederated Tribes of the Umatilla Indian Reservation. At the time of ASC submittal, draft survey reports have been provided for review by the Yakama Nation and Confederated Tribes of the Warm Springs at their request, but no comments have been received.~~

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

Wautoma Solar Energy Project

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

3.20 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

3.20.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? <ul style="list-style-type: none"> • 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 	<input type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input checked="" type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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:

Project construction will involve temporary increased traffic to the site for delivery of materials and worker transportation, and an improvement to the approach off SR-241 to the Project, as well as new approach construction along Wautoma Road. During Project operations, traffic will be limited to periodic maintenance visits and commutes of two to four operations and maintenance employees. The Project will be unlikely to reduce the level of service on area roads, except potentially for brief periods during construction. The Project will not restrict vehicular use or create 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 analysis was completed.

The Part 4 analysis discloses the potential impacts to the existing level of service on transportation routes that will be used during construction and operations and identifies proposed mitigation measures for traffic impacts.

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

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3.21 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	No	N/A	Yes	Yes	N/A

3.21.a Screening Question – Public Services and Facilities

Will the project be likely to directly or indirectly increase use of public services and facilities such as fire protection, law enforcement, schools, parks and recreation, public open space, social services or general government?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project is a largely self-sufficient solar power generating facility and is therefore unlikely to directly or indirectly increase use of public services and facilities during construction or operation. Further, the Project is located in rural Benton County where many public services and facilities are unavailable. Potential impacts to public services and facilities will be minor and will primarily occur during the construction period, which is anticipated to take approximately 22 months. During construction, a peak of up to 515 workers may be employed, with an average of 225 workers. As described in Attachment N, the non-local share of the construction workforce is anticipated to be approximately 35 to 55 percent of the work force, or an average of 79 to 124 workers, with a peak of 180 to 283. Due to the temporary nature of these jobs, workers from outside the area would be unlikely to move their families to the area. This compares to an estimated population in Benton County of 209,400 in 2021, along with a population in Franklin County of 98,350 and a population in Yakima County of 258,100. During construction, if all construction workers temporarily reside in the Tri-Cities area (which is unlikely), the peak temporary increase in the population would be approximately 0.1 percent. During operations, the Project will be staffed by up to four personnel. Considering these factors along with implementation of the mitigation measures outlined below, the Project will not significantly adversely affect the use of public services and facilities during construction or operation.

Fire Protection. The Project will develop and maintain an Emergency Management Plan (which will be developed and finalized prior to construction) and implement best management practices for fire prevention. The Applicant will coordinate with the Benton County Sheriff’s Office, Benton County Emergency Management, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project’s

design and construction. The Applicant will also coordinate with these entities regarding necessary equipment or training, if any are identified, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project's facilities will include and incorporate multiple layers of protection to avoid failures and risks of fire or spills will be designed to applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards. Furthermore, the Project's design will incorporate graveled areas around the O&M facility and substation, as well as graveled access roads and fire breaks, where applicable.

Law Enforcement. The Benton County Capital Improvement Plan for 2021-2026 does not identify significant needs for increased equipment, personnel, and facilities for the Benton County Sheriff's Office to provide services to the community (Benton County 2020), and these services have been funded at sustained levels over the past 5 years (Benton County 2021). A temporary peak increase of up to 283 workers, and an average increase of approximately 79 to 124 workers, during the Project's construction is less than one percent of the Benton County population and will not effectively reduce the level of service that the Benton County Sheriff's Office and local law enforcement can provide the community. To mitigate the need for additional law enforcement services, site access will be restricted, and Project components will be secured by a perimeter fence. The Project will not require special services from the Benton County Sheriff's Office. As a result, no adverse impacts to law enforcement services are anticipated as a result of the Project.

Schools, Parks, and Recreational Facilities. No significant adverse impacts to schools, parks, or recreational facilities are anticipated as a result of the Project. Construction of the Project will take about 22 months, during which period a peak of up to 515 workers will be employed. Because the construction period is temporary, little to no adverse impact on housing or schools is anticipated. Temporary school and housing needs would be supported within the purview of Benton County's current growth trajectory, which plans for population growth in the Tri-Cities area and associated rural transition areas and urban growth areas (Benton County 2018). Temporary, occasional use of parks and recreational facilities associated with the temporary construction population influx would not significantly adversely affect these facilities. During operations, the Project will employ up to four personnel, which will not create an adverse impact for schools, parks, or recreational facilities.

Public Open Space, Social Services, and General Government. The Project is not located on public land and its construction and operation will not have any impact on public open space. Increased jobs for community members as described in Appendix N, and increased property tax revenue from the Project (see Attachment D) will provide support for social services and general government operations.

Because public services and facilities will not be adversely affected, a detailed analysis of potential impacts to public services and facilities under Part 4 is not warranted. Furthermore, no mitigation, beyond what is described above, is anticipated to be required.

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.)

3.22 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	No	N/A	Yes	Yes	N/A

3.22.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?	<input checked="" type="checkbox"/> No	⇒ Explain below why you believe “No” is the appropriate answer.
	<input type="checkbox"/> Yes	⇒ Explain below what aspect of the question triggered a “Yes” response; AND ⇒ Complete Part 4 - Detailed Analysis
	<input type="checkbox"/> 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 Project will not significantly increase demand for public or private water, sewer, solid waste, stormwater, communication, or energy utilities. The Project’s impacts to these public and private utilities will be minimal, largely because the Project is a solar power generating facility that will produce much of its own electricity. Additionally, the Project is located in rural Benton County where public utility services are largely unavailable, including no public sewer or stormwater facilities.

During construction, water will be obtained from an existing groundwater well or will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). Best management practices will be employed to manage stormwater within the Project Area (see Part 3, Section 3.5, and Part 4, Section 4.5, for more information). Portable toilets will be used for sanitary wastes. A licensed hauler will be used to transport and dispose of construction waste in accordance with applicable laws. Recycling will be implemented to the extent practicable. Electricity and necessary communications connections for the Project will be provided by Benton Rural Electric Association before the start of operations, and communications will be provided by a local utility.

During operations, the Project will obtain water from an existing groundwater well, haul water from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right), or utilize an on-site well (as discussed in Part 3, Sections 3.4 and 3.6). Domestic waste produced during construction and operation of the Project will be handled by a licensed waste contractor. After the Project is decommissioned, spent panels will be recycled by the manufacturer to the extent possible. The Project will be designed to capture stormwater and reduce runoff as described in Part 3, Section 3.5, and Part 4, Section 4.5. No

municipal stormwater facilities will be utilized. The Project will generate electricity during operations, which will be supplemented with a small amount of power for the O&M building as needed from the Benton Rural Electric Association.

No significant adverse impacts to water, stormwater, sewer, or solid waste facilities are anticipated as a result of the Project. The Project is outside the urban growth boundary service area where public water, stormwater, sewer, and solid waste facilities are available; therefore, construction and operation of the Project is not anticipated to impact these services and facilities. During construction, water will be obtained from a source with verified water rights. The Project may use a new well or purchase and haul water from off-site sources during operation; therefore, the Project will not use public water services.

The Project will install a new on-site septic system for the O&M facility. Several licensed wastewater treatment facilities are available in the Tri-Cities area and nearby Yakima County. During operations, routine domestic septic waste would be produced at the O&M facility in quantities that can be accommodated by existing licensed providers.

Routine solid waste would be produced during construction and operation of the Project, including packaging materials and domestic refuse. These materials would be handled by a licensed contractor in accordance with applicable regulations (see Part 3, Section 3.11). At the end of the Project's useful operational life, spent solar panels will be recycled by the manufacturer after decommissioning in accordance with state law. Solid waste landfills and waste transfer stations in Benton County and nearby Yakima County are available with sufficient capacity to accommodate wastes generated by the Project, including the Yakima County Lower Valley Transfer Station, Cheyne Landfill, Terrace Heights Landfill, City of Richland Horns Rapid Landfill, and the Waste Management Kennewick Transfer Station. Therefore, the Project will not adversely impact public solid waste disposal facilities.

The Project design will generally maintain existing topography and therefore stormwater would continue to flow and infiltrate into the ground as under existing conditions. No municipal stormwater facilities will be utilized or impacted.

Because the Project will not significantly increase demand for public and private utilities, a detailed analysis of potential impacts to utilities under Part 4 is not warranted. No mitigation is proposed or anticipated to be required.

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

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PART 4 – DETAILED ANALYSIS

4.1 Earth

4.1.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	Author / Expert agency participation Name, Title, and Involvement	Completed Y/N
Preliminary Geotechnical Engineering Report (Attachment S)	February 18, 2022	RRC, geotechnical engineering consultant for the Applicant	Y

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

4.1.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
General description of site	<p><u>General Conditions:</u> The Project Area is located within the Columbia Plateau physiographic province of Washington, an extensive region comprised of early Tertiary (17 to 6 million years old) volcanic and sedimentary rocks and Quaternary volcanic rock and sediment. Around 17 million years ago, a series of extensive flood basalt eruptions known as the Columbia River Basalt Group (CRB) began to cover up the surface of the state of Washington, reaching as much as 10,000 square miles and over 100 feet in depth (Attachment S).</p> <p>The Preliminary Geotechnical Engineering Report describes the geology, soils, topography, and existing erosion patterns of the Project Area, per the requirements of WAC 463-60-302(1) and (2) (Attachment S).</p> <p><u>Geology:</u> The Project Area is located on top of the Saddle Mountains Basalt, the youngest of the seven major groupings (or formations) within the CRB group. The Quaternary silty and sandy deposits found on top of the Saddle Mountain basalt are a product of wind-blown and lake deposits. Quaternary deposits consist of alluvium, loess, and outburst flood deposits. Alluvium consists of clay, silt, sand, and gravel deposited in streambeds and fans. Alluvium also includes terrace and organic deposits in places; commonly includes reworked loess and outburst flood deposits. Loess consists of eolian silt and fine sand, some clay and caliche. Typical geomorphic expression is a complex of dunes. Outburst flood deposits consist of lacustrine silt and fine sand and fluvial fine to coarse sand, predominantly quartz and feldspar, with basalt grains in coarser sections. The Preliminary Geotechnical</p>

	<p>Engineering Report indicates silt with gravel, silt with sand, silty gravel, and silty sand were observed in borings up to 15.5 feet in depth. Groundwater was not encountered to depths up to 15.5 feet (Attachment S).</p> <p><u>Soils:</u> Attachment A includes figures of the soils and topography in the Project Area (Attachment A, Figures A-3 and A-4, respectively), while Attachment E includes a table listing the soils and related soils information within the Project Area (NRSC 2022). Silt loam soils are the primary underlying soil type within the Project Area accounting for over 85 percent of the soil types. Primary soils mapped within the Project Area include Warden silt loam (49 percent); Ritzville silt loam (17 percent); Finley stony fine sandy loam (8 percent); Warden silt loam (severely eroded) (8 percent); and Scootene silt loam (5 percent). These units are also primarily characterized by eolian deposits over residuum weathered from basalt, with areas of gravelly alluvium and loess.</p> <p><u>Restrictive Layer/Shallow Bedrock:</u> Restrictive layers less than 25 inches is reported for approximately 1 percent of the Project Area. Shallow bedrock (less than 80 inches in depth) is not reported for the soil types within the Project Area. The Preliminary Geotechnical Engineering Report did not identify shallow bedrock or restrictive layers as an issue for Project construction (Attachment S).</p> <p><u>Steep Slopes:</u> Slopes within the Project Area range from zero to 51 percent. In general, the Project Area is on semi-flat terrain with slopes of less than 3 percent. A review of Benton County critical areas data and the Washington Department of Natural Resources light detection and ranging (LiDAR) data identified portions of the Project Area as containing slopes greater than 15 percent as shown on Figure A-4 in Attachment A. Soils with slopes greater than 30 percent account for less than 3 percent of the Project Area. Areas of steep slopes are further described below under geologic hazards.</p> <p><u>Alluvial Fan Intermediate Risk:</u> An area of Benton County’s “alluvial fan intermediate risk” is mapped in the westernmost portion of the Project Area (Attachment A, Figure A-4). An alluvial fan is a sign that catastrophic floods, often laden with sediment and debris, have occurred in the area and may occur again. It is noted that this area is not within the 100-year floodplain of Dry Creek, which is located approximately 0.75 mile to the north. Refer to Part 4, Section 4.3, and Attachment A, Figure A-6, for additional details on the 100-year floodplain.</p> <p><u>Erodibility:</u> Soils mapped within the Project Area are rated as low to moderate wind erodibility. Eighty-six percent of soils within the Project Area are mapped with a moderate to high potential for water erosion. <u>Soil wind and erodibility details are provided in Attachment E, Table E-1.</u></p>
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	<p><u>Drainage/Topography:</u> Drainage and topography within the Project Area are described in Part 4, Section 4.5. Attachment A, Figure A-4 provides a figure showing the topography in the area of the Project Area. All of the soils in the Project Area are rated as well-drained. Topography in the Project Area generally ranges from 960 feet above mean sea level (amsl) to 1,240 feet amsl. In general, Project features have been sited to avoid steep slopes that are present in the northern and western portions of the Project Area, and along drainages in the eastern portion of the Project Area.</p>
<p>Geologic hazards</p>	<p>Geological hazards are defined as Critical Areas in Chapter 15.8 of Benton County’s Critical Areas Regulations. The following are defined as geological hazards under Benton County 15.8, Part Five) “Geologically hazardous areas include areas susceptible to erosion, land sliding, bluff failures, or other geological events. Such areas pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard.”</p> <p>The Preliminary Geotechnical Engineering Report (Attachment S) provides information regarding geologic hazards that may affect the Project, including seismic hazards (e.g., ground shaking, surface fault rupture, soil liquefaction, and other secondary earthquake-related hazards), slope instability, flooding, ground subsidence, collapsible soils, corrosive soils, and erosion, per the requirements of WAC 463-60-265 and WAC 463-62-020.</p> <p><u>Seismic Hazards:</u> As described in Attachment S, the Project site is distant from known active faults and is at a low to moderate risk of seismicity or ground rupture from earthquakes. Figure A-5 in Attachment A provides mapping information on earthquakes in the vicinity of the Project obtained from the Pacific Northwest Seismic Network (PNSN). According to the U.S. Geological Survey (USGS) earthquake catalog, the nearest event was a magnitude 1.5 earthquake located approximately 0.4 mile southeast of the Project Area (USGS 2022a). The largest event within 25 miles of the Project Area was a 3.8 magnitude earthquake located approximately 18 miles northeast of the Project Area, recorded in 1971. The most recent event within 25 miles of the Project Area was a 1.3 magnitude earthquake located approximately 6 miles north of the Project Area, recorded in 2016. The 3.8 magnitude event would have been classified at the Project as a 3.0 to 4.0 on the Modified Mercalli Intensity scale. This classification corresponds to weak to light shaking that would generally be felt indoors with negligible potential for damage to structures in the area. The nearest potentially active fault system to the Project Area is the “Rattlesnake Hills Fault Zone (Class B) No. 565,” which is located immediately south of the Project Area that is part of the Yakima fold and thrust belt (USGS 2022b). A Class B fault characterized with geologic evidence demonstrating the existence of a fault or that suggests Quaternary deformation, but either (1) the fault might not extend deeply enough to be a potential source of significant earthquakes, or (2) the currently available geologic evidence is too</p>

	<p>strong to confidently assign the feature to Class C but not strong enough to assign it to Class A. The potential for surface fault rupture within the Project Area is considered low due to the Class B classification of the potentially active fault zone and lack of large earthquake events mapped near the Project Area.</p> <p>Although the seismicity of the region is low to moderate, groundwater is expected to be deep (approximately 60 feet or greater). Therefore, the liquefaction potential on site is considered low (see Attachment S for detail). It is noted that Benton County has mapped high liquefaction potential areas within the Dry Creek 100-year floodplain and it is acknowledged that temporary saturation of these areas would occur during rare flood events. If a major earthquake occurs during flooding, liquefaction is possible in these areas. Sections 4.5 and 5.5 of Attachment S provide additional discussion on the impacts of seismicity on the Project.</p> <p><u>Slope Stability and Landslides:</u> As described above, the Project Area is on semi-flat terrain with the majority of slopes less than 3 percent. The Project Area does not contain any known landslides (DNR 2022a; Benton County 2022). Benton County has a geologic hazard layer for combined erosion hazard and slopes greater than 15 percent (Attachment A, Figure A-4). Approximately 172 acres (3.8 percent) of the Project Area are mapped as combined erosion hazard and slopes greater than 15 percent. The Applicant further reviewed DNR LiDAR data for the Project Area to identify slopes greater than 15 percent (DNR 2022b). Based on the DNR lidar data, an additional 222 acres (4.8 percent) are mapped as slopes greater than 15 percent in the Project Area. As shown on Figure A-4 in Attachment A, these areas are primarily associated with drainages (ephemeral streams and non-jurisdictional drainages) and steeper terrain at the outskirts of the Project Area. Steeper terrain is also located in areas to the south, east, and north outside of the Project Area. Project facilities have been sited to avoid mapped slopes of greater than 15 percent to the extent possible. See Attachment S for information on geotechnical practices to address Project facilities that required siting in steeper slopes.</p> <p><u>Volcanic Activity:</u> The nearest mapped volcanic feature to the Project Area is the Ice Harbor Member volcano vent that lies approximately 33 miles east of the Project. The Ice Harbor Member was erupted from now-extinct volcanic activity in the central part of the Columbia Plateau about 8.5 million years ago. The Project Area is mapped by DNR in the Tephra (ash) volcanic hazard zone. The nearest active volcanoes are located in the Cascade Range, with Mount Adams approximately 80 miles to the west of the Project site. When a volcano erupts, the blast sends gas and pieces of molten rock into the air. Lighter pieces, such as volcanic glass, minerals, and ash, can rise high into the air and form a massive cloud called an eruption column. The larger pieces—called volcanic bombs—usually fall quickly to the ground within a few miles of the volcanic</p>
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	<p>vent. All of these pieces of ash, bombs, and rock fragments produced during the eruption are known as tephra. When eruption columns become large, they pose a serious hazard to health and aviation. The small particles of dust, rock, and volcanic glass—called ash—could fall in the vicinity of the Project if a Cascade Range volcano were to erupt.</p> <p><u>Flooding</u>: Floodplains in the Project Area are addressed in Part 4, Section 4.3. Stormwater runoff is addressed in Part 4, Section 4.5. As described above, an area of Yakima County’s “alluvial fan intermediate risk” is mapped in the very western portion of the Project Area (Attachment A, Figure A-4). An alluvial fan is a sign that catastrophic floods, often laden with sediment and debris, have occurred in the area and could occur again under heavy rain conditions, which are unusual in this area.</p> <p><u>Ground Subsidence and Mines</u>: A listing of mine information (USGS 2022c), indicates that there are no active or inactive subsurface mines in the vicinity of the Project Area and no surface mines within the Project Area. A few clay pit mines are located south of the Project Area. These surface mines are not considered a subsidence hazard. Therefore, the potential for mine subsidence is generally considered low. Karst topography is not present in the vicinity of the Project.</p> <p><u>Collapsible Soils</u>: Soils mapped within the Project Area are dominated by silt and loess (Figure A-3) and are not saturated. Collapse potential is generally considered moderate but is mostly dependent on access to water (Attachment S).</p> <p><u>Corrosive Soils</u>: Electrical resistivity measurements were used to design the electrical grounding systems and to assess corrosion potential (Attachment S). These data indicate subsurface corrosive soil conditions are low for concrete but moderate to high for unprotected steel in the Project Area.</p>
<p>Unique physical features</p>	<p>There are approximately 3 acres of talus slopes located in the southwestern corner of the Project Area (refer to Part 4, Section 4.8 for additional discussion on talus slopes). The Project has been designed to avoid talus slopes in the southwestern corner of the Project Area. The Project is set back by at least 125 feet from this feature.</p>

4.1.C Changes to and from Existing Condition

4.1.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Geohazards	<p>The potential for surface fault rupture within the Project Area is considered low due to the relative distance of the confirmed active fault zones and lack of large earthquake events mapped near the Project Area (Attachment S). The Project will provide seismic design using 2018 International Building Code (IBC). Site Class C will be used for very dense soils and bedrock conditions. The Mapped Spectral Response Acceleration for the 1 second (S1) and short periods (SS) were computed in the Preliminary Geotechnical Engineering Report using the Applied Technology Council Seismic Design Maps, which is a web-based application program. The permanent Project infrastructure would not be constructed within the 100-year floodplain. During construction, a temporary access road will be required across the floodplain for construction the overhead transmission line. Refer to Part 4, Section 4.3 for discussion of this temporary work area in the floodplain. The Project Area includes approximately 7.6 acres of temporary and 0.5 acre of permanent disturbance within the area mapped as “alluvial fan intermediate risk” mapped in the very western portion of the Project Area (Attachment A, Figure A-4). The preliminary geotechnical report (Attachment S) concluded that some siting grading may be necessary in this area, and additional design will be conducted to address any potential slope failure issues should they be present at this location. Soil liquefaction and/or mine subsidence are not concerns for the Project Area based on the lack of saturated soils and absence of underground mines in the vicinity of the Project. The Project will also be designed to meet seismic design and soil characteristic requirements (including collapsible and corrosive soils) documented in the Preliminary Geotechnical Engineering Report (Attachment S).</p> <p>Project infrastructure has also been designed to avoid the majority of slopes equal to or greater than 15 percent in the Project Area, including those areas located along the western and northern portions of the Project Area and slopes along drainages in the eastern portion of the Project Area (Attachment A, Figure A-4). The Project will have approximately 10.6 acres of temporary disturbance and approximately 0.3 acre of permanent disturbance in areas mapped by Benton County as combined erosion hazard and 15 percent or greater slopes. An additional approximately 50.2 acres of temporary and 2.6 acres of permanent disturbance will</p>

		<p>occur in areas with slopes greater than 15 percent based on the DNR LiDAR survey results. During construction, temporary disturbances will include minimal site grading for the installation of PV solar panel posts across the Project. Some collection lines will be installed in trenches in areas of slopes greater than 15 percent slope. Areas of permanent disturbance that will require additional grading in areas with slopes greater than 15 percent include the access roads, foundations for PCS and BESS units, and the Project substation. Areas of slopes greater than 15 percent will be reviewed during the final Project design and avoided to the greatest extent feasible. The Applicant will provide a site-specific grading plan in the Construction Plans and Specifications that will be submitted to EFSEC prior to site preparation. The Project's Stormwater Management Plan, Erosion Control Plan, and design BMPs will address these areas to prevent erosion and stabilize changes to local topography and drainage patterns.</p> <p>Access roads will be required during construction to accommodate construction equipment and deliveries. The access roads will also facilitate long-term operation and maintenance of the Project. These roads will be subjected to heavy loads, but only for limited duration and frequency. The surficial materials encountered within a majority of the preliminary geotechnical testing locations indicated native soils consisting of clay soils with varying amounts of sand and silt. These materials are generally considered to be poor in terms of supporting vehicular and construction traffic as defined by AASHTO when used for support of pavement structures. Access roads for the Project will be gravel roads. The final access roadway section thickness and required aggregate course material thickness recommendation will be provided during final Project design and engineering. Access roads will be constructed with an aggregate surface to help ensure accessibility during wet conditions.</p> <p>As described above and in the mitigation section below, the Project will avoid identified geological hazards (e.g., seismic hazards, 15 percent slopes, erosive soils, collapsible soils, high risk flood areas, etc.); or mitigate the effects of Project construction on these areas (e.g. steep slopes and erosion); or will mitigate the effects of these hazards on the Project (e.g., corrosive soils and erosion). As a result, the Project is in compliance with the County's Critical Area Ordinance in regard to geological hazards.</p>
	<p>Water flow</p>	<p>The majority of the Project Area will not be covered with impervious surfaces (see Part 2, Section 2.B.2) and infiltration of precipitation will not differ significantly from current conditions; any additional scour will be minimized and avoided within existing drainages through Project design and BMPs.</p> <p>New impervious surfaces will be developed as part of this Project (e.g., gravel roads, solar array posts, foundations for PCS, O&M building, substation components, etc.). However, these impervious</p>

		surfaces are a small percentage of the total Project Area, and stormwater will generally infiltrate across the site by infiltrating through vegetation or, where necessary, through permanent detention basins with outlet culverts to allow water to slowly release and infiltrate. Overall, impervious surfaces are anticipated to be 142 acres, or approximately 3 percent of the total Project Area (see Part 2, Section B.2). See Part 3, Section 3.5 and Part 4, Section 4.5 for additional information.
	Topography	The Project will require minimal grading on-site (see Part 2, Section 2.B.1). The Applicant will provide grading plans and specify the source of fill in the Construction Plans and Specifications that will be provided to EFSEC for approval prior to site preparation. The Applicant will obtain Building Permits from Benton County if needed. Per RCW 17.10.140, the Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC for the control of noxious and problem weeds prior to construction.

4.1.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Design around slope and geohazards	<p>The Project has been designed to avoid the steepest slopes in the Project Area, watercourse drainages, and geological hazardous areas to minimize risk due to erosion and flash flooding.</p> <p>No development is planned within or in proximity to incised drainages that might pose a risk from potential flooding events. All permanent Project components are located outside of the 100-year floodplain. Refer to Part 4, Section 4.3 for additional information on the temporary construction corridor across the floodplain and the one proposed access road crossing located between two ephemeral streams. In addition, the stormwater design will account for sufficient measures, including drainage basins, to address the minor amount of additional impervious surface. Appropriate Project design, construction, and maintenance will be implemented to mitigate the risk from site erosion.</p>

4.1.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Implementation of Geotechnical Recommendations	<p>The Applicant will follow all geotechnical recommendations provided in the Final Geotechnical Engineering Report. Recommendations included in Section 5.2 of the Preliminary Geotechnical Engineering Report (Attachment S) include the following.</p> <p>Shallow foundations must have a minimum embedment of 1.5 feet below finish site grade. Other alternatives are non-frost susceptible fill under foundations or thermal insulation to protect against frost.</p> <p>At some locations, soft silt soils may require remediation for bearing capacity. Where remediation is necessary, the continuous or square footings should bear on a minimum of 2 feet of compacted structural fill materials. The over-excavation should extend a minimum lateral distance of about 1 foot beyond the edge of the footings. Anticipated settlement of the foundations under service loads will be on the order of about 1 inch or less. Shallow foundations should be adequately reinforced and proportioned to resist adfreezing forces associated with the frost depth. Shallow foundations should be adequately reinforced and proportioned to resist swell/uplift forces associated with the near surface clay soils.</p> <p>The subgrade preparation and compaction recommendations in Section 5.3 of the Preliminary Geotechnical Engineering Report (Attachment S) will</p>	EFSEC

		<p>be followed to mitigate the risks associated with corrosive soils.</p> <p>The Project will provide seismic design using the 2018 IBC. Site Class C will be used for very dense soils and bedrock conditions.</p> <p>Native sand and silt material can be used as general site grading fill, provided they do not contain significant amounts of organics. After site clearing and grubbing, the general fill should be placed in loose lifts not exceeding 12 inches in thickness and compacted to a minimum of 90 percent of the ASTM D698 maximum dry unit weight. If the general site grading is located below proposed pavement, foundations, or equipment pads, then other compaction requirements apply.</p> <p>Structural fill should consist of a non-expansive, well-graded material with sufficient binder for compaction purposes and meet the requirements of 2020 Standard Specifications, Publication No. M41-10, Division 9 Materials, "Item 9-03-10 Aggregate for Gravel Base" issued by the Washington Department of Transportation. The Project would make structural fill interchangeable with flexible road base.</p> <p>Structural fill should be compacted to a minimum of 95 percent of maximum dry density determined by ASTM D1557. The structural fill should be moisture conditioned within 2 percent of optimum moisture content. Lift thickness is a function of energy, equipment, and ideal moisture. Typically, 9-inch lifts are a maximum, but if a contractor is able to complete thicker lifts and it can be verified that full densification occurs throughout the lift, then lifts up to 12 inches are possible.</p>	
	<p>Best Management Practices (BMPs) - Erosion</p>	<p>As further described in Part 4, Section 4.5, the Applicant will implement an Erosion and Sediment Control Plan (ESCP), a Construction Phase SWPPP,</p>	<p>Ecology, EFSEC</p>

		<p>and an Operations Phase SWPPP, in compliance with local stormwater regulations. These plans will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPP will include BMPs from Ecology’s Stormwater Management Manual for Eastern Washington (Ecology 2019). Benton County has adopted Ecology’s Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review.</p> <p>Per RCW 17.10.140, the Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC for the control of noxious and problem weeds prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.</p>	
	<p>Building Permits</p>	<p>The Applicant will provide grading plans and obtain necessary building permits from Benton County Building Division if needed.</p> <p>Seismic design parameters that will be used to design the Project are included in the 2018 IBC and American Society of Civil Engineers (ASCE) 7-10 and ASCE 7-16. These parameters are consistent with the Washington State Building Codes. The Project will comply with the current codes at the time of construction, demonstrating compliance with WAC 463-62-020.</p>	<p>Benton County Building Division and Washington State Building Code Council</p>
	<p><u>Soil Monitoring</u></p>	<p><u>The Applicant will develop and implement a soil monitoring plan in general alignment with the memorandum included as Attachment V to this ASC, to assess soil health following construction of the Project and identify mitigation measures that would be implemented if soil health declines.</u></p>	<p><u>EFSEC</u></p>

4.1.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.1.F References

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4.2 Air Quality

4.2.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 related to air quality have been conducted for the Project, nor are any studies planned.			

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

4.2.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
Regulatory	<p>The Clean Air Act (CAA) is the primary federal statute governing air quality. The U.S. Environmental Protection Agency (EPA) has promulgated primary and secondary National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), two size categories of particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), sulfur dioxide (SO₂), and lead. The primary standards are concentration levels of pollutants in ambient air, averaged over a specific time interval, designed to protect public health with an adequate margin of safety. The secondary standards are concentration levels judged necessary to protect public welfare and other resources from known or anticipated adverse effects of air pollution. Although states may promulgate more stringent ambient standards, the State of Washington has adopted standards identical to the federal levels (see 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.</p> <p>A new emissions source must demonstrate compliance with all applicable federal and state air quality requirements, including emissions standards and ambient air quality standards. The State of Washington has established rules through Ecology for permitting new sources in both attainment and non-attainment areas of the state, and additional requirements may be imposed by local air authorities. 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. In general, if potential emissions from stationary sources exceed certain thresholds, approval from the applicable permitting authority is required before beginning construction. In an effort to</p>

	<p>bring the area back into compliance with air quality standards, new sources of air emissions in non-attainment areas must undergo more rigorous permitting than equivalently sized sources in attainment areas. However, the Project is not located within a non-attainment area for any criteria pollutants (EPA 2022).</p> <p>Under the CAA, new industrial sources of air pollution must receive an air quality permit prior to operation. The two most common permits associated with industrial activity emitting regulated air pollutants are Notice of Construction/New Source Review approvals and Prevention of Significant Deterioration (PSD) permits. WAC 463-39 and 173-400 establish the requirements for review and issuance of notice of construction approvals for new sources of air emissions.</p> <p>A Notice of Construction is not required for the Project because there would be no permanent source of regulated air emissions. PSD regulations apply to proposed new or modified sources located in an attainment area that have the potential to emit criteria pollutants in excess of predetermined de minimus values (40 CFR Part 51). For new generation facilities, these values are 100 tons per year of criteria pollutants for 28 specific source categories, or 250 tons per year for sources not included in the 28 categories. A PSD permit would not be required for the Project because the generation of electricity by solar arrays does not produce air emissions.</p> <p>A concrete batch plant will not be required during construction or operation of the Project, and as such, no associated permit will be required. During operations, the Project substation and O&M building will be connected to the local utility (Benton Rural Electric Association). No back-up power generators are proposed and therefore no associated permits will be required.</p> <p>Construction Emissions:</p> <p>Although construction emissions are not included in permitting of stationary sources, mobile sources (such as construction equipment and maintenance pickups) are regulated separately under the CAA. Washington State regulates what are known as “fugitive” air emissions, which consist of pollutants that are not emitted through a chimney, smokestack, or similar facility. Blowing dust from construction sites, unpaved roads, and tilled agricultural fields are common sources of fugitive air emissions. Solar energy plants are not included among the facilities for which review and permitting of fugitive emissions are required (WAC 173-400-040). Nevertheless, WAC 173-400-040(9)(a) requires owners and operators of fugitive dust sources to take reasonable measures to prevent dust from becoming airborne and to minimize emissions.</p> <p>Other Washington State regulations that apply to nuisance emissions, including fugitive dust, and various equipment used during construction include the following:</p> <ul style="list-style-type: none"> • <u>WAC 173-400-040(3) Fallout</u>. 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
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	<p>the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.</p> <ul style="list-style-type: none"> • <u>WAC 173-400-040(4-4a) Fugitive emissions.</u> The owner or operator of any emissions unit engaging in materials handling, construction, demolition, or other operation, which is a source of fugitive emissions, if located in an attainment area and not impacting any non-attainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation. • <u>WAC 173-400-040(5) Odors.</u> Any person who shall cause or allow the generation of any odor from any source that may unreasonably interfere with any other property owner's use and enjoyment of his property must use recognized good practice and procedures to reduce these odors to a reasonable minimum. • <u>WAC 173-400-040(9) Fugitive dust.</u> 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. <p>Greenhouse Gases: Greenhouse gases (GHG) play a critical role in determining the earth's surface temperature. A GHG is any gas in the atmosphere that absorbs infrared radiation. The infrared radiation is selectively absorbed or "trapped" by GHGs as heat and then reradiated back toward the earth's surface, warming the lower atmosphere and the earth's surface. As the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere gradually increases, thereby increasing the potential for indirect effects such as a decrease in precipitation as snow, a rise in sea level, and changes to plant and animal species and habitat. Climate impacts are not attributable to any single action but are exacerbated by diverse individual sources of emissions that each make relatively small additions to GHG concentrations.</p> <p>GHGs are emitted by both natural processes and human activities. Human activities known to emit GHGs include industrial manufacturing, utilities, transportation, residential, and agricultural activities. The GHGs that enter the atmosphere because of human activities are CO₂, methane, nitrous oxide, and fluorinated carbons (i.e., hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).</p> <p>In Washington state, GHGs are regulated by RCW Chapter 70A.45, which establishes goals for statewide reduction of GHG emissions. The statute aims to reduce overall GHG emissions to 45 percent below 1990 levels by 2030. By 2050, the state intends to reduce overall emissions to 95 percent below 1990 level. Goals also included fostering a clean energy economy by increasing the number of jobs in the clean energy sector to 25,000 by 2020, from just over 8,000 jobs in 2004 (RCW 43.330.310). WAC 173-441 established an inventory of GHG emissions through a mandatory greenhouse reporting rule for certain operations. Because solar power would not emit GHGs during operations, these regulations would not apply</p>
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	<p>to the Project. In addition, the Project could assist the State in achieving these goals by providing clean renewable energy to the State.</p>
<p>Climate</p>	<p>The Project is located 12.5 miles northeast of the city of Sunnyside and 1 mile south of the State Route (SR) 241 and SR 24 interchange in Benton County, Washington. It is located in a sparsely populated rural area of Benton County and contains a mix of dryland and irrigated agricultural use, rangeland, transmission and electrical infrastructure, and undeveloped areas. It is located within a rain shadow created by the Cascade Mountains, which causes a decrease in precipitation to the east. In this region of Washington, the summers are hot and mostly clear, winters are very cold and partly cloudy, and it is typically dry year-round (e.g., on average, there are over 200 days of sunshine). Average annual precipitation at Priest Rapids Dam, Washington (nearest monitor, approximately 10 miles north of the Project) is 7.0 inches. The average seasonal snowfall at Priest Rapids Dam is 5.9 inches. In winter, temperatures average a high of 48.4 degrees Fahrenheit (°F) and low of 28.6°F, with extreme lows below 20°F. In summer, temperatures average a high of 88.1°F and a low of 62.5°F, with extreme highs above 95°F (Western Regional Climate Center 2021).</p> <p>Wind conditions near the Project can be characterized by Automated Surface Observing Systems (ASOS), which serves as the nation’s primary surface weather observing network. The closest ASOS station to the Project is located at the Sunnyside Municipal Airport in Sunnyside, Washington (K1S5). Based on data collected over the 5-year period 2015 through 2020, the prevailing winds most frequently blew from the west (approximately 11 percent of the time), from the north (approximately 9 percent of the time), and from the northeast, east, and southwest (each approximately 7 percent of the time), with calm conditions (less than 2.0 miles per hour) occurring approximately 50 percent of the time. The average wind speed for the period was approximately 3.5 miles per hour (1.6 meters per second) (IEM 2022).</p>
<p>Regional Air Quality</p>	<p>While the air quality in Benton County is healthy most of the year, the county’s sunny climate, pollution-trapping mountains, and growing population contribute to occasional air quality issues. Fugitive dust and smoke are two of the most prevalent existing sources of air pollution in the area. Agricultural and outdoor burns, as well as wildfires, are the main PM_{2.5} sources. Tilling operations, windblown dust, and resuspended road dust sometimes gives rise to elevated levels of PM₁₀. The area surrounding the Project is sparsely populated and largely undeveloped, with the nearest schools and parks located 12 miles to the south in the town of Sunnyside.</p> <p>The nearest air quality monitors to the Project that can be used to determine compliance with the NAAQS are summarized in Table 4.2-1. Ambient monitoring data reported in this table are for years 2018 through 2020, as summarized in the 2021 Ambient Air Monitoring Network Plan. The nearest monitor is located in Sunnyside, Washington (approximately 12 miles to the south), which measures PM_{2.5}. The nearest PM₁₀ monitor is located in Yakima, Washington (approximately 30 miles to the west). The nearest ozone monitor is in Kennewick, Washington (approximately 35 miles to the</p>

southeast). The nearest SO₂ monitor is located in Malaga, Washington (approximately 60 miles north). The nearest CO and NO₂ monitors are in Seattle, Washington and Tacoma, Washington, respectively (both approximately 135 miles to the northwest).

In recent years, Washington experienced extended smoke events from regional wildfires in the Pacific Northwest. These smoke events caused repeated exceedances of the PM standards. Due to the regional and exceptional nature of these events, EPA issued waivers for the unmet monitoring requirement. Under normal conditions, pollutant concentrations fall well below NAAQS (Ecology 2021).

Table 4.2-1. Ambient Air Quality Monitors Nearest the Project with Comparison to NAAQS

Pollutant / Averaging	Site	2018	2019	2020	3-year Design Value	NAAQS	Units
CO 1-hr	Seattle Beacon Hill (ID 530330080)	1	1.1	1.7	1.7	35	ppm
CO 8-hr		0.9	0.7	1.7	1.7	9	ppm
NO ₂ 1-hr	Tacoma – S 36th St. (ID 530530024)	46.4	40.3	39.8	42	100	ppb
NO ₂ Annual		16.7	15.13	12.47	17	53	ppb
PM ₁₀	Yakima 4th Ave. (ID 530770009)	129	60	326	326	150	µg/m ³
PM _{2.5} 24-hr	Sunnyside – S 16th St. (ID 530770005)	62.4	31.3	118.1	71	35	µg/m ³
PM _{2.5} Annual		11.9	10.8	15.2	13	12	µg/m ³
SO ₂ 1-hr	Malaga Hwy. (ID 530070012)	1.2	1.0	1.7	1	75	ppb
SO ₂ 3-hr		1.1	0.8	1.5	1.5	500	ppb
Ozone 8-hr	Kennewick – S Clodfelter Rd. (ID 530050003)	0.073	0.061	0.061	0.065	0.07	ppm

4.2.C Changes to and from Existing Condition

4.2.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.

<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
Topical Area/issue	Changes
Construction	<p>The primary sources of air pollution generated by construction of the Project would be vehicle exhaust emissions, as well as fugitive dust particles from disturbed soils that become airborne. A concrete batch plant will not be required during construction. 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. Pollutant emissions from these sources would be relatively small, given the size of the construction workforce and equipment fleet, and similar to emissions from other equipment commonly used for agriculture, transportation, and general construction in Benton County. The emissions would generally</p>

	<p>be dispersed among multiple locations in and near the Project Area at any given time rather than concentrated in a specific location, and they likely would not reach significant concentrations at off-site locations. Construction activities that could create fugitive dust include transportation of materials; clearing and grading for roads, crane pads, solar array pads, and other Project infrastructure; and trenching or plowing for underground utility cables.</p> <p>Construction activities for the Project are scheduled to take approximately 22 months (see Part 2 of the ASC). Construction emissions have been estimated using EPA’s Motor Vehicle Emissions Simulator (MOVES3) and NONROAD emission factor models. These emissions are associated with exhaust from heavy equipment, worker vehicle commutes, delivery and haul trucks, as well as fugitive dust from earth-moving and material handling activities. Construction scheduling and equipment have not been finalized, and therefore, reasonable and conservative assumptions have been made for the purpose of estimating construction emissions. A summary of total estimated emissions from construction of the Project is shown in Table 4.2-2. When compared to the most recent published emissions inventory (2017) for Benton County, Project emissions would represent a very minor fraction of total emissions for the county (Ecology 2020). Given the relatively low magnitude, localized extent, and temporary duration of construction-related emissions, air quality impacts associated with Project construction would not be substantial.</p> <p>The following assumptions were used to develop the calculations presented in Table 4.2-2:</p> <ul style="list-style-type: none"> • Construction equipment emissions were based on estimated construction activity schedule, types of vehicles/equipment, number of vehicles/equipment, fuel type, equipment load factors, and equipment size (horsepower). Equipment operating times for the equipment were based on a 5-day work week and an 8-hour workday. • Fugitive dust sources were estimated using South Coast Air Quality Management District’s (SCAQMD) recommended methodology. An uncontrolled PM₁₀ emission factor of 20 pounds per acre per day was used, consistent with California Air Resource Board’s URBEMIS2007 model. The Project would implement Best Management Practices to minimize fugitive dust during construction, including but not limited to graveling, watering, and limiting traffic speeds on unpaved roads. For the purposes of estimating fugitive dust emissions, it was assumed that disturbed areas would be watered at least twice a day, reducing fugitive dust by at least 50 percent. Based on the equipment mix, an estimated
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average disturbed area of 3 acres per day was used in the calculations. PM_{2.5} emissions were assumed to be 21 percent of PM₁₀ emissions, using the fraction recommended by SCAQMD (SCAQMD 1993).

Table 4.2-2. Summary of Total Estimated Construction Emissions (tons per year)

Source	VOC	NOx	CO	PM ₁₀	PM _{2.5}
Off-road Construction Equipment	3.2	21.9	10.4	2.0	2.0
Worker Commuting	1.5	0.8	22.3	0.04	0.03
Material Delivery and Hauling	1.0	5.6	3.6	0.11	0.11
Fugitive Dust from Construction	--	--	--	3.8	0.8
Project Construction Annual (Max.) Total	5.6	28.3	36.4	6.0	2.9
Benton County 2017 Total Emissions^a	14,186	6,709	31,652	11,159	2,535
Project Total as a Percent of Benton County Total Emissions	< 0.1%	0.4%	0.1%	< 0.1%	0.1%

^a Ecology 2020

Operation

O&M impacts on air quality from the Project will be minimal. Combustion emissions and fugitive dust generated by vehicles traveling on Project access roads to perform operations and maintenance functions will be the primary emissions expected during this timeframe. The volume of O&M vehicle traffic will be very low; therefore, quantities of potential emissions generated by these vehicles will be very low, intermittent, and localized. Areas disturbed during construction and not occupied by permanent Project infrastructure will be revegetated to prevent the generation of dust. A local utility connection to Benton Rural Electric Association will be provided at the Project substation and O&M building and therefore no generator engine emissions will occur during operations. Operation of the Project will not produce visible plumes, fogging, misting, icing, impairment of visibility, changes in ambient levels of pollutants, or impacts on climate.

The Project is not expected to induce regional growth that would result in substantial changes to off-site air quality. Other pollutants, including GHGs, will be emitted from outside the immediate vicinity, as a result of the total fuel cycle of the Project. These emissions will be generated from manufacturing and transporting Project parts and equipment. However, the Project itself will not directly emit GHGs beyond the use of vehicles and transportation (as mentioned earlier). Furthermore, the Project will support the state’s goal of increasing use of renewable energy resources, which has been declared in part to protect Washington’s clean air and water.

Implementation of any weed control measures at the Project (e.g., herbicide spraying) will be conducted in compliance with federal, state, and local regulations to ensure that adverse impacts to air quality do not occur (see Part 4 Section 4.8).

	Odors	During Project-related construction activities, exhaust from diesel-powered vehicles and equipment as well as painting of the O&M building and other structures could create minor odors. These odors are not likely to be noticeable beyond the immediate vicinity and will be temporary and short-lived. Long-term odors are associated typically with industrial projects involving use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills; however, the Project involves no elements related to these types of uses. Therefore, no long-term odor impacts related to odors will occur with operation of the Project.

4.2.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	N/A	Existing conditions at the site have been analyzed and incorporated as described in above.

4.2.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Implementation of Best Management Practices (BMPs) and Standard Construction Practices	Washington Administrative Code sections addressing air quality include: <ul style="list-style-type: none"> • WAC 173-400-040(3) Fallout • WAC 173-400-040(4-4a) Fugitive emissions • WAC 173-400-040(5) Odors • WAC 173-400-040(9)(a) Fugitive Dust 	N/A

		<p>To adhere to these codes, the Applicant would implement BMPs and standard construction practices, including the following:</p> <ul style="list-style-type: none"> • Vehicles and equipment used during construction would be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use would be implemented. • Watering or other fugitive dust-abatement measures would be used as needed to control fugitive dust generated during construction. When applied, the Applicant will use water or a water-based environmentally safe dust palliative such as lignin for dust control. • Construction materials that could be a source of fugitive dust would be covered when stored. • Traffic speeds on unpaved roads would be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds would be covered when transporting dirt or soil. • Carpooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures would be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas would be conducted during and after construction to reduce wind-blown dust. 	
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4.2.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.2.F References

Ecology (Washington State Department of Ecology). 2020. 2017 Washington Comprehensive Emissions Inventory Technical Support Document, data, and methods.

<https://apps.ecology.wa.gov/publications/SummaryPages/2002012.html>. Accessed February 28, 2022.

Ecology. 2021. 2020 Ambient Air Monitoring Plan (Publication 20-02-017).

<https://apps.ecology.wa.gov/publications/summarypages/2002017.html>. Accessed February 28, 2022.

EPA (U.S. Environmental Protection Agency). 2022. Green Book, Washington Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants.

https://www3.epa.gov/airquality/greenbook/anayo_wa.html. Accessed February 28, 2022.

IEM (Iowa Environmental Mesonet, Iowa State University). 2022. Sunnyside Municipal Airport (K1S5) ASOS Station Windrose Plot.

https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?network=WA_ASOS&station=1S5. Accessed on February 28, 2022.

SCAQMD (South Coast Air Quality Management District). 1993. CEQA Air Quality Handbook.

<http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>.

Western Regional Climate Center. 2021. Priest Rapids Dam, Washington Climate Summaries.

<https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa6747>. Accessed on February 28, 2022.

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

4.3.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
Wautoma Solar Facility Wetland and Other Waters Delineation	Completed	Wetland Specialists at Tetra Tech, Inc. performed field surveys and wrote a Wetland Delineation report that meets USACE and Washington State Department of Ecology (Ecology) specifications; see Attachment I.	Y

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

4.3.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
Wetland delineation	The wetland and other waters delineation found that there are three palustrine emergent wetlands within the Project Area (refer to Attachment A, Figure A-6 and Attachment I Wetland Delineation Report). These wetlands are the result of long-term leaks in an irrigation pipeline that is positioned on the soil surface and are adjacent to an existing farm road. The wetlands are labeled as WT500, WT501, and WT502 in Attachment I.
Ephemeral streams within the Project area	The wetland and other waters delineation found that there are 34 ephemeral stream segments within the Project Area (refer to Attachment A, Figure A-6 and Attachment I Wetland Delineation Report). The ephemeral streams are characterized and labeled in Attachment I, and only one has an official name in the National Hydrography Dataset maps. Dry Creek (also labeled ST-207 in Attachment I) is in the northern end of the Project Area and has a 100-year floodplain listed on the Federal Emergency Management Agency maps. Per discussions with a Project participant landowner, it is extremely rare for Dry Creek to have visible flows. Further, a Riparian Analysis Memo prepared in 2020 for Benton County’s critical areas update stated that Dry Creek was among several

	<p>named streams in the County that were not measured due to lack of visible flows (AC Geospatial LLC 2020).</p> <p>All of the ephemeral streams lack connectivity to other intermittent, perennial, or fish-bearing streams. Two of the stream segments (ST-207/Dry Creek, and ST-217 in Attachment I) continue out of the Project Area. ST-217 is a tributary to ST-207/Dry Creek just outside of the Project Area. ST-207/Dry Creek connects to Cold Creek at 4.5 miles downstream from the Project Area.</p> <p>Cold Creek is uncategorized on the Washington Department of Natural Resources (DNR) stream typing maps and does not contain fish per the StreamNet database (DNR 2022; StreamNet 2022). The Cold Creek drainage continues about 21 miles downstream to the Yakima River. However, Cold Creek appears to no longer be directly connected to the Yakima River in the historical orthoimagery (Google 2022). The Horn Rapids Campground and Park as well as the Tapteal Water Trail Access Road cover the historical floodplain and confluence of Cold Creek and the Yakima River (Google 2022).</p>
<p>Flood risks</p>	<p>There is a Zone A (100-year) floodplain associated with ST-207/Dry Creek in the north end of the Project Area. This special flood hazard area is regulated by Benton County as described below.</p>
<p>Regulatory</p>	<p>On August 30, 2021, the Navigable Waters Protection Rule was vacated and the definition of WOTUS has reverted to pre-2015 rules. Under those rules, certain isolated wetlands and ephemeral waterways are again considered jurisdictional. As of November 18, 2021, a revised definition of WOTUS has been published in the Federal Register for public comment. The proposed definition is a codified version of the current pre-2015 rules. The virtual hearings for the proposed 2022 definition of WOTUS occurred in mid-January 2022, but no findings from those hearings have been presented to the public.</p> <p>The State of Washington considers all water bodies to be waters of the state and therefore has jurisdiction over the ephemeral streams found within the Project Area. Crossings or other work within the ordinary high-water marks of ephemeral streams may require a Hydraulic Project Approval (HPA) permit from the WDFW. The Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. Per WAC 220-660-010, the purpose of the HPA is to ensure that construction or performance of work is done in a manner that protects fish life. A JARPA is included in this submittal because WDFW has indicated that this type of crossing may require an HPA. The Applicant understands that WDFW will make a determination on whether an HPA is required on the basis of a review of this application.</p> <p>Benton County Code (BCC) (Chapter 15.14.040) requires 50-foot buffers on Non-Fish Seasonal (Ns) streams without adjacent slopes of 10 percent or greater, and 100-foot buffers on all Ns streams with</p>

	<p>adjacent slopes of 10 percent or greater. All of the streams within the Project Area are considered Ns pending confirmation of the wetland delineation by Ecology (Appendix I). Benton County does allow averaging of buffer widths with approval of the Planning Administrator. However, buffer averaging is not required for this Project because no stream buffers would be impacted by the Project. Buffer averaging is not anticipated to be required for the Project's proposed temporary stream crossing located within the special flood hazard area because that crossing will be regulated under the BCC Chapter 3.26 and Special Flood Hazard Development Permit (see below).</p> <p>Benton County's Flood Damage Prevention Ordinance regulates development within the special flood hazard areas per BCC Chapter 3.26. The 100-year floodplain along Dry Creek is a special flood hazard area. A Special Flood Hazard Development Permit is required for development within the flood hazard area per BCC Chapter 3.26.</p>
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4.3.C Changes to and from Existing Condition

4.3.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Wetland and wetland buffer impacts	The Project has been designed to avoid wetlands, and no wetland or wetland buffer impacts (temporary or permanent) will occur. <u>No solar panels will be placed over the wetlands or their buffers, and disturbance of wetlands and their buffers will be avoided during construction.</u>
	Stream crossings	<p>Ephemeral streams and stream buffers were avoided by Project design to the greatest extent practicable. The Project design has avoided permanent impacts to ephemeral streams or stream buffers. Further, the Applicant designed the Project security fence line to avoid crossing streams and stream buffers.</p> <p>The Project design would widen an existing access road by 2 feet on each side where it runs between two ephemeral stream segments (ST-216 and ST-217; see Figure 8 in the JARPA). The road is about 60 feet downhill from where bed and banks disappear in ST-216 and 140 feet uphill from where bed and banks begin on ST-</p>

		<p>217. The access road is about 2 feet in elevation above the low point in the drainage.</p> <p>Temporary impacts in the vicinity of the crossing could include sediment and dust from construction of the Project. Given the topography of the area, there is the potential for water to drain across the existing road from ST-216 into ST-217 during a large storm event or rapid snowmelt runoff; the proposed widened road also will have this potential for drainage to occur across it. However, there were no signs of previous drainage across the existing road observed during the wetland and waters delineation surveys, and therefore, this is likely to be a relatively rare event.</p> <p>The existing temporary and permanent impacts from widening the road will occur outside of the 50- and 100-foot buffers for the delineated Ns/ephemeral waterways (see Figure 8 in the JARPA, Attachment T). No temporary or permanent impacts to the stream to the stream buffer are anticipated.</p> <p>There are four locations (see Figures 4, 5, 6, and 7 in the JARPA, Attachment T) where collector lines will be installed underneath ephemeral drainages by boring underneath the stream bed. The boring depth has not yet been determined but is expected to be at least 4 feet below the bottom of the ephemeral stream channels. Boring entrance and exit locations will be outside of the buffers on those delineated Ns ephemeral waterways, and the entrance and exit locations will be outside of the floodplain. Therefore, no impacts to the stream channels, floodplains, or their buffers will occur from the boring. However, the Applicant understands that WDFW may require an HPA for this activity. As a result, these crossing are included in the JARPA (Attachment T).</p>
	Existing/potential flood risks	<p>The Project's overhead transmission line will span Dry Creek and the associated floodplain. As shown in Figure 3 of the JARPA, a temporary 50-foot wide access corridor would cross the floodplain and Dry Creek. The temporary access corridor will be used during the construction of the overhead transmission line by vehicles equipped to carry the transmission line wires (conductor, shield wire, etc.) and will be closed to</p>

		<p>other vehicles. Temporary use of this access corridor would occur when no water is flowing through the stream channel. No temporary structures or permanent impacts are proposed within the floodplain. Only limited temporary impacts (i.e., one temporary stream crossing) will occur, with no fill placed within the floodplain, and that location will be restored to pre-Project condition with no impacts to flood capacity or flood levels. Further, matting would be placed to minimize disturbance to the floodplain. No permanent Project components will be constructed within the floodplain.</p> <p>A Special Flood Hazard Development Permit will be obtained from Benton County prior to construction for the temporary access corridor.</p>
	<p>Erosion and surface water quality</p>	<p>Risks of erosion during construction will be addressed through construction best management practices as described in detail in Part 4, Section 4.1 and Section 4.5. The Project will be designed and constructed to comply with Benton County and Ecology requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow, and the Project's ESCP, Construction SWPPP, Permanent Stormwater Control Plan, and Vegetation and Weed Management Plan will provide specific measures to minimize erosion and sedimentation during and after construction.</p> <p>Further, stream crossings would be constructed to minimize risks of erosion, including locating directional boring entrance and exit locations outside of the floodplain and outside of buffers; installing adequately sized and designed culverts where required; and restoring areas of temporary impacts to the natural, pre-project channel dimensions and vegetation.</p>

4.3.C.1 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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes				
	<table border="1"> <thead> <tr> <th data-bbox="355 1818 776 1866">Topical Area/issue</th> <th data-bbox="776 1818 1443 1866">Changes</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Topical Area/issue	Changes		
Topical Area/issue	Changes				

	Existing/potential flood risks	While a floodplain is located within the Project Area, all permanent features are proposed to be located outside of the floodplain. A Special Flood Hazard Development Permit will be obtained from Benton County for the temporary construction access across the floodplain as described above. Therefore, the Project will not be affected by existing and potential flood risks.
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4.3.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Avoidance	The Project would not impact wetlands or wetland buffers and is consistent with WAC 463-62-050. Ephemeral streams and stream buffers were avoided to the greatest extent feasibly as described above.	N/A
	Stream crossing construction best management practices	Minimization of temporary water quality impacts (WAC 220-660-120; Stormwater Management Manual for Eastern Washington (Chapter 173-204 WAC); and Construction Stormwater General Permit (Chapter 90.48 RCW) will be implemented on site during construction and operations and include the following best management practices: <ul style="list-style-type: none"> • Staging of materials and equipment to prevent contamination of waters of the state • Development of the Stormwater Pollution Prevention, Erosion and Sediment Control, and Spill Prevention 	Ecology, WDFW

		<p>Countermeasures and Control plans</p> <ul style="list-style-type: none"> • Installation and maintenance of temporary erosion and sediment control measures • Completing work in the dry with no water present 	
	Hydraulic Project Approval	The Applicant is using the JARPA to obtain an HPA permit per WAC 20-660-050.	WDFW
	Special Flood Hazard Development Permit	The Applicant will obtain a Special Flood Hazard Development Permit from Benton County prior to construction.	Benton County

4.3.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.3.F References

AC Geospatial LLC. 2020. Riparian Buffer Analysis Summary Memorandum. Prepared for White Bluffs Consulting and Benton County. Available online at: <https://www.co.benton.wa.us/files/documents/SMPRiparianAnalysisMemo2021129012732032321PM.pdf>.

DNR (Washington State Department of Natural Resources). 2022. Washington Department of Natural Resources GIS Open Data: DNR Hydrography – Watercourses -Forest Practices Regulation. Available online at: <https://fpamt.dnr.wa.gov/default.aspx#>.

Google Earth (Google Earth Pro). 2022. Historical Aerial Imagery of the Project Study Area from 2021, 2018, 2017, 2016, 2015, 2013, 2012, 2011, 2009, 2006, 2005, 2004, 2003, 1996 and 1985.

StreamNet. 2022. StreamNet Mapper: Fish Data for the Northwest. Available online at: <https://www.arcgis.com/apps/webappviewer/index.html?id=3be91b0a32a9488a901c3885bbfc2b0b>. Accessed March 2022.

4.4 Water Quality – Wastewater Discharges

Part 4 Analysis is not required for this section.

4.5 Water Quality - Stormwater Runoff

4.5.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
Preliminary Stormwater Management Report (Attachment J)	Complete (January 2022)	Prepared by Westwood, engineering consultant for the Applicant	Y
Preliminary Hydrology Report (Attachment K)	Complete (December 2021)	Prepared by Westwood, engineering consultant for the Applicant	Y
Final Preliminary Geotechnical Report (Attachment S)	Complete (January 2022)	Prepared by RRC, geotechnical engineering consultant for the Applicant	Y
Wetland Delineation Report (Attachment I)	Complete (November 2021)	Prepared by Tetra Tech, environmental consultant for the Applicant	Y

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

4.5.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
Surface-water runoff ¹	<p>The Project Area is located on varying terrain within the valley that contains Dry Creek. In general, the Project Area is on semi-flat terrain with slopes of less than 3 percent, although there are locations where the slopes reach roughly 51 percent (see Part 4, Section 4.1 Earth for additional information on slopes). The southern portion of the Project Area drains north along several concentrated flow paths toward Dry Creek. The northern portion of the Project Area drains east following Dry Creek. A small part of the eastern portion of the Project Area drains east. Dry Creek flows through the north side of the Project Area from west to east (Figure A-6 in Attachment A).</p> <p>There are 34 ephemeral streams within the Project Area (Figure A-6 in Attachment A). The topography within the Project Area is the relatively flat bottom between two ridges. The majority of the waterways originate in the alluvial fans coming off the hills into the</p>

¹ Existing conditions related to water quality and wetlands are addressed in Part 4, Section 4.3, while existing conditions related to hazardous materials within the Project Area are addressed in Part 3, Section 3.12, as well as Part 4, Section 4.13.

	<p>Project Area and dissipate before joining the ephemeral drainages present on the valley floor (Attachment I). The ephemeral drainages within the Project Area eventually lead about <u>21.24</u> miles downstream to the Yakima River. All stream segments within the Project Area including Dry Creek were determined to be ephemeral (Attachment I; Part 4 Section 4.3).</p> <p>The Project Area is located primarily in FEMA Flood Zone C or unmapped areas containing minimal flood hazards. Flood Zone C represents areas located outside of the 500-year flood event and that have a minimal chance of flooding. The Project Area contains areas of FEMA Zone A flood hazards surrounding Dry Creek (Figure A-6 in Attachment A). A FEMA Zone A flood hazard is a 100-year flood hazard (1 percent annual flood risk) with no defined base flood elevations.</p> <p>The watershed area that was modeled in the Preliminary Hydrology Report (Attachment K) encompasses approximately 101 square miles and generally slopes east. Dry Creek flows east through the northern portion of the Project Area and through the central portion of the modeled watershed. The analysis shows low to moderate water depths and velocities across the majority of the site. Higher flood depths exist within Dry Creek and its surrounding areas located within and adjacent to the site. Minimal scour is expected onsite except within and adjacent to Dry Creek. Onsite runoff is split into 38 drainage areas based on discharge locations and existing low areas.</p> <p>Land use within the Project Area is primarily shrubland with areas of alfalfa, wheat, and other cropland. Soils are primarily classified as Hydrologic Soil Groups A and B within the Project Area. The Preliminary Hydrology Report (Attachment K) shows type B soils over a majority of the site with type A soils present along Dry Creek and drainages. A small area of type C soils is located north of Dry Creek in the northeastern portion of the Project Area. Soil Group A soils have low runoff potential when thoroughly wet. Water is transmitted freely through the soil. Group A soils typically have less than 10 percent clay and more than 90 percent sand or gravel and have gravel or sand textures. Some soils having loamy sand, sandy loam, loam or silt loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments. Soil Group B soils have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded. Group B soils typically have between 10 percent and 20 percent clay and 50 percent to 90 percent sand and have loamy sand or sandy loam textures. Group C soils have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted. Group C soils typically have between 20 percent and 40 percent clay and less than 50 percent sand and have loam, silt loam, sandy clay loam, clay loam, and silty clay</p>
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	<p>loam textures. The soils in the Project Area are expected to have moderate to high infiltration rates based on their clay content and their drainage class ratings.</p> <p>The Preliminary Geotechnical Report (Attachment S) indicates that soils in the Project Area have low moisture content (average of 6 percent), and the clay content is estimated to be between 10 and 20 percent. Surface soils in the Project Area are rated as “well drained” with a moderate to high potential for water erosion (see Section 4.1).</p> <p>Benton County classifies all lands with moderate to high susceptibility to contamination as critical aquifer recharge areas (BCC 15.06.010). The Project Area includes critical aquifer recharge areas due to the presence of areas including floodplains, combined hydrological soil group A and irrigated agriculture, and alluvial soils (Figure A-7 in Attachment A).</p> <p>Boreholes were used during the geotechnical study to determine the presence and level of groundwater in the Project Area. A static groundwater level was not observed in any of the test borings drilled to approximately 15.5 feet below ground surface (bgs). Publicly available groundwater data indicate that groundwater may be encountered approximately 60 feet bgs (Attachment S). It is noted that shallow/perched groundwater fluctuations may occur due to seasonal variations in the amount of rainfall, runoff, and other factors that were not evident at the time the borings were performed.</p>
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4.5.C Changes to and from Existing Condition

4.5.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.

<input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes
	Topical Area/issue	Changes
	Surface-water runoff	<p>The Project may result in some changes to the stormwater drainage as a result of new impervious surfaces developed as part of this proposal (e.g., gravel roads, foundations for solar array posts, battery storage container pads, pads for substation components, etc.). Although typically classified as impervious surfaces, stormwater will generally infiltrate through the gravel roads, but at a reduced rate compared to most soils in the area.</p> <p>The approximately 4,573-acre Project Area includes all of the Project facilities, including the solar PV system and DC-coupled</p>

	<p>BESS, Project substation, transmission line, O&M building, and associated access roads. Impervious surfaces generally include gravel access roads, inverters, and the substation area. The Project under the solar modules will be converted to grassland conditions within the fenced boundary around the proposed impervious surfaces. Due to the area between and beneath the panels being vegetated, panels are not considered an impervious surface.</p> <p>A Preliminary Stormwater Management Report is provided in Attachment J. Erosion control measures have been incorporated into the Project design to address construction runoff. The Project will also prepare an ESCP, Construction Stormwater Pollution Prevention Plan (SWPPP), Operations SWPPP, and Vegetation and Weed Management Plan prior to construction that will include measures to minimize soil erosion and stormwater runoff.</p> <p>Overall, impervious surfaces are a low percentage of the total Project Area (approximately 3 percent of the Project Area; see Part 2, Section B.2). Impervious surfaces include the substation, inverters, and permanent roads. Furthermore, the Project will be designed and constructed to comply with Benton County and Ecology requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow. The Project’s ESCP, Construction SWPPP, Operations SWPPP, and Vegetation and Weed Management Plan will include measures to minimize the rate of stormwater that will be discharged due to these impervious surfaces.</p> <p>The proposed substation and O&M building will be a raised pad, and runoff from this area will sheet flow to a proposed detention basin to the east. Minimal grading is proposed across the solar array areas. Drainage patterns will remain the same with the addition of detention basins that outlet similar to existing conditions. Stormwater management practices including detention basins are proposed on site to meet the requirements of the state. Other stormwater measures are proposed to route water through the site including culverts and low water crossings. Grading in small portions of the Project Area will impact areas of slopes greater than 15 percent slopes as discussed in Section 4.1 Earth. The Stormwater Management Plan, Erosion Control Plan, and specific BMPs will address these areas to prevent erosion and stabilize changes to local topography and drainage patterns.</p> <p>The Preliminary Stormwater Management Report analysis shows low to moderate water depths and velocities (Exhibits 6 through 7A, Attachment J) across the majority of the Project Area. During a 100-year storm, the flood depths across the majority of the Project Area are less than 0.5 foot with velocities less than 1 foot per second, with the exception of within and adjacent to Dry Creek where the depths can reach as high as 6 feet. Several</p>
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		<p>concentrated flow paths in the southern portion of the Project Area have higher flood depths but are generally less than 2.5 feet. Minimal scour is expected onsite except within and adjacent to Dry Creek (Exhibit 8, Attachment J). The Preliminary Hydrology Report (Attachment K) concluded that the Project Area is suitable for the planned development, and hydrologic concerns can be addressed by either avoiding areas of high flood depths or through detailed engineering design.</p> <p>BCC 15.06.030 requires a critical area report to be prepared for certain activities when proposed in a Critical Aquifer Recharge Area. These activities include the following:</p> <ol style="list-style-type: none"> (1) <i>Biosolids land application;</i> (2) <i>Critical material handling, generating, or use;</i> (3) <i>Dairy operation;</i> (4) <i>Feedlot of livestock/animal operation;</i> (5) <i>Landfill;</i> (6) <i>Mining and/or gravel pits;</i> (7) <i>Sanitary waste discharge;</i> (8) <i>Wood treatment facilities;</i> (9) <i>Storage, processing, or disposal of radioactive substances;</i> (10) <i>Above ground storage tanks, subject to WAC 173-303-640 as it now exists or may be hereinafter amended;</i> (11) <i>Below ground storage tanks, subject to WAC 173-360 as it now exists or may be hereinafter amended;</i> (12) <i>Hazardous waste generator (such as Boat or Motor Vehicle Repair Shops);</i> (13) <i>Junk yards and salvage yards;</i> (14) <i>Waste water application to land surface;</i> (15) <i>Commercial fertilizer storage;</i> (16) <i>Injection wells;</i> (17) <i>Sawmill;</i> (18) <i>Solid waste handling and recycling facility;</i> (19) <i>Cement and/or concrete plants;</i> (20) <i>Machine shops;</i> (21) <i>Chemical treatment and disposal facility; or</i> (22) <i>Any activities, particularly municipal, industrial, and commercial that involve the collection and storage of substances that, in sufficient quantity during an accidental or intentional release, would result in the impairment of the aquifer water to be used as potable drinking water liquids shall be regulated by this chapter.</i> <p>The proposed solar energy facility and related or supporting activities do not meet any of the above definitions and are not substantially similar to any of the activities described. Therefore, a separate Critical Areas Report is not required. The proposed facilities do not pose a danger to critical aquifers because BMPs would be implemented as described in this section to manage stormwater and to prevent the release of any hazardous materials</p>
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		<p>to the ground. Additionally, the proposed on-site septic system that will be located at the O&M building does not overlap with any critical aquifer recharge area per BCC 15.06.010.</p> <p>Based on the groundwater level of over 15.5 feet in depth identified in the Preliminary Geotechnical Report (Attachment E), the Project is not expected to impact groundwater. The slight increase in impervious surfaces (142 acres, or 3 percent of the Project Area) is not expected to impact recharge to groundwater or stream flows with the implementation of mitigation measures.</p>

4.5.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?

<input type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Design considerations of stormwater runoff and erosion.	<p>The existing stormwater runoff and erosion patterns will inform the final design of the Project. The Project's engineer will determine the final appropriate erosion and sediment control and drainage plans based on existing conditions and planned impervious surfaces. The Project will be designed to have the least impact to stormwater drainage patterns and erosion risk as feasible.</p> <p>The proposed Project will be designed to meet the requirements of the State of Washington for stormwater management. The proposed stormwater engineering includes proposed basins and crossings in order to maintain existing drainage patterns and reduce runoff rates.</p> <p>Detention basins will be provided at critical locations in the site to capture runoff to slow release rates for the site. Temporary basins will be used during construction with the final number of temporary basins dependent on final design. Based on the current Project design, a total of eight permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development in critical discharge locations. The final location of these permanent basins will be verified during final engineering.</p> <p>Crossings are proposed at new access roads to maintain existing drainage patterns through the proposed site. Internal crossings will be sized for either culverts or low</p>

	<p>water crossings. Culverts are sized for the 10-year 24-hour rain event with a 1-foot allowable head. The Preliminary Stormwater Management Report (Attachment J) summarizes the proposed culverts and low water crossings on site. Low water crossings will be sized to withstand the shear stress caused by flow during the 10-year 24-hour rainfall event. FLO2D models were created and analyzed to determine the shear stresses and lengths. The combination of crossing depths and the slope of the flow path at each crossing location were multiplied by the density of water to determine the expected shear stress. The final location and design of these crossings will be verified during final engineering.</p> <p>As discussed in Part 3, Section 4, panel washing would not be expected to generate runoff from the site or cause erosion. If panel washing occurs, the wash water will not contain additives and will not be discharged into nearby water bodies (i.e., it is expected to infiltrate into the ground surface at and near the point of application). The amount of water needed for cleaning is estimated to be approximately 120,000 gallons per year.</p> <p>All permanent Project components would avoid Dry Creek and the associated 100-year floodplain. The Project's transmission line will span Dry Creek and associated 100-year floodplain, which is located between the Project substation and the POI. A temporary 50-foot-wide access corridor across the floodplain will be used during construction of the overhead line. To minimize impacts to this area, only matting or other BMPs to prevent erosion along with vehicles equipped to carry the transmission wires (conductor, shield wire, etc.) will be allowed.</p> <p>Minimal grading on site and at proposed crossings will maintain existing drainage areas throughout the Project Area. Small areas of the Project with impacts to 15 percent (or greater) slopes would include specific BMPs to address any potential erosion and stability concerns during construction and prior to final site stabilization (refer to Part 4, Section 4.1 Earth).</p> <p>The proposed vegetative cover below the array and permanent detention basins will reduce runoff rates for the final conditions. Grassland is proposed below the solar array, which will allow for treatment using the Full Dispersion BMP. Based on Table 6.10 in the SWMMEW, a minimum of 20 percent grass cover is required on site. The Project will greatly exceed this minimum because only 3 percent of the Project Area would be permanently impacted, and vegetative cover would be established in</p>
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		areas of temporary disturbance and within the detention basins.
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4.5.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Construction Stormwater General Permit	<p>In compliance with WAC 173-200, the Applicant will obtain a Construction Stormwater General Permit (CSWGP) from Ecology. The CSWGP requires an ESCP and a SWPPP. Benton County has adopted Ecology’s Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review. In compliance with SWMMEW, the proposed development will require storage onsite for any increase in runoff for the 100-year, 24-hour storm. The basin design for any required storage will also follow the requirements outlined in the SWMMEW. As the Project design advances, the post-construction stormwater management should be reviewed in further detail with the County Engineer.</p> <p>The following requirements will be met for the Project:</p> <p>Stormwater quantity control will be provided so that proposed conditions peak runoff rates and volumes must be equal to or less than existing conditions. The 2-year, 10-year, 25-year, and 100-year 24-hour stormwater events must meet these requirements.</p> <p>The aim of Core Element #5 of the SWMMEW is to treat at minimum 90 percent of runoff from pollution-generating impervious surfaces (PGIS). A surface is considered a PGIS if it is being regularly used by vehicles. Since the access roads on the Project site are primarily for O&M, it is assumed that this Project is exempt from the Core Element #5 requirements.</p>	Ecology

	<p>Water quality will be addressed using the Full Dispersion BMP (SWMM EW, Table 6.10).</p> <p>Proposed culverts and low water crossings will be sized for the 10-year 24-hour stormwater event.</p>	
<p>Best Management Practices - Stormwater</p>	<p>The ESCP and SWPPPs (both for construction and operation) will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington (Ecology 2019).</p> <p>The Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.</p> <p>Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. Permanent basins will be provided at each discharge location that has an increase in runoff due to the proposed development in critical discharge locations. Each basin will have a minimum depth of 3.5 feet, a length-to-width ratio of 3:1 to 6:1, and a pond riser outlet structure to provide treatment per State of Washington requirements. These basin locations are shown in Exhibit 5 of Attachment J.</p>	<p>Ecology</p>

	Preventative procedures to avoid spills	Substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation. The Applicant will prepare a Construction Phase SPCC Plan, consistent with requirements of 40 CFR Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential water quality issues. The Applicant will also prepare an Operations Phase SPCC Plan in consultation with Ecology and pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402 (a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080.	NA
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4.5.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.5.F References

Ecology (Washington State Department of Ecology). 2019. Stormwater Management Manual for Eastern Washington. Publication Number 18-10-044. August. Available online at: <https://apps.ecology.wa.gov/publications/documents/1810044.pdf>.

4.6 Water Quantity – Water Use

Part 4 Analysis is not required for this section.

4.7 Water Quantity – Runoff, Stormwater & Point Discharges

Part 4 Analysis is not required for this section.

4.8 Plants

4.8.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
Botanical Survey Report (Attachment F)	Complete (January 2022)	Prepared by: Tetra Tech, environmental consultant for the Applicant. Agency involvement: WDFW provided feedback on protocols and special status species in the Project vicinity.	Y
Botanical Survey Addendum	Planned for spring Complete (August 2022)	Prepared by: Tetra Tech, environmental consultant for the Applicant. Agency involvement: Tetra Tech discussed the planned spring 2022 surveys with WDFW <u>prior to initiating field work and will continue to coordinate with WDFW as described for the original Botanical Survey Report.</u>	N Y
Habitat and General Wildlife Survey Report (Attachment G)	Complete (January 2022; <u>revised October 2022</u>)	Prepared by: Tetra Tech, environmental consultant for the Applicant. Agency involvement: WDFW provided feedback on protocols and special status species in the Project vicinity. <u>WDFW requested that a small area initially classified as Eastside (Interior) Grasslands be reclassified as shrubsteppe habitat. This change was made in October 2022 and the revised report is included with this Revised ASC.</u>	Y
Habitat and General Wildlife Survey Report Addendum	Planned for spring Complete (August 2022)	Prepared by: Tetra Tech, environmental consultant for the Applicant. Agency involvement: Tetra Tech discussed the planned spring 2022 surveys with WDFW <u>and will continue to coordinate with WDFW as described for the</u>	N Y

		original Habitat and General Wildlife Survey Report.	
Wetland Delineation Report (Attachment I)	Complete (November 2021)	Prepared by: Tetra Tech, environmental consultant for the Applicant.	Y

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

4.8.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
U.S. Fish and Wildlife Service (USFWS) Federally Listed Plant Species	One federally listed threatened plant species, Umtanum dessert buckwheat (<i>Eriogonum codium</i>), is listed by the USFWS as known to occur within Benton County (USFWS 2022). However, this species has a highly restricted distribution, and the entire known population occurs in a 1.9-acre area on the eastern end of Umtanum Ridge within the Hanford Reach National Monument, which is more than 6 miles north of the Project Area (USFWS 2019). Additionally, the approximately 5 acres of designated critical habitat for Umtanum Desert buckwheat is restricted to this region along Umtanum Ridge (i.e., more than 6 miles north of the Project Area).
Washington Natural Heritage Program (WNHP) Special Status Vascular Plants	<p>Of the 28 special status vascular plant species (i.e., species listed as endangered, threatened, or sensitive in Washington by the WNHP) known to occur or potentially occurring within Benton County (WNHP 2021a), 16 species were considered to have a potential of occurring within the Project Area based on the proximity of known occurrences (WNHP 2021b) and the anticipated likelihood of suitable habitat for these species to occur in the Project Area. The other 12 species were considered unlikely to occur because 1) the known range of the species does not overlap the Project Area, 2) the known occurrences of the species in Benton County are historical (i.e., have not been confirmed in over 40 years), and/or 3) suitable habitat for the species was not anticipated to occur in the Project Area (see Appendix A to Attachment F)².</p> <p>Seven of the species listed as potentially occurring within the Project Area have been documented within 5 miles of the Project (WNHP 2021b): cespitose evening-primrose (<i>Oenothera cespitosa</i> subsp. <i>cespitosa</i>), Columbia milk-vetch (<i>Astragalus columbianus</i>), coyote tobacco (<i>Nicotiana attenuata</i>), desert cryptantha (<i>Cryptantha scoparia</i>), dwarf-evening primrose (<i>Eremothera pygmaea</i>), small-flower evening primrose (<i>Eremothera minor</i>), and Snake River cryptantha</p>

² The numbers of state endangered, threatened, and sensitive vascular species discussed in this paragraph are based on updated species lists (WNHP 2021a); therefore, the numbers are slightly different than those discussed in the Botanical Survey Report (Attachment F) prepared for the Project.

	<p>(<i>Cryptantha spiculifera</i>). An Element Occurrence (EO)³ for one of these seven species, Columbia milkvetch, overlaps the Project Area.</p> <p>One special status vascular plant species, Columbia milkvetch, was identified during the May 2021 surveys conducted for the Project. One population of this species consisting of approximately 125 plants occupying approximately 3 acres was documented within the eastside (interior) grassland habitat on a slope and crest of a hill in the southwest portion of the spring 2021 survey area. Further details on this population are presented in Attachment F.</p> <p>Subsequent to the completion of botanical surveys in May 2021, the original Project Area was expanded by approximately 990 acres. Supplemental surveys for special status vascular plant species will be conducted within this area in the spring of 2022.</p>
<p>WNHP Special Status Nonvascular Species</p>	<p>Per WNHP (2021c), one special status nonvascular lichen, woven-spore lichen (<i>Texosporium sancti-jacobi</i>), is listed as known or potentially occurring in Benton County. This species is listed as threatened by the WNHP. Navel lichen grows in arid to semiarid shrub-steppe, grassland, scabland, or savannah vegetation communities (WNHP 2022). Most sites where this species is found are relatively undisturbed and dominated by native plants including sagebrush (<i>Artemisia tridentata</i>), bitterbrush (<i>Purshia tridentata</i>), Idaho fescue (<i>Festuca idahoensis</i>), and bluebunch wheatgrass (<i>Pseudoroegneria spicata</i>), and fire generally eliminates the species (WNHP 2022). In Washington, this species is currently known from four occurrences in Benton, Klickitat, and Yakima counties (WNHP 2022). Although the exact locations of these occurrences are not publicly available, the closest EO is approximately 5 miles from the Project Area.</p>
<p>Vegetation Types / WDFW Priority Habitats</p>	<p>Habitat surveys conducted by Tetra Tech identified nine habitat types within the Project Area (Attachment A, Figure A-8; Attachment G). These include:</p> <ul style="list-style-type: none"> • Agricultural land • Developed/disturbed • Eastside (interior) grassland • Irrigated hedgerows • Non-native grassland and forbland • Planted grassland • Rabbitbrush shrubland • Shrub-steppe • Talus <p>In general, habitat types were adapted from habitat classifications and descriptions found in Wildlife-Habitat Relationships in Oregon and Washington (Johnson and O'Neil 2001), the Priority Habitats and Species (PHS) List (WDFW</p>

³ An Element Occurrence is an “area of land and/or water in which a species or natural community is, or was present” (DNR 2018). The WNHP provides data on rare plants in Washington, including the locations of documented EOs for rare plant species. However, due to the sensitive nature of this information, rare plant EOs are buffered to protect the exact location of documented occurrences of rare plant populations.

2008), and the WDFW Wind Power Guidelines (WDFW 2009). Table 4.8-1 lists the acres of each habitat type mapped within the Project Area. Three of the habitat types that occur within the Project Area (i.e., eastside [interior] grassland⁴, shrub-steppe, and talus) are listed as Priority Habitats by the WDFW (WDFW 2008).

As shown in Table 4.8-1, approximately 93, 63, and 3 acres of eastside (interior) grassland, shrub-steppe, and talus, respectively, occur within the Project Area. As shown in Attachment A, Figure A-8, eastside (interior) grassland habitat is most prevalent in the southern and eastern portions of the Project Area, shrub-steppe habitat is most prevalent in the north-central portion, and talus slopes are found in the southwest corner. See the Wildlife and Habitat Survey Report (Attachment G) for additional details on habitat types observed within the Project Area as well as their distribution in the area.

Table 4.8-1. Habitat Types Mapped within the Project Area

Habitat Type	Acres within Project Area	Percent of Project Area
Planted grassland ¹	2,129	47
Non-native grassland and formland	1,321	29
Agricultural land	793	17
Rabbitbrush shrubland	129	3
Eastside (interior) grassland ^{2/}	93 41	< 12
Shrub-steppe ^{2/}	63 115	13
Developed/disturbed	33	1
Irrigated hedgerows	9	<1
Talus ^{2/}	3	<1
Total^{3/}	4,573	100

Note: Acres in this table do not match those in the table in Part 2, Section B.2 because the table in Part 2 Section B.2 includes acres of wetlands and ephemeral streams mapped within the Project Area.

1/ Approximately 338 acres of planted grasslands mapped in the Project Area are currently enrolled in the Conservation Reserve Program (CRP). [The current CRP contract expires in 2022.](#)

2/ Listed as Priority Habitat by the WDFW (WDFW 2008)

3/ Totals may not sum exactly due to rounding

Invasive Plant Species

Eight state- and county-listed noxious weeds were observed in the Project survey area during botanical surveys conducted in May 2021:

- Cereal rye (*Secale cereale*)
- Diffuse knapweed (*Centaurea diffusa*)
- Field bindweed (*Convolvulus arvensis*)
- Jointed goatgrass (*Aegilops cylindrica*)
- Medusahead (*Taeniatherum caput-medusae*)
- Rush skeletonweed (*Chondrilla juncea*)
- Russian olive (*Elaeagnus angustifolia*)
- Russian thistle (*Rhaponticum [Acroptilon] repens*)

Cereal rye and diffuse knapweed were abundant and frequently observed throughout the Project Area, and field

⁴ This habitat type is referred to as eastside steppe in the WDFW PHS list (WDFW 2008).

	<p>bindweed and rush skeletonweed were commonly observed. Medusahead was observed in one location, and jointed goatgrass, Russian olive, and Russian knapweed were each observed in just one location within the Project Area.</p> <p>In addition to these eight species, several other non-native, invasive plant species, including blue mustard (<i>Chorispora tenella</i>), bulbous bluegrass (<i>Poa bulbosa</i>), cheatgrass (<i>Bromus tectorum</i>), common stork's bill (<i>Erodium cicutarium</i>), prickly lettuce (<i>Lactuca serriola</i>), tall tumbled mustard (<i>Sisymbrium altissimum</i>), and yellow salsify (<i>Tragopon dubius</i>) were commonly observed within the Project Area. Although these species were found throughout the Project Area, they were most abundant in non-native grassland and formland habitat and in the vicinity of agricultural fields or developed/disturbed areas. Appendix B of the Botanical Survey Report (Attachment F) provides a list of all vascular plant species observed within the Project Area and notes whether each species is native or non-native.</p> <p><u>As noted in the Botanical Survey Report prepared for the Project (Attachment F of the ASC), one observation of kochia (<i>Bassia scoparia</i>) was documented during field surveys. As shown in Figure 4 of the Botanical Survey Report, this observation is located along the northern portion of the Project Lease boundary and outside of the current Project Area. Kochia is the only noxious weed documented during field surveys that was observed in the Project Lease Boundary but not within the Project Area.</u></p> <p><u>The Project Area was revised subsequent to botanical field surveys in May 2021. Supplemental surveys for noxious weeds will be conducted within this area in the spring of 2022.</u></p>
<p>Fire</p>	<p>Fire has played an important role in shaping the environmental conditions and habitat types of an area. Several fire complexes have occurred within the Project Area between 1979 and 2020 (DNR 2021). The entire Project Area is located within the location of one or more of these fires.</p> <p>Part 4, Section 13 (Environmental Health – Hazardous Materials) describes the existing conditions related to historic fires in the area.</p>

4.8.C Changes to and from Existing Condition

4.8.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
		Topical Area/issue
		Changes
		<p>USFWS Federally Listed Plant Species</p> <p>As noted in Section 4.8.B, federally listed plant species are not anticipated to occur in the Project Area, and none were observed during botanical surveys conducted for the Project (Attachment F). Therefore, federally listed plant species will not be affected by the Project.</p>
		<p>WNHP Special Status Vascular Plants</p> <p>One special status vascular plant species, Columbia milk-vetch, was identified during surveys conducted for the Project in May of 2021 (Attachment F). The Project has been sited to avoid this population of Columbia milk-vetch, and the closest Project facilities are more than 150 feet from this population. <u>No additional special status plant species were observed during supplemental surveys conducted in May 2022.</u> Therefore, no direct or indirect impacts to this population are anticipated from construction and operation of the Project.</p> <p>As noted in Section 4.8.B, subsequent to completion of botanical surveys in May 2021, the Project Area was expanded. Supplemental surveys for special status vascular plant species will be conducted within this expansion area in the spring of 2022. If special status vascular plant species are observed during supplemental surveys, they will be avoided during Project construction and operation, to the extent feasible.</p>
		<p>WNHP Special Status Nonvascular Species</p> <p>Species-specific surveys have not been conducted for special status nonvascular species within the Project area. However, suitable habitat for woven-spore lichen (i.e., relatively undisturbed shrub-steppe, grassland, scabland, or savannah vegetation communities) was not observed during botanical surveys conducted for the Project. Native shrub-steppe and grassland habitats observed within the Project Area were highly disturbed due to extensive cattle grazing. In addition, the entire Project Area has been impacted by at least one fire in the last 20 years (DNR 2021). Because woven-spore lichen is typically found in relatively undisturbed native vegetation communities and fire is believed to eliminate this species, it is highly unlikely that this species occurs within the Project Area. In addition, impacts to native shrub-steppe and eastside (interior) grassland communities were minimized during Project design, and less than 9 acres of these habitat types would be impacted during Project construction and operation. Therefore, impacts to woven-spore lichen are not anticipated.</p>

	<p>Vegetation Types / WDFW Priority Habitats</p>	<p>Construction and operation of the Project will result in permanent and temporary impacts on vegetation, as well as alterations to vegetation within the solar array's perimeter fence lines during the life of the Project. Permanent impact areas include locations where Project components will occur (e.g., solar array panel posts, permanent Project service roads, O&M building, collector substation area, poles for transmission line, inverter and transformer pads) and constitute a habitat loss during the life of the Project. Temporary impact areas include areas that will be disturbed during construction and revegetated following construction (e.g., collection lines, temporary access roads, and temporary work areas outside the perimeter fence lines and temporary laydown and pulling areas for the transmission line). Temporarily disturbed areas will be revegetated in accordance with a the <u>Vegetation and Weed Management Plan that will be developed and submitted to EFSEC prior to construction provided as Attachment U to this Revised ASC.</u> Altered habitat impacts include lands within the perimeter fence lines minus any areas occupied by permanent Project structures. These areas will be revegetated either passively (i.e., allow species to colonize naturally) or actively (seeded with low-growing vegetation consisting of native species and/or a mix of native and desirable non-native, non-invasive species [i.e., species that would provide more rapid soil stabilization and vegetative cover than slower growing native species], <u>identified in coordination with WDFW</u>, which will result in permanently altered vegetation [see Attachment M for additional details]. A <u>Draft</u> Vegetation and Weed Management Plan <u>will be has been</u> prepared <u>in coordination with WDFW (see Attachment U); and the plan will to</u> describe the revegetation methods for the Project. <u>This plan will be updated and finalized prior to construction.</u></p> <p>Table 4.8-2 lists the estimated acres of temporary and permanent impacts to habitat types and acres of altered habitat from construction and operation of the Project. The vast majority of impacts would occur to planted grassland, agriculture, and non-native grassland and forbland habitat types. As shown in this table, up to approximately 3 acres and 2 acres of eastside (interior) grassland and shrub-steppe habitat, respectively, will be temporarily impacted by Project construction, 3 acres and less than 1 acre, respectively, would be permanently altered during operation, and less than 1 acre for both would be permanently impacted by operation of the Project.</p> <p>The estimated acres of impact on each habitat type provided in Table 4.8-2 are based on the current Project design (Attachment A, Figure A-1). However, as discussed in Part 2, the exact locations of Project components may be revised during final Project design, and impacts from the Project could occur anywhere within the Project Area. Any relocations made to the Project layout will be designed to</p>
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		<p>avoid or minimize impacts to special status species, Priority Habitats, and streams to the extent practical, and to comply with any conditions imposed in the Site Certification Agreement. The Project has already been designed to avoid talus by at least 125 feet; therefore, this Priority Habitat will not be affected by the Project, and any subsequent revisions to the Project layout will continue to avoid this habitat type.</p> <p>Part 4, Section 4.9 contains additional information regarding impacts to habitat including those classified as Priority Habitats by the WDFW.</p>
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Table 4.8-2. Anticipated Impacts to Habitat Types from the Project

Habitat Type	Temporary Impacts (Acres) ^{1/}	Altered Habitat Impacts (Acres) ^{2/}	Permanent Impacts (Acres) ^{3/,4/}	Total ^{5/}
Planted grassland ^{6/}	66	1,439	81	1,586
Agricultural land	5	729	29	764
Non-native grassland and forbland	35	563	26	623
Rabbitbrush shrubland	3	85	4	92
Developed/disturbed	1	10	1	11
Irrigated hedgerow	<1	7	1	8
Eastside (interior) grassland	3 2	3 2	<1	6 4
Shrub-steppe	2 3	4 2	<1	2 5
Total^{5/}	115	2,836	141	3,093

- 1/ Temporary impacts include collector lines, temporary access roads, and work areas located outside the solar array perimeter fence lines and laydown and pulling areas associated with the transmission line.
- 2/ Altered habitat impacts consist of all lands within the perimeter fence lines minus any areas occupied by permanent Project features/structures.
- 3/ Permanent impacts include solar array panel posts, inverter pads, permanent access roads, substation, O&M building, and poles for transmission line.
- 4/ An approximately 65-foot-by-135-foot area (or approximately 0.2 acre) of the impact footprint for road improvements at the intersection of Wautoma Road and SR 241 have not been mapped and are not included in this total.
- 5/ Totals may not sum exactly due to rounding.
- 6/ Approximately 8 acres of temporary impacts, 295 acres of altered habitat impacts, and 14 acres of permanent impacts listed under planted grassland would occur to lands currently enrolled in the CRP.

	<p>Invasive Plant Species</p>	<p>Soil disturbance and the subsequent removal of vegetation during construction will increase the potential for the introduction and spread of noxious weeds and invasive species. The movement of construction and operation equipment and personnel also increases the potential for introduction and spread of noxious weed and invasive plant species.</p> <p>However, with the implementation of BMPs such as flagging the limits of construction to minimize vegetation removal and ground disturbance, and implementing measures described in the Vegetation and Weed Management Plan that will be prepared for the Project (see Part 4, Section 4.8.D), the Project is not expected to result in a significant increase in the introduction and spread of noxious weeds and invasive species.</p>
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	<p>Fire</p>	<p>Fires (both those potentially generated by the Project as well as those generated by other factors) have the potential to directly affect botanical resources through alteration of habitats as well as destruction of plant species including special status plant species. Fire can also indirectly affect botanical resources by creating conditions for colonization or expansion of non-native, invasive plant species, such as cheatgrass. As described in Part 3, Section 4.13 (Environmental Health – Hazardous Materials), Part 3, Section 4.21 (Public Services and Facilities), and Part 4, Section 4.13 (Environmental Health – Hazardous Materials), the Project will implement measures to address fire risk. <u>While the project site is in a remote area that is not part of a tax-supported fire protection district, Innergex the Applicant has had preliminary communication with the Benton County Fire Marshal, who provided suggestions on fire response measures that could be taken and agreed to further communications as the project develops.</u></p> <p><u>Innergex The Applicant has also reached out to the Bureau of Land Management and the Hanford Fire District and engaged in ongoing discussions with participating and adjacent landowners on potential fire response measures that could be employed by the Project, which could also provide a community benefit to the surrounding area.</u></p> <p>Prior to construction, the Applicant will develop an Emergency Management Plan and implement BMPs for fire prevention. The Applicant will coordinate with the Benton County Sheriff's Office, Benton County Emergency Management, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project's design and construction. The Applicant will also coordinate with these entities regarding necessary equipment or training, if any are identified as needed, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project's facilities will include and incorporate multiple layers of protection to avoid failures and risks of fire or spills and will be designed to applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards. Access roads will be developed and maintained with an approximate 24-foot width to provide 1) sufficient access for fire fighters to the area and 2) additional fire breaks. In addition, the Project Area may also include a 10,000-gallon water cistern to store water for fire suppression needs. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project substation, and along the Project's fence line. The Applicant may also establish and maintain additional fire and fuel breaks (i.e., 100- to 150-foot-wide planted green strips) in key areas and have been in discussion with WDFW staff to continue green-stripping areas along the boundaries of the leased parcels. The implementation of these measures will</p>
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		minimize the risk of wildfires occurring and adversely affecting botanical resources.
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4.8.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Vegetation Types / WDFW Priority Habitats	As noted in Part 2, Section A.2, the Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Project Area. During final design, the Applicant will minimize impacts to eastside (interior) grassland and shrub-steppe habitat, where possible. In addition, the suite of measures discussed in Section 4.8.D below will provide additional habitat mitigation.

4.8.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrub-steppe habitat and will avoid talus slopes (i.e., Priority Habitats). As described above, the Applicant sited the Project to avoid the population of the state sensitive Columbia milk-vetch documented during surveys conducted for the Project.	WDFW
	Habitat Management Plan	Per WAC 463-60-332(3) and consistent with requirements in the BCC 15.14.030 for the Applicant to provide a habitat assessment and discuss the habitat avoidance, minimization, and mitigation measures proposed for the Project, the Applicant has prepared a Draft Habitat Management Plan (Attachment M). This plan will provide details regarding mitigation measures for impacts to habitat types from Project construction and operation including impacts to “habitats and species of local importance” (i.e., shrub-steppe habitat), per BCC 15.14.030.	WDFW

	A Final Habitat Management Plan will be prepared prior to construction.	
Revegetation and Noxious Weed Control	Per RCW 17.10.140, the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Benton County Noxious Weed Control Board prior to construction. <u>The Vegetation and Weed Management Plan (Attachment U) addresses noxious weed prevention and control actions that would be implemented to avoid and minimize the potential for introduction or spread of weeds from Project construction and operation. Measures that would be implemented include: requirement for all equipment entering the site to be inspected for invasive plant species and cleaning as needed, to avoid the introduction of invasive plant species; revegetating temporarily disturbed areas as soon as practicable following disturbance to minimize conditions favorable to weed germination; using only certified weed-free seed mixes; and monitoring for and treating observed infestations of noxious weeds.</u> Herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations; herbicides will only be directly applied to localized spots and will not be applied by broadcasting techniques (RCW 17.21).	EFSEC, Benton County Noxious Weed Control Board
BMPs	The Applicant will implement the Project's ESCP, Construction SWPPP, and Permanent Stormwater Control Plan. These plans will help reduce erosion and impacts to vegetation.	Ecology; WDFW

4.8.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.8.F References

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<https://fieldguide.mt.gov/wa/?species=texosporium%20sancti-jacobi>. Accessed March 2022.

4.9 Animals

4.9.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
Wetland Delineation Report (Attachment I)	Complete (November 2021)	<u>Prepared by:</u> Tetra Tech, environmental consultant for the Applicant.	Y
Raptor Nest Survey Report (Attachment L)	Complete (January 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant. <u>Agency involvement:</u> WDFW provided feedback on protocols and special status species in the Project vicinity.	Y
Habitat and General Wildlife Survey Report (Attachment G)	Complete (January 2022; <u>revised October 2022</u>)	<u>Prepared by:</u> Tetra Tech, environmental consultant for the Applicant. <u>Agency involvement:</u> WDFW provided feedback on protocols and special status species in the Project vicinity.	Y
Habitat and General Wildlife Survey Report Addendum	<u>Planned for spring Complete (August 2022)</u>	<u>Prepared by:</u> Tetra Tech, environmental consultant for the Applicant. <u>Agency involvement:</u> Tetra Tech discussed the planned spring 2022 surveys with WDFW <u>and will continue to coordinate with WDFW as described for the original Habitat and General Wildlife Survey Report prior to conducting surveys.</u>	Y
Botanical Survey Report (Attachment F)	Complete (January 2022)	<u>Prepared by:</u> Tetra Tech, environmental consultant for the Applicant. <u>Agency involvement:</u> WDFW provided feedback on protocols and special status species in the Project vicinity.	Y
Botanical Survey Addendum	<u>Planned for spring Complete (August 2022)</u>	<u>Prepared by:</u> Tetra Tech, environmental consultant for the Applicant.	Y

		<p><u>Agency involvement:</u> Tetra Tech discussed the planned spring 2022 surveys with WDFW and will continue to coordinate with WDFW as described for the original Botanical Survey Report prior to conducting surveys.</p>	
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Check this box when all proposed studies for this topic are completed

4.9.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
Habitat Types	<p>In consultation with WDFW and in compliance with WAC 463-60-332(1), the Applicant contracted with Tetra Tech to complete a Wildlife and Habitat Survey in 2021 (see Part 4.9.A above). Surveys were conducted within the Project Area from May 10 through 14, 2021, with additional surveys conducted on October 12 and 13, 2021. Details regarding these habitat/wildlife surveys are provided in the Habitat and General Wildlife Survey Report (Attachment G). Additional general wildlife observations will also be collected during the planned spring 2022 supplemental surveys for approximately 990 acres of the Project Area.</p> <p>Nine habitat types were identified and mapped within the Project Area: agriculture, developed/disturbed, eastside (interior) grassland, irrigated hedgerows, non-native grassland and forbland, planted grassland, rabbitbrush shrubland, shrub-steppe, and talus. In addition to these habitat types, 3 palustrine emergent wetlands and 34 ephemeral drainages were mapped within the Project Area (see Attachment I). Section 5.2.1 of the Wildlife and Habitat Survey Report (Attachment G) as well as Table 4.8-1 in Part 4 - Section 4.8 (Plants) provide detailed description of the habitat types found within the Project Area, as well as the amount of these habitat types that occur in the Project Area. Figure 3 in Attachment G depicts the locations of each habitat type within the Project Area.</p> <p>In general, habitat types were adapted from the habitat descriptions in Wildlife-Habitat Relationships in Oregon and Washington (Johnson and O'Neil 2001), the WDFW Priority Habitats and Species List (WDFW 2008), and the Washington Department of Fish and Wildlife Wind Power Guidelines (WDFW 2009).</p>
Special Status Species	<p>For this analysis, the term “special status species” includes federal and state endangered, threatened, proposed, and candidate species; species of concern; birds of conservation concern; and state sensitive and priority species. On March 8, 2021, the WDFW provided the applicant with a description of special-status wildlife that may occur in the Project vicinity. Appendix A to Attachment G provides the list of 26 special-status wildlife species identified as having the potential to occur in the area, which includes 18 birds, 6 mammals, and 2 reptiles. Section 4.1.2 in Attachment G lists the sources used to identify which special-status species have a potential to</p>

	<p>occur (e.g., the WDFW PHS database) as well as describes the coordination conducted with the WDFW prior to surveys to determine this list.</p> <p>Thirty-six bird species and one mammal species were observed within the Project Area during the Habitat and General Wildlife Survey (see Appendix C in Attachment G), and a total of 15 raptor nests were observed during the Raptor Nest Surveys (Attachment L). No federally threatened or endangered species were observed during these surveys; however, one State-listed species (i.e., ferruginous hawk) one State-candidate species (i.e., burrowing owl), three Priority Species (i.e., golden eagle, elk, and mule deer), and one bird of conservation concern (i.e., northern harrier) were observed during these surveys.</p> <ul style="list-style-type: none"> • Ferruginous Hawk: A single ferruginous hawk was observed briefly soaring in an area of native grassland habitat in the far southwestern edge of the Project; however, there is neither appropriate nesting substrate nor an apparent sufficient prey base for larger raptors such as ferruginous hawks in the area (Katzner et al. 2020; Ng et al. 2020; Attachment L); this assumption of a lack of sufficient prey base is supported by the lack of detections of ground squirrel colonies or jackrabbits found during surveys. This single ferruginous hawk is likely associated with a known nest site located about 2 miles south of the Project Area. Furthermore, the WDFW indicated that they have visited historic nest sites in the hills south of the Project Area in 2021 and did not observe any occupied nests (pers Comm-J. Fidorra-WDFW). • Greater Sage-Grouse (Columbia Basin DPS): <u>The Washington population in 2021 was estimated to be 775 birds. There are no known populations of greater sage-grouse in Benton County or suitable habitat within the Project Area. There are two remnant populations of the Columbia Basin DPS of greater sage-grouse: one in Douglas and Grant counties, and one on the Yakima Training Center in Yakima and Kittitas counties. Small, reintroduced populations occurred in Lincoln County and on the Yakama Indian Reservation in Yakima County but were lost to fires in 2019 and 2020 (WDFW 2015; Stinson 2021).</u> <p>— Burrowing Owl: The PHS database contains burrowing owl records that were documented in 2014 located approximately 0.25 mile north of the Project. In addition, one active burrowing owl nest was identified approximately 0.25 mile north of the Project Area during the Raptor Nest Surveys (Attachment L). <u>Four additional active burrowing owl nests were observed in the center of the Project Area during surveys in 2022 (these observations were noted in a Wildlife Survey Addendum submitted in August 2022). The active burrowing owl burrows both in the PHS database and documented just north of the Project Area in 2021 and in the central portion of the Project Area in 2022 have been avoided through design modifications to all Project facilities including solar arrays, security fencing, access roads and collection lines. In addition, site-specific conservation measures developed in consultation with WDFW, such as ensuring that occupied burrows plus a 150-meter buffer would not be disturbed during the nesting period (February 15 through September 25), would be implemented. If avoidance is not possible, use or development of nearby natural or artificial burrow systems would be developed</u></p>
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	<ul style="list-style-type: none"> • in coordination with WDFW. The presence of active burrowing owl burrows both in the PHS database and documented during surveys just north of the Project Area suggest that this species has the potential to occur within the Project Area. • Golden Eagle: A partial raptor carcass was found in the bottom of a small canyon below the talus slope identified during habitat surveys (see Appendix D - Photo 26 – in Attachment L). Most tail feathers, a partial wing (primaries), and scattered cluster of body feathers were found within an approximately 30-meter radius. The few pieces left of this scavenged carcass provided no other insight into potential cause of death. This carcass was determined to most likely be the remains of an adult golden eagle⁵. However, no observations of live golden eagles using the Project Area were recorded during surveys. • Northern Harrier: Northern harriers were commonly observed within the irrigated crop portions of the Project Area. • Elk and Mule Deer: Mule deer and elk scat were found scattered in the planted grassland, eastside grassland, and shrubland habitat areas within the Project Area. Scat was generally desiccated; mule deer scat was found more frequently than elk scat. Tracks of mule deer were identified; however, elk tracks were not definitively identified during the summer 2021 survey. Two groups of elk (consisting of approximately 70 individuals) were observed within the adjacent Hanford Site during the Raptor Nest Survey (Attachment L), outside the Project Area. Tracks leading from the Hanford Site to and from a watering structure within the Project were observed along game trails and along a two-track road within the Project Area. Potentially suitable habitat for these species is generally limited to portions of the Project Area that occur outside of agricultural or other developed/disturbed lands.
<p><u>Fish</u></p>	<p><u>The Yakima River is the nearest downstream fish-bearing stream, approximately 21 miles downstream of the Project, as described in the ASC (Section 4.3B). Because the Project will not adversely impact ephemeral streams on site as described in the ASC (Section 4.3.C.1), and because the ephemeral streams on site lack connectivity to other intermittent, perennial, or fish-bearing streams, no adverse impacts to downstream fish would occur. As described in Section 4.3, two of the stream segments (ST-207/Dry Creek, and ST-217 in Attachment I) continue out of the Project Area. ST-217 is a tributary to ST-207/Dry Creek just outside of the Project Area. ST-207/Dry Creek connects to Cold Creek at 4.5 miles downstream from the Project Area.</u></p> <p><u>Cold Creek is uncategorized on the Washington Department of Natural Resources (DNR) stream typing maps and does not contain fish per the StreamNet database (DNR 2022; StreamNet 2022). The Cold Creek drainage continues about 21 miles downstream to the Yakima River. However, Cold Creek appears to no longer be directly connected to the Yakima River in the historical orthoimagery (Google 2022). The Horn Rapids Campground and Park as well as the Tapteal Water Trail Access Road</u></p>

⁵ Primary length approximately 18 to 24 inches (at least 45 centimeters), tail feathers at approximately 10 to 12 inches (at least 25 centimeters), and overall coloration (USFWS 2020; Liguori et al. 2020).

<p><u>Non-Special Status Species</u></p>	<p><u>cover the historical floodplain and confluence of Cold Creek and the Yakima River (Google 2022).</u></p> <p><u>This analysis is primarily focused on special status species, as those are the taxa/species to which regulations apply. However, the species represented in the special status species list includes a wide range of taxa/groups; including avian species, mammals (including bats), and reptiles. Attachment G to this ASC (Habitat and General Wildlife Survey Report), as well as the Wildlife Survey Addendum, lists all wildlife species seen or heard during various survey efforts (See Appendix C of Attachment G and 2022 Addendum).</u></p> <p><u>Although no protocol-level surveys for bats were conducted, there is likely limited use of the area due to lack of day/night roosting or maternity structure for bats (e.g., caves, cliffs, buildings). Use by bats and other species, including most amphibians, is likely around the existing man-made water sources. There are approximately 113 acres (2 percent) of mapped shrub-steppe within the Project Boundary, of which up to approximately 4.2 acres may be impacted. Due to the limited amount of existing shrub-steppe, use by shrub-steppe obligate species is unlikely and none of those species were documented during surveys. As a result, the information provided for special status species can be used to determine the likelihood of similar non-special status species that occur as well as what potential impacts could be.</u></p> <p><u>Regardless of a specie's "special status," all species that were either documented during surveys or have potential to occur were reviewed and potential impacts assessed.</u></p>
<p>Raptor Nests and General Avian Species</p>	<p>The Applicant contracted with Tetra Tech to complete a Raptor Nest Survey in 2021 (see Part 4.9.A above). Three rounds of ground-based raptor nest surveys were conducted within the Project Area; the first round of surveys was conducted on March 13, 2021, the second round was conducted in May 10-12, 2021, and the third round was conducted on October 2, 2021. A total of 15 nests were detected during the surveys, including three in-use burrowing owl nests, two in-use Swainson's hawk nests, one in-use red tailed hawk nest, one in-use great horned owl nest, five in-use common raven nests, and three small inactive nests with unknown species determinations. See Attachment L for a detailed discussion of the raptor nests observed during raptor nest surveys, tables outlining the results of the surveys, and nest status definitions.</p> <p>Use of the Project Area by general avian species was documented during the Habitat and General Wildlife Survey (see Attachment G). The highest avian diversity was observed near irrigated crops, home sites, at livestock ponds, and in the shrubs and trees (irrigated hedgerows) in the south section of the Project. In undeveloped areas where eastside grasslands, planted grasslands, rabbitbrush shrubland, and shrub-steppe were mapped, grassland species were observed including grasshopper sparrow, lark sparrow, vesper sparrow, long-billed curlew, horned lark, and western meadowlark. Avian species documented within the shrub-steppe habitats included horned lark, Western meadowlark, grasshopper sparrow, long-billed curlew, vesper sparrow, and lark sparrow; however, no sagebrush-associated or sagebrush-obligate species were observed in these areas (e.g., greater sage grouse, loggerhead shrike, sagebrush sparrow, sage thrasher). The Project Area primarily consists of non-native grassland and forbland, and horned larks were the most common species observed in these habitat types. See Attachment G for additional details regarding general avian species detected within the Project Area.</p>

Fish	Three palustrine emergent wetlands and 34 ephemeral drainages were identified within the Project Area; however, the stream segments within the Project Area were not identified as fish streams (Attachment I).
Fish and Wildlife Conservation Areas	<p>Per the Benton County Critical Area Regulations, “Fish and Wildlife Conservation Areas” include 1) areas where endangered, threatened, and sensitive species have a primary association⁶; 2) habitats and species of local importance; 3) waters of the state; 4) naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat⁷; 5) lakes, ponds, streams and rivers planted with native fish populations, including fish planted under the auspices of federal, state, local or tribal programs or which supports priority fish species as identified by the WDFW; 6) Washington State Wildlife Areas⁸; and 7) Washington State Natural Area Preserves and Natural Resource Conservation Areas⁹. All areas that meet one of more of these criteria are managed per the WDFW’s management recommendations for priority habitat and species (see Chapter 15.08 of the Benton County Critical Area Regulations).</p> <p>The entire Project Area is designated by the State as an elk wintering area, and both talus slopes and shrub-steppe habitats are identified within the Project Area. These areas are classified by Benton County as a Fish and Wildlife Conservation Area. Also, the special status species occurrences (reported above in the Special Status Species section) would trigger the affected areas to be classified as Fish and Wildlife Conservation Areas per criteria 1 and 2. The emergent wetlands and 34 ephemeral drainages identified in Attachment I would also be classified as Fish and Wildlife Conservation Areas per criteria 3 through 5.</p> <p>Based on the extent of special status species occurrence, habitat types, and wildlife designations (e.g., elk wintering area) the entire Project Area would be classified by Benton County as a Fish and Wildlife Conservation Area.</p>
<u>Invasive Animal Species</u>	<u>No invasive animal species listed by WDFW are known to occur in the vicinity of the Project area. Potential habitat for invasive fish or aquatic invasive species (e.g., zebra and quagga mussels, European green crabs, or bullfrogs) is not present (Source: https://invasivespecies.wa.gov/find-a-priority-species/?_sft_priority-specietype=invasive-animals).</u>
Big Game Habitats and Migration Routes	<p>As described above (in the Special Status Species section) both elk and mule deer have been identified within and adjacent to the Project Area. The WDFW indicated that pronghorns do not use the Project Area (pers Comm-M. Ritter-WDFW). Big game habitat and potential migration corridors were reviewed to identify big game migration routes in the Project vicinity.</p> <p>The Project Area encompasses known migration routes for elk and mule deer, and use of the area by these species is expected to be high. The entire Project Area is designated by the State as an elk wintering area and tied to the Rattlesnake Hills elk herd (Hanford Site), which is considered a subpopulation of the Yakima herd. Movements into and out of the Hanford Site is a common occurrence seasonally; however, the Hanford Site is considered a core area, particularly the Cold Creek Valley area (WDFW</p>

⁶ These areas are identified on the WDFW PHS Map.

⁷ “Naturally occurring ponds” do not include ponds deliberately designed and created from dry sites such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than 3 years’ duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.

⁸ As defined, established, and managed by the WDFW.

⁹ As defined, established, and managed by the DNR.

	2002). As shown in Attachment A, Figure A-9, the southern and eastern portions of Project Area are identified as Habitat Concentration Area for elk per the Washington Connected Landscapes Project (WHCWG 2012) and as Priority Core Areas ¹⁰ by the Arid Lands Initiative Spatial Conservation Priorities report (ALI 2014). The southern and western portions of the Project Area are identified as Priority Linkage Areas ¹¹ by the Arid Lands Initiative (ALI) (ALI 2014). The easternmost portion of the Project Area is identified as Landscape Integrity Core Area by the Washington Connected Landscapes Project (WHCWG 2012). As a result, the landscape around and encompassed by the Project likely serves as important winter and migration habitats for both elk and mule deer. It is anticipated that elk and mule deer (as well as other large bodies mammal species) currently use the various ephemeral drainages, manmade water sources (livestock ponds), game trails, as well as native habitat types located outside of agricultural use for migration corridors though the Project Area.
Noise, Light, and Glare	The Project Area is located in an area with agricultural development and accompanying existing sources of noise. Principal contributors to the existing acoustic environment likely include motor vehicle traffic, mobile farming equipment, farming activities such as plowing and irrigation, all-terrain vehicles, local roadways, rail movements, periodic aircraft flyovers, and natural sounds such as birds, insects, and leaf or vegetation rustle during elevated wind conditions. As noted in Part 4, Section 4.16a (Noise), existing ambient sound levels at the Project Area are expected to be approximately 50 A-weighted decibels (dBA) equivalent sound level (L _{eq}) during daytime hours and 40 dBA L _{eq} during nighttime hours (also see Attachment O).
Fire	Fire plays an important role in shaping the environmental conditions and habitat types of an area. Part 4, Section 13 (Environmental Health – Hazardous Materials) describes the existing conditions related to historic fires in the area.
Hazardous or toxic spills	Part 3, Sections 12 and 13, as well as Part 4, Section 13 provides information regarding the existing conditions regarding hazardous materials within the Project Area.

4.9.C Changes to and from Existing Condition

4.9.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes				
	<table border="1"> <thead> <tr> <th>Topical Area/issue</th> <th>Changes</th> </tr> </thead> <tbody> <tr> <td>Habitat Types</td> <td>As described in Part 4, Section 4.8 (Plants), the Project will result in three types of impacts to habitat—temporary, altered, and permanent—where Project construction and operations will occur. Table 4.8-2 in Part 4, Section 4.8 (Plants) lists the estimated acres of temporary, altered, and permanent impacts to the various habitat</td> </tr> </tbody> </table>	Topical Area/issue	Changes	Habitat Types	As described in Part 4, Section 4.8 (Plants), the Project will result in three types of impacts to habitat—temporary, altered, and permanent—where Project construction and operations will occur. Table 4.8-2 in Part 4, Section 4.8 (Plants) lists the estimated acres of temporary, altered, and permanent impacts to the various habitat
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¹⁰ Priority Core Areas are a set of noncontiguous polygons of various sizes selected by modeling where local protection and restoration actions can best contribute to the ALI’s overall goals).

¹¹ Priority Linkage Areas are area identified as important for maintaining movement opportunities for organisms or ecological processes (e.g., for animals to move to find food, shelter, or access to mates).

		<p>types that will result from the Project's construction and operation based on the current Project design (Attachment A, Figure A-1). However, as discussed in Part 2, the exact locations of Project components may be shifted or revised during final Project design, and impacts from the Project could occur anywhere within the Project Area because the Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Project Area, provided the final layout does not exceed the values evaluated in this ASC and allowed for in the Site Certification Agreement.</p> <p>Following construction, areas within the solar array perimeter fence not permanently occupied by Project components will be revegetated with low-growing vegetation consisting of native species or desirable non-native, non-invasive species (e.g., species that would provide more rapid soil stabilization and vegetative cover than slower-growing native species), resulting in permanently altered vegetation. The altered vegetation community will be compatible with a solar facility and support an altered wildlife community (i.e., consisting of species that are able to pass over, under, or through the perimeter fence), retaining value to some wildlife species that are able to pass through/over the perimeter fence (e.g., small mammals, birds, and reptiles).</p> <p>The temporary, permanent, and altered habitat impacts as well as the associated Project mitigation needs are identified in Attachment M, Habitat Management Plan. These values may be adjusted in coordination with EFSEC and with input from WDFW.</p> <p>Habitat loss through conversion to agriculture, fire, fragmentation, and degradation are the major threats to wildlife in the state of Washington (WDFW 2015). The long-term conversion or loss of habitat associated with the footprint of the area occupied by Project components will create marginal additional habitat loss and fragmentation on the landscape; however, once constructed, the area may benefit over time from the removal of the effects from domestic grazing and limit potential effects from increased fire regimes in this area.</p>
	<p>Special Status Species</p>	<p>The Project has been designed to avoid and minimize impacts on habitats associated with the special status species that were observed during surveys and/or are known to occur in the Project vicinity. Talus slopes have been avoided by 125 feet, and as a result, no impacts are expected to this Priority Habitat, thus minimizing impacts to special status species associated with this habitat type. Burrowing owl nests have been avoided by 2,800 <u>minimum of 100</u> feet to avoid and minimize potential effects to this species. Furthermore, impacts to shrub-steppe have been avoided and minimized to the extent feasible, thus minimizing impacts to special status species associated with this Priority Habitat type.</p> <p>Aside from the habitat loss and alteration described above, potential impacts to special status wildlife species include collisions with construction vehicles and equipment, and displacement due to avoidance of activity during Project construction and operation for more mobile wildlife. Removal of vegetation during the breeding season can result in destruction of nests and injury or death to birds</p>

		<p>or eggs. Special status raptors (e.g., golden eagle, northern harrier, and ferruginous hawk) will experience loss of foraging habitat as a result of the Project. The Project has the potential to affect habitats that are important to elk and mule deer during winter months as well as affect the migratory corridors for big game species (see further discussion below in the Big Game Habitats and Migration Routes section).</p> <p>Federally listed wildlife species are not anticipated to occur within the Project Area, and the Project does not contain USFWS-designated critical habitat.</p>
	<p>Raptor Nests and General Avian Species</p>	<p>If nest territories are occupied during construction, pairs associated with these nests could experience disturbance, particularly early in the breeding season during courtship, nest building, incubation, and brooding. Raptors within active territory could also experience a loss of foraging habitat if prey species are reduced within the pairs' home range. However, the vast majority of the habitat that will be impacted by the Project is agricultural land, which typically provides limited forage value to large raptors such as golden eagles, northern harriers, and ferruginous hawks, given the low prey availability in agricultural lands. Additionally, the Project avoids impacts on the talus slope (associated with the cliff nests) by 125 feet, limiting impacts to the ridgeline and shrub-steppe immediately adjacent to the ridge that likely supports raptor prey species.</p> <p>Avian collisions with solar modules during operation is possible, although the available data on avian mortality at utility scale solar energy sites suggest mortality at PV facilities is comparatively low. A study examining avian fatalities at two solar sites and one PV facility found the mortality rate at the PV facility in the study was significantly lower than at the two power tower facilities (Walston et al. 2016). More recently, Kosciuch et al. (2020) synthesized results from fatality monitoring studies at 10 PV solar facilities across southwest United States and calculated a high-end estimate of 2.5 birds per MW per year, but noted that an average annual fatality rate of 1.8 birds per MW per year was also calculated by excluding the one project in the Coastal California Bird Conservation Region that could be considered an outlier in the dataset. In Oregon, preliminary results of a fatality study at a 56-MW PV facility near Prineville detected only two fatalities on native birds, a horned lark and a dark-eyed junco, during 1 year of standardized searches (ODOE 2020).</p> <p>If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012).</p>
	<p>Fish</p>	<p>The stream segments within the Project Area were not identified as fish streams (see Attachment I); therefore, no effects to fish species are anticipated. However, the Project will implement a Construction SPCC Plan and an Operations SPCC Plan, as well as BMPs related to erosion control and prevention to avoid or minimize Project-related effects to waterbodies (see Sections 4.3 through 4.7).</p>
	<p>Fish and Wildlife Conservation Areas</p>	<p>As discussed above, impacts to talus slopes need be avoided during the Project design, and impacts to shrub-steppe habitats have been avoided and minimized to the extent feasible. The acreage of impact</p>

		<p>that will occur to shrub-steppe habitats is provided in Table 4.8-2 in Part 4, Section 4.8 (Plants).</p> <p>All Project-related impacts to habitat (i.e., temporary, altered, and permanent) will occur to areas identified by the State as elk wintering area.</p> <p>Project-related impacts to 1) areas where endangered, threatened, and sensitive species have a primary association, and 2) habitats and species of local importance are discussed above in the Special Status Species section.</p> <p>Project-related impacts on aquatic Fish and Wildlife Conservation Areas (i.e., waters of the state) are addressed in Part 4, Section 4.3.</p>																																																						
	<p>Big Game Habitats and Migration Routes</p>	<p>Development of the Project’s perimeter fence will result in the Fenced Area having no habitat value for elk and mule deer (i.e., excluding them from the Fenced Area) because it will create an access barrier to areas within the fence. Also, as shown in Figure A-9 in Attachment A, the Project’s perimeter fence will intersect and encompass important migratory areas for both elk and mule deer, including approximately 1,615 acres of Habitat Concentration Area, 864 acres of Landscape Integrity Core Area, 1,306 acres of Priority Core Areas, and 714 acres of Priority Linkage Areas. However, as shown in the following table, the vast majority of these areas consist of planted grasslands and non-native habitats (ranging from 74 to 97 percent of the designated migratory area within the Fenced Area), which may serve as lower quality habitat for big game species compared to native habitats.</p> <p>Table 4.9-1. Acres of Big Game Migration Habitat Designation Encompassed by the Project’s Perimeter Fence</p> <table border="1"> <thead> <tr> <th rowspan="2">Vegetation Type</th> <th colspan="4">Big Game Migration Habitat Designation</th> </tr> <tr> <th>HCA</th> <th>LICA</th> <th>PCA</th> <th>PLA</th> </tr> </thead> <tbody> <tr> <td>Agriculture</td> <td>12</td> <td>0</td> <td>1</td> <td>176</td> </tr> <tr> <td>Developed/disturbed</td> <td>2</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>Eastside (interior) grassland</td> <td>3</td> <td>1</td> <td>3</td> <td><1</td> </tr> <tr> <td>Non-native grassland and forbland</td> <td>331</td> <td>112</td> <td>208</td> <td>191</td> </tr> <tr> <td>Planted grassland</td> <td>1,184</td> <td>728</td> <td>1,013</td> <td>327</td> </tr> <tr> <td>Planted trees/windbreak</td> <td>2</td> <td>0</td> <td>0.2</td> <td>6</td> </tr> <tr> <td>Rabbitbrush shrubland</td> <td>81</td> <td>22</td> <td>79</td> <td>11</td> </tr> <tr> <td>Shrub-steppe</td> <td><1</td> <td><1</td> <td><1</td> <td>0</td> </tr> <tr> <td>Total</td> <td>1,615</td> <td>864</td> <td>1,306</td> <td>714</td> </tr> </tbody> </table> <p>HCA = Habitat Concentration Area; LICA = Landscape Integrity Core Area; PCA = Priority Core Areas; PLA = Priority Linkage Areas.</p> <p>The presence of the Project’s perimeter fence may affect the movement patterns of elk and mule deer in the area. As discussed below (see Section 4.9.D), the Applicant has modified the layout of the Project’s perimeter fence to include separate smaller fenced</p>	Vegetation Type	Big Game Migration Habitat Designation				HCA	LICA	PCA	PLA	Agriculture	12	0	1	176	Developed/disturbed	2	1	2	3	Eastside (interior) grassland	3	1	3	<1	Non-native grassland and forbland	331	112	208	191	Planted grassland	1,184	728	1,013	327	Planted trees/windbreak	2	0	0.2	6	Rabbitbrush shrubland	81	22	79	11	Shrub-steppe	<1	<1	<1	0	Total	1,615	864	1,306	714
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		<p>units versus one large fenced array in order to allow for elk and mule deer movement. The layout of the perimeter fence was also modified to maintain open access to the ephemeral drainages within the Project Area (see Attachment I) that are used by mule deer and elk; the existing transmission line ROWs through the Project would also be left unfenced to maintain movement corridors along these existing transmission lines. With the exception of fencing around the Project substation, which will extend to the ground, perimeter fencing will be designed to be an average of at least 4 inches above ground. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW. The applicant is also in discussions with WDFW and affected landowners to see if <u>identify potential locations outside of the fenced areas where</u> existing artificial water sources (that were primarily developed for livestock) can be moved outside of the fenced areas <u>relocated</u> in order to maintain wildlife access to these water sources (including access for elk and mule deer). These design changes to the fence as well as considerations regarding water sources in the area will minimize the effects that this Project may have to elk and mule deer movement patterns and habitat availability in the area.</p>
	<p>Noise, Light, and Glare</p>	<p>As described in Part 4, Section 4.16a (Noise) the Project is not expected to have significant noise impacts during operations. Potential impacts on wildlife during construction include general noise and visual disturbances from construction activity. Projected noise levels associated with expected Project construction equipment at 50 feet are identified in Table 6 in Attachment O. These noise levels could disturb wildlife, if present in the Project vicinity, within the anticipated 22-month construction period. In general, noise and visual disturbances may cause wildlife to avoid typical foraging and breeding areas, or distract them from those activities within those areas, which can result in reduced fitness. Construction equipment operates intermittently, and noise levels resulting from construction activities will vary depending on equipment and operations being performed. Loud construction activities are anticipated to be infrequent at the site, hours of construction will be limited, and noise mitigation measures will be implemented, which will minimize the impacts on wildlife from the temporary increase in noise due to construction (see Part 4, Section 4.16a [Noise] and Attachment O). For example, evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife. Additional BMPs related to noise are listed in Part 4, Section 4.16a (Noise). Although wildlife species are susceptible to noise disturbances caused by humans and construction equipment, the BMPs listed in Part 4, Section 4.16a (Noise) will limit these impacts.</p> <p>Lighting can attract some species (e.g., avian species) to the Project Area, thereby exposing them to potential impacts. Lighting is needed at the O&M building for security and occasional after-hours work; however, the Applicant will limit the amount of lighting and will shield lighting as needed. In addition, applicable lighting will include motion detector-activated lighting to minimize the amount of time lights need to be active. Lighting is also needed at the Project substation in accordance with North American Electric Reliability Corporation (NERC) standards.</p>

		<p>Fatalities or injuries of water-associated birds (i.e., species that rely on water for foraging, reproduction, and/or roosting, such as herons and egrets) and water-obligate birds (i.e., species that cannot take flight from land, such as loons and grebes) has led some researchers to suggest that these species might interpret PV solar facilities as water (i.e., lake effect hypothesis; Kagan et al. 2014). Kosciuch et al. (2020) reviewed bird fatality data from 10 PV solar facilities in southwest United States; for facilities with multiple study years, each year was treated as a separate study, resulting in 13 “site-years.” Kosciuch et al. (2020) found that water-obligate birds occurred at 90 percent of site-years in the Sonoran and Mojave Desert Bird Conservation Region, and that adjusted composition (which takes into consideration searcher efficiency and carcass persistence per Huso [2011]) was higher for water associates and water obligates the closer the facility was to the Salton Sea, which serves as stop-over and wintering habitat for water birds. The sites farthest from the Salton Sea showed almost no contribution to adjusted composition of water associates and water obligates (i.e., no or relatively few birds in these groups were detected).</p> <p>The Project will be built with solar modules that are treated with an anti-reflective coating to minimize glare. Moreover, the Project does not occur near a large waterbody that serves as a major migratory stop-over site; therefore, water-associated and water-obligate species are not anticipated to be disproportionately affected by the Project.</p>
	<p>Fire</p>	<p>Fires (both those potentially generated by the Project as well as those generated by other factors) have the potential to directly affect botanical resources through alteration of habitats as well as destruction of plant species including special status plant species. Fire can also indirectly affect botanical resources by creating conditions for colonization or expansion of non-native, invasive plant species, such as cheatgrass. As described in Part 3, Section 4.13 (Environmental Health – Hazardous Materials), Part 3, Section 4.21 (Public Services and Facilities), and Part 4, Section 4.13 (Environmental Health – Hazardous Materials), the Project will implement measures to address fire risk.</p> <p>Prior to construction, the Applicant will develop an Emergency Management Plan and implement BMPs for fire prevention. The Applicant will coordinate with the Benton County Sheriff’s Office, Benton County Emergency Management, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project’s design and construction. The Applicant will also coordinate with these entities regarding necessary equipment or training, if any are identified as needed, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project’s facilities will incorporate multiple layers of protection to avoid failures and risks of fire or spills and will be designed to applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards. Access roads will be developed and maintained with an approximate 24-foot width to provide 1) sufficient access for fire fighters to the area and 2) additional fire breaks. In addition, the Project may also include a 10,000-gallon water cistern</p>

		<p>to store water for fire suppression needs. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project substation, and along the Project's fence line. The Applicant may also establish and maintain additional fire and fuel breaks (i.e., 100- to 150-foot-wide planted green strips) in key areas and have been in discussion with WDFW staff to continue green-stripping areas along the boundaries of the leased parcels. The implementation of these measures will minimize the risk of wildfires occurring and adversely affecting wildlife in the region.</p>
	<p>Hazardous or toxic spills</p>	<p>As demonstrated in Part 4, Section 4.13 (Environmental Health – Hazardous Materials) the risk of hazardous or toxic spills at the Project is low. The Applicant will prepare both a Construction SPCC Plan and an Operations SPCC Plan. The SPCC Plans will be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. Implementation of these measures will minimize the risk that an accidental release of a hazardous or regulated liquid will affect wildlife species.</p>

4.9.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?

<input type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Habitat	The Applicant has revised the Project layout to avoid Fish and Wildlife Conservation Areas in the Project Area to the extent feasible. This includes completely avoiding talus slopes by 125 feet, avoiding burrowing owl nests by 2,800 feet <u>along the northern Project boundary</u> , as well as minimizing the extent of shrub-steppe habitats that will be affected. Also, as discussed in Part 4 - Section 4.3, waters and wetlands were avoided to the extent feasible.
	Big Game Habitats and Migration Routes	<p>The Applicant has modified the layout of the Project's perimeter fence to include separate smaller fenced units versus one large fenced array in order to allow for wildlife movement through the area. The layout of the perimeter fence was also modified to maintain open access to the ephemeral drainages within the Project Area (see Attachment I), which are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line ROWs through the project would also be left unfenced to maintain movement corridors along these existing transmission lines. With the exception of fencing around the Project substation, which will extend to the ground, perimeter fencing will be designed to be an average of at least 4 inches above ground. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW.</p> <p>The applicant is also in discussions with WDFW and affected landowners to see if existing artificial water sources that were primarily developed for livestock can be moved outside of the fenced areas in order to maintain wildlife access (including elk and mule deer) to these water sources.</p>

4.9.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?

<input type="checkbox"/> No	<input type="checkbox"/> Yes	
	Mitigation	Applicable law and how well it addresses the impact
	Avoidance and Minimization Measures	<p>During siting and design, the Applicant took several measures to avoid and minimize impacts to wildlife and habitat. The Applicant coordinated with WDFW prior to conducting surveys, and used the feedback obtained during this coordination to inform surveys and the assessment of impacts. As described above, the Applicant avoided talus slopes (i.e.,</p>
		Expert agency participation
		WDFW

		<p>a Priority Habitat) by 125 feet and burrowing owl nests by 2,800 feet <u>along the northern Project boundary</u>, and minimized impacts to shrub-steppe habitat to the extent feasible. Additionally, the Project is sited primarily on currently disturbed lands, which minimizes impacts to wildlife and habitat.</p> <p>The Applicant has modified the layout of the Project's perimeter fence to include separate smaller fenced units versus one large fenced array in order to allow for wildlife movement through the area. The layout of the perimeter fence was also modified to maintain open access to the ephemeral drainages within the Project Area (see Attachment I) that are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line ROWs through the project would also be left unfenced to maintain movement corridors along these existing transmission lines. With the exception of fencing around the Project substation, which will extend to the ground, perimeter fencing will be designed to be at least 4 inches above ground. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW. The applicant is also in discussions with WDFW and affected landowners to see if existing artificial water sources that were primarily developed for livestock can be moved outside of the fenced areas in order to maintain wildlife access (including access for elk and mule deer) to these water sources.</p> <p><u>All Project facilities, including solar arrays, security fencing, access roads and collection lines, currently avoid all active burrowing owl burrows documented in the central portion of the Project Area during 2022 surveys. These burrows will be monitored. In addition, the following measures would be implemented (see Attachment M):</u></p> <ul style="list-style-type: none"> • <u>Conduct preconstruction surveys to ensure that occupied burrows are not disturbed during the nesting season (February 15 through September 25) unless a qualified biologist approved by the WDFW verifies through non-invasive methods that either: (1) burrowing owls are not present; (2) the birds have not begun egg-laying and incubation; (3) that juveniles from the occupied burrows are foraging independently and are capable of</u> 	
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		<p><u>independent survival; or (4) have dispersed from the site.</u></p> <ul style="list-style-type: none"> <u>A no disturbance buffer of a minimum of 150 meters (~500 feet) would apply to any occupied burrow during the nesting period, from February 15 through September 25, or until burrowing owls have dispersed from the site.</u> <u>If avoidance is not possible; use or development of nearby natural or artificial burrow systems would be developed in coordination with WDFW.</u> 	
	<p>Construction and Operations BMPs</p>	<p>Unnecessary lighting will be turned off at night to limit attraction of migratory birds to the area. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights.</p> <p>If construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance.</p> <p>Evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife.</p> <p>Prior to construction, construction personnel will be instructed on wildlife resource protection measures, including: 1) applicable federal and state laws (e.g., those that prohibit animal collection or removal); and 2) the importance of these resources and the purpose and necessity of protecting these resources. Construction personnel will be trained in the following areas when appropriate: awareness of biological resources (including Priority Habitats and special status species), potential bird nesting areas, and general wildlife issues.</p> <p>The Applicant will prepare an ESCP that would include BMPs to minimize surface water runoff and soil erosion. Appropriate stormwater management practices will be implemented in accordance with the SWPPPs. The Applicant will prepare SPCC Plans to be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of</p>	<p>WDFW</p>

		<p>the release (see Part 4, Section 4.3 for more details).</p> <p>Vehicle speeds will be limited to 25 miles per hour on internal Project access roads to avoid wildlife collisions. Existing posted speed limits on county and private roads will be followed outside of the Project Area.</p> <p>If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012).</p> <p>Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, and allowing smoking only in designated areas per the requirements of WAC 463-60-352. The Applicant will prepare an Emergency Management Plan that contains fire safety measures, which will be developed with input from applicable agencies (see the “Fire” section above for more details).</p> <p>Following decommissioning, reclamation of the Project Area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas.</p> <p>Section 4.8.D contains additional measures targeted at successfully restoring vegetation communities. Implementation of these Vegetation mitigation measures will have indirect benefits to wildlife species as well.</p>	
	<p>Compensatory Mitigation</p>	<p>In order to achieve “no net loss of habitat functions and values” as required by WAC 463-62-040, the Applicant will continue to work with the WDFW and EFSEC to determine appropriate compensatory mitigation. The Applicant has prepared a Draft Habitat Management Plan (Attachment M), which provides a framework for determining the compensatory mitigation required to achieve “no net loss.” A Final Wildlife Habitat Management and Mitigation Plan will be prepared prior to construction.</p>	<p>WDFW</p>

4.9.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	

4.9.F References

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Katzner, T. E., M. N. Kochert, K. Steenhof, C. L. McIntyre, E. H. Craig, and T. A. Miller. 2020. Golden Eagle (*Aquila chrysaetos*), version 2.0. In *Birds of the World* (P. G. Rodewald and B. K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, New York, USA. Available online at: <https://doi.org/10.2173/bow.goleag.02>.

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4.10 Energy and Other Natural Resources

Part 4 Analysis is not required for this section.

4.11 Waste Management

Part 4 Analysis is not required for this section.

4.12 Environmental Health – Existing Site Contamination

Part 4 Analysis is not required for this section.

4.13 Environmental Health – Hazardous Materials

4.13.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 direct studies have been conducted to date regarding the existing environmental contamination within the Project Area. A site-specific Phase 1 Environmental Site Assessment will be conducted prior to construction (refer to Part 1.E, List of Studies).			

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

4.13.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
Hazardous Materials	<p>The Project Area contains a mix of dryland and irrigated agricultural use, rangeland, transmission and electrical infrastructure, and undeveloped areas. Based on available historic aerial imagery, the land use in the Project Area has been consistent with current conditions for at least the past 30 years (Google Earth 2022). As a result, historical use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in agricultural production areas in the Project Area.</p> <p>The application of fertilizers, pesticides, and herbicides is assumed to have occurred according to manufacturer guidance, in a relatively uniform and generally consistent manner typical of agricultural practices. The concentrations of fertilizers and pesticides are likely to be similar to other dryland and irrigated agricultural operations. Risks to human health and the environment associated with soil disturbance during Project development are assumed to be low and similar to those associated with agricultural operations such as tiling. Therefore, potential past applications of fertilizer, herbicides, and pesticides pose little to no concern of adverse environmental impact with respect to Project development.</p> <p>No hazardous materials are known to be stored currently in the Project Area.</p>
Existing infrastructure	There are five BPA transmission lines that cross through the Project leading to the Wautoma Substation (located on a federal parcel encompassed by the Project Lease Boundary): Schultz to Wautoma 500 kV, Hanford to Wautoma 500 kV (two lines), Wautoma to Knight 500 kV and Wautoma to Rock Creek 500 kV. An additional BPA line cuts through

	<p>the middle of the Project Area trending northeast-southwest: Big Eddy to Midway 230 kV. Lastly, there are two BPA lines cutting through the northwest corner of the Project Area trending northeast-southwest: Midway to Grandview 115 kV and North Bonneville to Midway 230 kV.</p> <p>Water use for Project construction will be obtained from an existing on-site well with a valid water right (to be verified in coordination with Ecology) or will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). Water use for Project operations will be obtained from an existing on-site well with a valid water right, or hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right), or obtained through a new permit-exempt groundwater well. The Applicant or the Applicant’s construction contractor will verify the well location and availability of water from a permitted source prior to operations.</p> <p>No underground hazardous liquid (e.g., petroleum) or natural gas transmission pipelines are located within the Project Area or on surrounding properties (PHMSA 2022).</p>
<p>Risk of Fire or Explosion</p>	<p>The Project Area is located predominantly on vacant, undeveloped land that has been used for dryland and irrigated agricultural production and grazing. There are no residences in the Project Area; however, there are participating and non-participating residences in proximity to the Project. The Project’s security fence is set back from the closest participating residence by approximately 500 feet and is set back from the closest non-participating residence by approximately 700 feet. No petroleum products or other flammable/explosive substances are stored within the Project Area. Wildland grass fires are the greatest existing fire risk in the vicinity of the Project Area.</p> <p>At the time of preparing this Application in April 2022, there are currently no active fire related incidents in the immediate vicinity of the Project (InciWeb 2022). However, the Project Area has a history of large fires, the most recent of which is the Cold Creek Fire from 2019. The entirety of the Project Area is located within the extent of one or more large fires. A list of large fires greater than 500 acres in the last 40 years and recorded within 10 miles of the Project Area follows below (WDNR 2022):</p>

	Fire Name	Acres	Year	Cause	Overlaps With Project Area
	Weather Station	4,915	2005	Misc.	
	Dry Creek Complex	48,902	2009	Unknown	Yes
	Washout	596	2012	Unknown	
	241-BLM	4,614	2012	Unknown	
	Wautoma	67,291	2007	Misc.	Yes
	Milepost 17	6,452	2007	Misc.	
	Range 12	176,581	2016	Unknown	Yes
	400	26,087	2017	Unknown	
	Silver Dollar	31,740	2017	Unknown	
	L Rd SW	21,619	2018	Human	
	Cold Creek	41,712	2019	Unknown	Yes
	Hanford	122,894	1984	Unknown	Yes
	Lambing	9,451	1987	Unknown	Yes
	Nake	1,578	1990	Unknown	Yes
	Emerson	6,703	1990	Unknown	
	Rattlesnake	17,200	1992	Unknown	
	<p>Most materials used in construction of the Project will not be hazardous or dangerous, and the risk of fire will be low. However, the Project will include a PCS system with a DC-coupled BESS (distributed throughout the solar arrays) and/or an AC-coupled BESS (consolidated in a central location near the Project substation). These BESS options are described further in Part 2.A2 Project Description. The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards.</p>				
Emergency Plans and Services	<p>The Project is located outside of a Benton County fire district. Prior to construction, the Project will develop and maintain an Emergency Management Plan that will include BMPs for fire prevention. The Applicant will coordinate with Benton County Emergency Management and DNR Wildland Fire Management Division.</p>				

4.13.C Changes to and from Existing Condition

4.13.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Hazardous Materials	<p>Earthwork associated with Project construction will disturb soils and has the potential to expose soils that may contain remnants of past fertilizer, pesticide, and herbicide use. Potential risks associated with soil disturbance are expected to be low and similar to those associated with agricultural operations such as tiling.</p> <p>The Applicant or the Applicant’s contractor will manage noxious weeds and control vegetation during construction and operations. The Project will only use herbicides that are approved for use in the state of Washington by the EPA and the Washington State Department of Agriculture. As needed, herbicides will be transported and applied to the Project Area but will not be stored in the Project Area.</p> <p>During construction, small amounts of hazardous materials (e.g., petroleum-based fuels, mineral-based transformer oils, and oil-based lubricants) will be transported, stored, or used to operate equipment. These materials will be stored in compliance with a SPCC Plan that follows the EPA Amended Spill Prevention, Control, and Countermeasure Rule issued in 2006 (EPA-550-F-06-008). The SPCC Plan provides preventative procedures and rapid response measures to handle hazardous spills if one were to occur, and reduce the risk of potential soil or groundwater contamination to negligible.</p> <p>Project operations will not require large quantities of fuels, oils, or chemicals in the Project Area, except those required for the operation of certain Project components where such substances are fully contained (e.g., transformers, inverters, back-up generators, and certain BESS equipment). As noted in Part 2, back-up power is planned to be supplied for the Project by 12-volt lead-acid cell battery packs.</p> <p>Lead-acid batteries contain sulfuric acid within sealed, leakproof exterior compartments. Under 40 CFR § 355, sulfuric acid is considered an extremely hazardous material by the EPA. If lead-acid batteries are used at the Project, secondary containment will be provided. The Applicant will report sulfuric acid as part of its annual Emergency Planning and Community Right-to-Know Act</p>

		<p>report to local emergency service providers. Lead-acid batteries will be replaced every 5 years or more frequently, as indicated by system controls. Replacement of lead-acid batteries will be handled by a qualified contractor and adhere to applicable regulations for transport and disposal, including, but not limited to, 49 CFR § 173.159.</p>
	<p>Risk of Fire or Explosion</p>	<p>Two types of fire risks might affect the Project include 1) fires that are caused by Project-related activities, and 2) fires that start outside of the Project Area and spread to the Project Area.</p> <p>With respect to the first type of risk, the Project could theoretically increase existing fire or explosion risk due to the introduction of potential ignition sources. Vehicles, equipment, human activities, and heat-producing Project components represent potential ignition sources; however, the risk of actual ignition is low. Oil-based materials will be used and stored in accordance with the SPCC Plan, applicable regulations, and best practices during both construction and operation of the Project. The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards. Batteries may contain flammable liquids that can become hot during operation. To ensure safe handling these batteries contain individual, hermetically sealed cells that do not have any waste discharges and will not be opened in the Project Area for installation or maintenance purposes. In addition, each BESS will contain a fire suppression system that complies with National Fire Protection Association (NFPA) standards, specifically NFPA 855 “Standard for the Installation of Stationary Energy Storage Systems.” The fire suppression system will include sensing equipment and alarm systems with remote shut-off capabilities. Installation, maintenance, and decommissioning of BESS components will be done in compliance with applicable regulations, including 49 CFR §173.185, which regulates the transportation of lithium-ion batteries. Therefore, the potential ignition risk of either of these types of battery systems is low.</p> <p>Access roads will provide primary access to each of the solar array blocks, including each PCS, as well as the O&M and Project substation. The spacing between the rows of panels will allow for localized access within each of the solar array areas. The O&M building will be equipped with fire extinguishers as well as smoke detectors tied to the supervisory control and data acquisition (SCADA) system. In addition to fire extinguishers, the O&M building will have basic firefighting equipment for use on-site during maintenance activities including shovels, beaters, portable water for hand sprayers, and personal protective equipment. Also, the Project Area may include a 10,000-gallon water cistern to store water for fire suppression needs.</p>

		<p>Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project substation, and along the Project's fence line. The Applicant may also establish and maintain fire and fuel breaks (i.e., 100- to 150-foot-wide planted green strips) in key areas and have been in discussion with WDFW staff to continue green-stripping areas along the boundaries of the leased parcels. The implementation of these measures will minimize the risk of wildfires occurring in the Project Area and Project Lease Boundary.</p> <p>The Project will develop and maintain an Emergency Management Plan (which will be developed and finalized prior to construction) and implement BMPs for fire prevention. The Applicant will coordinate with the Benton County Sheriff's Office, Benton County Emergency Management, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project's design and construction. The final layout will be provided to the Benton County Fire Marshal's Office. The Applicant will also coordinate with these entities regarding necessary equipment or training, if any are identified, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project's facilities will include and incorporate multiple layers of protection to avoid failures, and risks of fire or spills will be designed to applicable requirements of the National Electric Code, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards. Furthermore, the Project's design will incorporate graveled areas around the O&M facility and substation, as well as graveled access roads and fire breaks, where applicable.</p> <p>With respect to the second type of risk, hot temperatures, arid conditions, and the presence of dry vegetation could lead to wildfires originating outside of the Project that could pose a risk to Project construction and components, including lithium-ion or flow batteries contained in the optional BESS. The Applicant will monitor wildfire activity during Project construction and operations; comply with the Benton County Wildlife Protection Plan (BCWPP 2005); and if necessary, the Applicant will modify Project activities, change the schedule, cease construction/operation activities, or take other action requested by emergency service providers to ensure the safety of Project personnel and avoid any interference with emergency fire/medical responders. During Project operations, there will be minimal fuel use on-site, and electrical equipment will be designed to reduce the potential for fire damage. Therefore, while the Project itself may be damaged in the event of a wildfire spreading across the site, it will not significantly change the risk posed by the wildfire to the surrounding vicinity.</p>
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	Existing Infrastructure	<p>Water for operations use will either be obtained from an existing on-site well with a valid water right, hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right), or obtained through a new permit-exempt groundwater well. The Applicant or the Applicant's construction contractor will verify the well location and availability of water from a permitted source prior to operations.</p> <p>Since there are no underground hazardous liquid or natural gas transmission pipelines and none are proposed as part of the Project, no change to this existing condition will occur.</p> <p>The Project will introduce new subsurface infrastructure such as electrical collector lines and a 500-kV gen-tie line, which will connect to existing BPA substation and transmission infrastructure. Proposed subsurface infrastructure will not contain hazardous materials nor pose significant fire risk. No changes will occur to existing transmission lines outside of the gen-tie interconnection. The Applicant is coordinating with BPA regarding the proposed interconnection actions.</p>
	Emergency Plans and Services	<p>The Emergency Management Plan (developed prior to construction) will address worker health and safety, as well as fire prevention and control measures for construction and operation. Access roads will have a compacted gravel surface, with a permanent width of approximately 24 feet as well as the required clearance and turning radius needed for emergency response vehicles, in accordance with fire code. The final layout will be provided to the Benton County Fire Marshal's Office.</p>

4.13.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	N/A	N/A

The existing agricultural use of the Project Area will not significantly affect construction, operation, or decommissioning of the proposed Project. No underground hazardous liquid or natural gas transmission pipelines occur within the Project Area.

4.13.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Emergency Management Plan	<p>Prior to Project construction and operations, the Applicant will develop an Emergency Management Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control. This plan will provide safety guidelines and procedures for potential emergency-related incidents during the Project's construction, operation, and decommissioning phases. This includes coordination with emergency service providers and fire suppression measures associated with the Project. Specifically, the plan will be developed with input from, and in coordination with, the Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division.</p> <p>Applicable laws/codes include:</p> <ul style="list-style-type: none"> • WAC 463-60-352 (2 through 4), which addresses fire and explosion, hazardous materials release, and safety standards compliance. • WAC 463-60-352(6), which describes emergency plans to ensure public safety and environmental protection. • 49 CFR §173.185m, which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. • International Fire Code 	Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division

<p>Best Management Practices – Fire Prevention</p>	<p>To minimize the risk of fire or explosions, the Project will implement BMPs to be detailed in the Emergency Management Plan noted above. Typical BMPs will include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Equip construction vehicles with fire extinguishers, spark arrestors and heat shields, as appropriate. • Establish roads before accessing the site to minimize vehicle contact with grass. • Use diesel construction vehicles instead of gasoline vehicles, where feasible, to prevent potential ignition by catalytic converters. • Prohibit vehicles from idling in grassy areas. • Restrict the use of high-temperature equipment in grassy areas. • Install lightning protection measures to protect generators and other equipment. • Install fire protection equipment in accordance with Washington state fire code. • Notify the local fire district of construction plans and access to Project equipment. • Provide mutual assistance in the case of fire in or around the Project during construction. • Monitor wildfire activity during Project construction and operations and, if necessary, modify Project activities, change the schedule, cease construction operations, or remove equipment. • Prevent and control potential fires inside the Project Area with trained staff who have 24-hour access to the site. <p>A Vegetation and Weed Management Plan will be prepared and will includes revegetation management and noxious weed control measures.</p>	<p>Benton County Fire Marshall and DNR Wildland Fire Management Division</p>
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	BESS design	The BESS will contain a fire suppression and detection 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.	NFPA
	Construction Stormwater General Permit (CSWGP) , Construction Phase Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sediment Control Plan (ESCP)	As described in Part 4, Section 4.5, the Applicant will obtain a CSWGP from EcologyEFSEC , which requires a SWPPP and ESCP. These plans will contain measures to minimize the risk of spills and stormwater pollution, as well as to reduce the effects of erosion to ensure compliance with state and federal water quality standards. Applicable laws/codes include the following: <ul style="list-style-type: none"> • RCW 90.48, which establishes general stormwater permits for Ecology under the Water Pollution Control Act • WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington • Clean Water Act (33 United States Code 1251) 	Ecology
	SPCC Plan	The Applicant will prepare an SPCC Plan, consistent with requirements of 40 CFR Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential risks to water quality.	Ecology
	Use of approved herbicides	In compliance with RCW 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the EPA.	EPA and the Benton County Noxious Weed Control Board

Consistent with WAC 463-60-352(2 through 4) and (6), the proposed mitigation described for the Project complies with existing regulations and provides measures to reduce the risk of fire and explosion; reduce potential hazardous releases to the environment that could affect the public; comply with applicable local, state, and federal safety standards; and implement the

Project’s Emergency Management Plan. For the reasons provided, construction and operation of the Project poses minimal risk to environmental health.

4.13.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.13.F References

BCWPP (Benton County Wildfire Protection Plan) 2005. Benton County , WA Community Wildfire Protection Plan. Available online at: https://www.dnr.wa.gov/publications/rp_burn_cwppbenton.pdf.

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4.14 Land Use, Natural Resource Lands, & Shoreline Compatibility

4.14.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
See Part 1, Section E (List of Studies)			

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

Response: There are no studies of the Project conducted solely for the purpose of land use; however, the studies listed in Part 1, Section E support findings of compliance in response to Benton County’s applicable land use regulations. The Land Use Consistency Review (see Attachment D) provides cross-references to these studies, where applicable, that demonstrate local land use consistency and regulatory compliance.

4.14.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
Existing Land Ownership	<p>The Project Lease Boundary includes 35 assessor parcels, all of which are in private ownership. The Applicant is also pursuing easements/crossing agreements with the Bonneville Power Administration (BPA) for Project access roads and collection line crossings of existing easements, as well as a transmission interconnection agreement. Refer to Part 1, Section A.4 for a description of the parcels in the Project Area.</p> <p>Lands to the east of the Project Area are part of the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve) and managed by the U.S. Fish and Wildlife Service. Lands to the north, west, and south include a mixture of Washington Department of Natural Resources (DNR), Bureau of Land Management BLM), and private lands. Northwest of the Project Area in Yakima County is the Department of Defense (U.S. Army) Yakima Training Center.</p>
Existing Land Use	<p>Existing land uses in the Project Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Project Area are similar and</p>

also include scattered rural residences, vineyard, rangelands, state highways, and the Hanford Reach National Monument.

Lands in the Project Area have historically been utilized for agricultural activities (crop cultivation and grazing), although the areas used for these activities have varied over time. Approximately 793 acres (17 percent) of the Project Area was mapped as current cultivated agricultural lands during the Project's 2021 Habitat and General Wildlife Survey (ASC Attachment G; Attachment A, Figure A-8). These cultivated agricultural lands consist of fallow and active wheat, irrigated alfalfa fields, livestock and horse pastures, and irrigated hedgerows. Water for irrigated lands in the Project Area is from an existing on-site well with a valid water right. Outside of these agricultural areas, approximately 3,740 acres (82 percent) of the Project Area was mapped as vegetated uplands, inclusive of 9 acres of irrigated hedgerows (i.e. windbreaks to crop lands). The remaining approximately 40 acres (1 percent) of the Project Area was mapped as developed, unvegetated, irrigated hedgerows, or wetlands and streams. The vegetated uplands include approximately 524 acres of lands currently enrolled in the Conservation Reserve Program (CRP). At this stage, the layout proposed in the ASC is at a preliminary stage. If all or a portion of the lands currently enrolled in CRP are included in the final layout, those lands will be removed from CRP. The remainder of the vegetated uplands consist of undeveloped rangelands, portions of which are used for sheep grazing.

Agricultural lands in the Project Area were also assessed using the Washington Department of Agriculture 2021 agricultural land use data (WSDA 2021; Attachment D, Figure 2). Within the Project Area, WSDA agricultural land uses are mapped as 320 acres of cereal grain, 368 acres of hay/silage, 138 acres of pasture, and 1,086 acres of other. Within these 1,912 acres of agricultural lands mapped by WSDA, 756 acres are identified as irrigated lands (center pivot, drip, sprinkler, or wheel line irrigation types). The undeveloped rangelands are used for sheep grazing, and the landowners maintain several livestock tanks across the Project Area to support livestock.

Currently, the landowner uses approximately 30 acres for sheep lambing (approximately 1 to 1.5 months of the year). These 30 acres have been set aside from the project layout and will be retained by the landowner for this purpose. Once the lambing period is over, sheep are moved off the property onto separate parcels (held by the same landowner) on an adjacent ridge, for grazing. The Vegetation and Weed Management Plan (Attachment U) prescribes revegetation with species consistent with current habitat makeup; no changes to forage quality, post-decommissioning, are anticipated. Together with WDFW, the landowner will be included in discussions on vegetation strategy and species.

	<p>Minimal agricultural-related structures (e.g., storage sheds, well house, etc.) occur in the Project Area. A hunting shed is located within the Project Area. No residences are located within the Project Area.</p> <p>The Project is accessed via SR 241 and Wautoma Road as described in Part 4 Section 4.20. There are several unpaved farm roads and transmission line access roads located within the Project Area.</p> <p>Lands to the south of the Project Area are mapped as other (non-irrigated) and undeveloped rangelands. Lands to the west of the Project Area include a small irrigated vineyard adjacent to the Project Area on Wautoma Road, as well as other (likely dryland wheat), non-irrigated pasture, and undeveloped rangelands. Lands to the north similarly include other (likely dryland wheat), non-irrigated pasture, and undeveloped rangelands. Approximately 1 mile north of the Project Area along SR 24 are additional irrigated vineyards and orchards.</p> <p>Non-agricultural lands uses to the south, west, and north of the Project Area include several rural residences, scattered unoccupied structures (e.g., agricultural storage), existing electrical transmission infrastructure (i.e., BPA Wautoma Substation and multiple transmission lines), local roads and state highways, and a small commercial area at the intersection of SR 241 and SR 24 north of the Project Area. Lands to the east of the Project Area are in the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve) and are not open to public use nor are used for agriculture.</p> <p>The Project Area is located in a rural, sparsely populated area of Benton County. The nearest residence is located approximately 500 feet from the security fence line and is a Project participant landowner. The Acoustic Assessment provided in Attachment O depicts the locations of participating and non-participating residences. The nearest nonparticipant residence is located approximately 700 feet from the security fence line. The closest developed area to the Project is the City of Sunnyside located approximately 12 miles south of the Project Area.</p>
<p>Electrical Infrastructure / Electrical Generation Capacity and Service</p>	<p>There is no current electrical generation service within the Project Area. There are five BPA transmission lines that cross through the Project leading to the BPA Wautoma Substation (located on a federal parcel encompassed by the Project Lease Boundary): Schultz-to-Wautoma 500-kV, Hanford-to-Wautoma 500-kV (two lines), Wautoma-to-Knight 500-kV, and Wautoma-to-Rock Creek 500-kV. An additional BPA line cuts through the middle of the Project Area trending northeast-southwest: Big Eddy-to-Midway</p>

	<p>230-kV. Lastly, there are two BPA lines cutting through the northwest corner of the Project Area trending northeast-southwest: Midway-to-Grandview 115-kV and North Bonneville-to-Midway 230-kV.</p>
<p>Benton Comprehensive Plan Designation</p>	<p>The Project Area and all surrounding non-federal lands are in the Benton County Comprehensive Plan Growth Management Act (GMA) Agricultural designation (Benton County 2021a):</p> <p><i>GMA Agriculture (GMA AG) includes agricultural land (such as dryland and irrigated land) identified by the County based on the criteria established by the GMA. A GMA Agricultural District zone conserves agricultural lands by establishing a 20-acre minimum parcel size and (with exceptions e.g., resort destinations, wineries) limits the range of other land uses to those which are dependent upon, supportive of, ancillary to, or compatible with, agricultural production as the principal land use.</i></p>
<p>Benton County Zoning District</p>	<p>The Project is located entirely on land zoned Growth Management Act Agricultural District (GMAAD), defined by Benton County Code (BCC; Benton County 2021b) (Attachment D, Figure 1). The Project is consistent with Benton County’s definition of a “solar power generator facility, major” under BCC 11.03.010(167) as described in detail in the Land Use Consistency Review (see Attachment D).</p> <p>As defined in BCC 11.03.010(167), “Solar Power Generator Facility, Major” means the use of solar panels to convert sunlight directly or indirectly into electricity. Solar power generators consist of solar panels, charge controllers, inverters, working fluid system, and storage batteries. Major facilities are developed as the primary land use for a parcel on which it is located and does not meet the siting criteria for a minor facility in BCC 11.03.010(168).</p> <p>The Applicant began obtaining lease agreements for the Project Area in 2020. As part of early agency outreach, the Applicant contacted Benton County Planning Department on July 26, 2021, intending to introduce the Project and discuss the local permitting process. At this stage of early Project development, “solar power generation facility, major” was listed as an allowed use requiring a conditional use permit (CUP) in the GMAAD BCC 11.17.07(cc). No response to the Applicant’s communications was received and the Applicant subsequently made the decision in the fall of 2021 to seek a Site Certification Agreement through EFSEC. At the time the Applicant first introduced the Project to EFSEC in August of 2021, the Project was a conditionally allowed use in the GMAAD.</p> <p>On December 21, 2021, Benton County passed Ordinance Amendment (OA) 2021-004, which among other changes, removed “solar power generation facility, major” from the list of uses requiring a CUP in the GMAAD zone and therefore prohibits this type of use</p>

	<p>in the GMAAD. The County stated this amendment was necessary to be consistent with the GMA and Comprehensive Plan and that the GMAAD would protect long-term commercially significant agricultural lands, limit incompatible and non-agricultural uses, conserve critical areas and habitat, protect visual resources, and protect rural character.</p> <p>Public testimony provided at the Planning Commission Hearing (November 30, 2021) and Benton County Board of Commissioners Hearing (December 21, 2021) on OA 2021-004 included testimony from multiple private landowners, solar energy developers, and advocacy groups in support of allowing solar development to occur on agricultural lands (Benton County 2021c,d). Despite testimony and discussion among commissioners about solar energy project compatibility in the GMAAD, the County ultimately approved OA 2021-004 and removed the County’s authority to approve solar facilities on agricultural lands through a CUP.</p> <p>The regulatory background is discussed further in the Land Use Consistency Review (see Attachment D).</p>
<p>Natural Resource Lands under RCW 36.70A.030</p>	<p>There are no forest or mineral resource lands within the Project Area.</p> <p>Agricultural land is defined under RCW 36.70A.030(3) as “land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production.” Per RCW 36.70A.170(1)(a), counties shall designate where appropriate, “Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products.”</p> <p>Benton County completed that designation analysis as described in the Comprehensive Plan (Benton County 2021a). Agricultural lands were designated based on the primary factors of urban growth (i.e., lands not already characterized by urban growth), production capability, and long-term commercial significance. Benton County’s designation of agriculture lands of long-term commercial significance used the factors established in WAC 365-190-050(3) as well as County-specific supplemental factors as described in detail in the Land Use Consistency Review (Attachment D).</p> <p>Per the Comprehensive Plan, all lands within the GMA Agricultural designation, including those lands within the Project Area, are agricultural resource lands under RCW 36.70A.030.</p>

Benton County Critical Areas	As listed in Part 2, Section B.6, the Project Area includes critical areas for wetlands, frequently flooded areas, aquifer recharge, geological hazards, and fish and wildlife habitat conservation. Further details regarding the existing conditions for these critical areas are provided in Part 4, Section 4.1, Section 4.3, Section 4.5, and Section 4.9.
Shoreline Master Program	There are no shorelines designated under the Benton County Shoreline Master Program within the Project Area.
Transportation, Utility, or Service Demands	Existing transportation conditions are discussed in Part 4, Section 4.20. Existing public service and utility conditions are discussed in Part 3, Sections 3.21 and 3.22, respectively. Where relevant for assessment of Benton County code criteria, aspects of transportation, public service, and utility conditions are also addressed in the Land Use Consistency Review (see Attachment D).

4.14.C Changes to and from Existing Condition

4.14.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.

<input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes
	Topical Area/issue	Changes
	Changes to Land Ownership	Ownership of the land within the Project Lease Boundary will not change as a result of the Project. The Applicant has executed or is pursuing a Lease Agreement with each identified property owner. The Applicant is also pursuing easements/crossing agreements with the BPA for Project access roads and collection line crossings of existing easements, as well as a transmission interconnection agreement.
	Existing Land Use	Existing land uses in the Project Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Project Area are similar and also include scattered rural residences, vineyard, rangelands, state highways, and Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve). The Applicant believes the Project is not incompatible with surrounding agricultural uses because it minimizes impacts through implementation of environmental best practices related to noise, traffic, erosion control, stormwater

		<p>management, dust mitigation, and noxious weed control. <u>Additionally, excessive soil compaction will be limited by the implementation of construction and operations best management practices (BMPs). These BMPs would include:</u></p> <ul style="list-style-type: none"> • <u>—Flag and prevent access to protected areas where no disturbance should occur, and areas where only minimal disturbance may occur. Protected soil organisms and seeds will remain available to colonize adjacent disturbed areas.</u> • <u>—Where possible, mow vegetation rather than clearing and grubbing areas</u> • <u>—Limit vehicular traffic to established access roads; place rock bases on access roads and prevent traffic on open soils</u> • <u>—Salvage, separate, and replace topsoil</u> • <u>—Where compaction has occurred, cultivate or decompact the subsoil to a minimum depth of 18 inches</u> • <u>—Avoid earthwork activities in saturated conditions, which can produce deep soil compaction that is difficult to reverse without deep tillage practices</u> • <u>—Implement a Vegetation and Weed Management Plan (Attachment U)</u> <p><u>The landowner has advised that topography and drainage are not factors which that impact the economic viability of continued farming operations. The limiting factor is a lack of water. In such a dry climate with low annual rainfall, irrigation is required to support any crop production. The landowner has observed that water levels in the onsite wells are decreasing every year. Consequently, several years ago, the landowner had to switch from alfalfa to crops which required less water (barley hay, triticale, and wheat). It is anticipated that as the water table continues to decrease, no crop will be able to be supported/cultivated. The landowner anticipates that the suspension of irrigation for crops during the 30-50 year operational term of the Project will allow the water table to naturally recharge and that the economic viability of the farmlands will be improved following the Project's operational term.</u></p> <p><u>Lastly, Minimal traffic impacts are expected during operation for the up to four maintenance employees.</u></p>
	<p>Electrical Infrastructure / Electrical Generation Capacity and Service</p>	<p>The Project will be a new source of clean, renewable electricity. The Project is designed to take advantage of the region's renewable solar energy resources and adjacent transmission interconnection with the existing BPA transmission system. The existing BPA electrical transmission systems have sufficient electrical capacity to</p>

	<p>support the Project, and the Applicant is working with BPA to secure an interconnection request. In addition, construction of this renewable energy resource will help Washington meet its goal of 100 percent clean electricity supply as set forth in the Clean Energy Transformation Act, passed by the Washington legislature in 2019 (RCW 19.405.010).</p>
<p>Benton County Comprehensive Plan Designation</p>	<p>The Applicant has carefully reviewed the goals and policies of the Comprehensive Plan and evaluated how they inform this ASC.</p> <p>The Project will be entirely located within the County’s GMAAD zoning district, which is part of the County’s GMA Agricultural land use designation in the Comprehensive Plan. As a “solar generation facility, major,” the Project was previously an allowed conditional use in the GMAAD district prior to the adoption of OA 2021-004, and therefore was previously deemed compatible with surrounding land uses in the GMAAD district as long as certain conditions were met as required by the CUP process. In total, the 4,573-acre Project Area represents 0.7 percent of the 649,153 acres of lands in the GMA Agricultural designation (Benton County 2021b). Within the Project Area, the Project’s security fenced area and permanent disturbance will occupy approximately 2,978 acres, or 0.5 percent of GMA Agricultural lands which would be a de minimis reduction of farmland utilized for crop and livestock production throughout Benton County.</p> <p>Section 2.0 of the Land Use Consistency Review (Attachment D) demonstrates further how the proposed Project is consistent with applicable Comprehensive Plan (Benton County 2021b) goals and policies.</p>
<p>Benton County Zoning District</p>	<p>Section 3.0 of the Land Use Consistency Review (Attachment D) describes how the proposed Project is consistent with the County’s zoning code requirements that are applicable to the Project in the GMAAD zoning district. Despite the adoption of OA 2021-004, the Applicant demonstrates the Project is able to meet the lot, building, and setback requirements of the conditional use and general use regulations that would have been required prior to OA 2021-004.</p>
<p>Natural Resource Lands under RCW 36.70A.030</p>	<p>Agricultural land is defined under RCW 36.70A.030(3) as “land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production.” Per RCW 36.70A.170(1)(a), counties shall designate where</p>

		<p>appropriate, “Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products.”</p> <p>The Project is designed to be compatible with ongoing agricultural activities. Operation of the Project will not conflict with agricultural uses on surrounding lands and represents compatible use in the GMA Agricultural lands designation. As stated above, the permanent disturbance will occupy approximately 2,978 acres, or 0.5 percent of GMA Agricultural lands which would be a de minimis reduction of farmland utilized for crop and livestock production throughout Benton County. The Applicant analyzed the NRCS soil classifications and determined that of the acres within the Fenced Area classified by NRCS as prime farmland if irrigated, only 690 acres are irrigated and should be considered prime farmland. The Project has been designed to avoid impacts to the majority of acres within the Project Area that would be designated Farmland of Unique Importance or Farmland of Statewide Importance. See Table 1 in Attachment D for additional detail.</p> <p>The Project will obtain water for construction and operation from existing sources with a verified water right. Anticipated water needs are described in Part 4.3 of the ASC and are substantially less than typical farm operations.</p> <p>Section 2.0 of the Land Use Consistency Review (Attachment D) demonstrates further how the proposed Project is consistent with applicable Comprehensive Plan (Benton County 2021b) goals and policies specifically related to Natural Resource Lands.</p>
	<p>Benton County Critical Areas</p>	<p>The Land Use Consistency Review (see Attachment D) demonstrates that the Project will comply with Benton County’s applicable critical area regulations. Additional details regarding critical areas are provided in Part 4, Section 4.1, Section 4.3, Section 4.5, and Section 4.9.</p>
	<p>Shoreline Master Program</p>	<p>Since no designated shorelines are present within the Project Area, the Project will not change the existing condition for this topic.</p>
	<p>Transportation, Utility, or Service Demands</p>	<p>Potential impacts to transportation conditions are discussed in Part 4, Section 4.20. Impacts to public services and utilities are discussed in Part 3, Sections 3.21 and 3.22, respectively. Where relevant for assessment of Benton County code criteria, aspects of the transportation, public service, and utility impact analyses are also incorporated in the Land Use Consistency Review (see Attachment D). Overall, the Project is not anticipated to significantly increase demands on transportation, public services, or utilities. Construction traffic is expected to be within the</p>

		capacity of existing roadways and will not block or obstruct access to surrounding lands. A Traffic Control Plan will be developed with input from the Washington State Department of Transportation, Benton County, and Yakima County. Operational traffic generated by up to four staff and annual panel washing will be negligible. The existing capacity of local public services and utilities will accommodate the limited extent of such services needed for the Project, and no mitigation will be required.
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4.14.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	The current land use of the Project Area does not affect the Project. The Project Area was selected for its favorable site suitability characteristics, including high solar energy resource, topography, proximity to electrical infrastructure, compatibility with allowed uses on surrounding lands, and low resource conflicts. Further, as a “solar generation facility, major,” the Project was previously an allowed conditional use in the GMAAD district prior to OA 2021-004. The Project’s inconsistency with Benton County’s recently amended zoning regulations for the GMAAD does not change the siting considerations or Project’s compatibility with surrounding land uses. As described above, the Project was designed to meet the setback and other land use restrictions in the GMAAD. Similarly, those setback and land use restrictions would make conflicting land uses, such as those that would block the Project site’s solar exposure or disrupt access to the Project Area for operations and maintenance, unlikely.	

4.14.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Based on the information provided above in Section 4.14.C and in the Land Use Consistency Review (see Attachment D), the Project will have no significant adverse effects on land use. Therefore, no land use mitigation or monitoring measures are proposed. Mitigation measures specific to other topics (e.g., wetlands and surface waters, wildlife habitat, or geological hazards) are addressed in their respective resource sections in Part 3 and Part 4 of this application and are summarized in Part 2, Section A.5.		

4.14.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.14.F References

Benton County. 2021a. Benton County Countywide Comprehensive Plan. Last Amended January, 2021. Available online at: <https://co.benton.wa.us/pview.aspx?id=1425>.

Benton County. 2021b. Benton County Code. Current through Ordinance Amendment 2021-004 passed December 2021. Available online at: <https://co.benton.wa.us/pview.aspx?catid=45&id=1541>.

Benton County. 2021c. Benton County Planning Commission Meeting Audio, November 30, 2021. Available online at: <https://www.co.benton.wa.us/agendaArchive.aspx?categoryid=1204&year=2021>.

Benton County. 2021d. Benton County Planning Commission Meeting Minutes, December 21, 2021. Available online at: <https://www.co.benton.wa.us/agendaArchive.aspx?categoryid=1181&year=2021>.

WSDA (Washington Department of Agriculture). 2021. Agricultural Land Use Data. Available at: <https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use>.

4.15 Housing

Part 4 Analysis is not required for this section.

4.16a Noise

4.16a.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
Acoustic Assessment Report (Attachment O)	Complete (April 2022)	Tetra Tech, environmental consultant for the Applicant	Y

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

4.16a.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
Regulatory	There are no noise regulations at the federal level with numerical decibel limits applicable to the Project; however, there are regulations at the state and county level. Environmental noise limits are established by WAC 173-60, which places limits on sounds crossing property boundaries based on the Environmental Designation for Noise Abatement (EDNA) of the sound source and the receiving properties. Daytime (7:00 a.m. – 10:00 p.m.) and nighttime (10:00 p.m. – 7:00 a.m.) limits are prescribed. The WAC regulatory limits are absolute and independent of the existing acoustic environment; therefore, a baseline noise survey is not requisite to determine conformance. The applicable WAC regulatory limits are further described in the Acoustic Assessment Report (Attachment O). Chapter 8.04 of the BCC provides numerical decibel limits. Chapter 6A.15 in the BCC regulates noise as a public nuisance and does not provide numerical decibel limits.
Existing Conditions	As described above, a baseline noise survey is not needed to demonstrate compliance with the WAC noise regulations. The existing ambient acoustic environment in the vicinity of the Project was estimated with a method published by the Federal Highway Administration (FHWA) in its Transit Noise and Vibration Impact Assessment (FHWA 2006). This document presents the general assessment of existing noise exposure based on the population density per square mile and proximity to area sound sources such as roadways and rail lines. The proposed Project is approximately 10 miles (16.2 kilometers) southeast of the city of Desert Aire, which has a population density of 2,288 per square mile according to the U.S. Census Bureau (2020); however, based on review of aerial imagery and County records, the population density within 2 kilometers of the Project is much less. Using the FHWA method and Census data for Desert Aire, ambient sound levels near the Project

	area are approximately 50 A-weighted decibel (dBA) equivalent sound level (L_{eq}) during daytime hours, 45 dBA L_{eq} during evening hours, and 50 dBA L_{eq} during nighttime hours.
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4.16a.C Changes to and from Existing Condition

4.16aC.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Construction	<p>Acoustic emission levels for activities associated with Project construction were analyzed in Attachment O based on typical ranges of energy equivalent noise levels at construction sites, as documented by the EPA’s (1980) “Construction Noise Control Technology Initiatives.” The EPA methodology distinguishes between type of construction and construction stage. Using those energy equivalent noise levels as input to a basic propagation model, construction noise levels were calculated at a series of set reference distances.</p> <p>Construction was organized in the following work stages: site preparation and grading, trenching and road construction, equipment installation, and commissioning. Expected noise levels generated during each of these work stages are provided in the Acoustic Assessment Report (Attachment O).</p> <p>Project construction may cause short-term, but unavoidable, noise impacts that could be loud enough at times to temporarily interfere with speech communication outdoors, and indoors with windows open. Noise levels resulting from the construction activities will vary significantly depending on several factors such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers.</p>
	Operation	Attachment O presents modeling results for sound levels that are anticipated to be generated by the Project. Operational sound levels were analyzed using Cadna-A (Computer Aided Noise Abatement), an acoustic modeling software

		<p>program that conforms with the International Organization for Standardization (ISO) 9613, Part 2: "Attenuation of Sound during Propagation Outdoors" (ISO 1989). The method described in this standard calculates sound attenuation under weather conditions that are favorable for sound propagation, such as for downwind propagation or atmospheric inversion, conditions which are typically considered worst-case.</p> <p>The Project's general arrangement was reviewed and directly imported into the acoustic model so that on-site equipment could be easily identified, buildings and structures could be added, and sound emission data could be assigned to sources as appropriate. The primary noise sources during operations are the solar array inverters and their integrated step-up transformers, BESS units, and collector substation transformers. The Project layout includes 159 step-up transformers distributed throughout the solar array areas. BESS units will either be positioned in groups of four at each step-up transformer location, or will be located in an approximately 16-acre area southwest of the substation. Both options for battery storage and their associated sound emissions were considered in the acoustic analysis. Sound emissions will be associated with the solar array transformers and inverters. Electronic noise from inverters can be audible but is often reduced by a combination of shielding, noise cancellation, filtering, and noise suppression. Substations have switching, protection, and control equipment, as well as power transformers, which generate the sound generally described as a low humming. The two transformer cores are the principal noise source at the Project substation, and cooling equipment (fans and pumps) are also noise components at this location.</p> <p>In addition, there will be a short (0.25 mile) 500-kV transmission line will be a part of the Project. Details pertaining the transmission line have not been finalized, but the audible sound level associated with transmission line operation under foul weather conditions was conservatively estimated at 69 dBA at a distance of 50 feet from the transmission line, and this has been incorporated into the acoustic modeling analysis.</p>
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		<p>Reference sound power levels input to CadnaA were provided by equipment manufacturers, based on information contained in reference documents or developed using empirical methods. Broadband (dBA) sound pressure levels were calculated for expected normal Project operations assuming that all components identified previously are operating continuously and concurrently at the representative manufacturer-rated sound power level. It is expected that all sound-producing equipment will operate during both daytime and nighttime periods. After calculation, the sound energy was then summed to determine the equivalent continuous A-weighted downwind sound pressure level at a point of reception. Attachment O provides modeling results in both visual (i.e., sound contour) and tabular formats, providing received sound levels resulting from operation at discrete noise sensitive receptors (NSRs; i.e., non-participating residences) and at adjacent property lines containing non-participating residences.</p> <p>Incorporating a number of conservative assumptions, acoustic modeling results indicate that the Project will comply with the 50 dBA nighttime limit at all non-participating NSRs implementing either BESS design configuration. In addition, the Project is predicted to comply with all the applicable WAC regulatory limits at the Project Lease Boundary implementing either BESS design configuration.</p>
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4.16a.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	N/A	N/A

4.16a.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	BMPs-Noise	<p>WAC 173-60-050 exempts temporary construction noise from the state noise limits; however, BMPs will be implemented to reduce off-site construction noise impacts.</p> <p>Since construction equipment operates intermittently, and the types of machines in use at the Project change with the stage of construction, noise emitted during construction will be mobile and highly variable, making it challenging to control.</p> <p>Project construction will generally occur during the day, Monday through Friday. Furthermore, reasonable efforts will be made to minimize the impact of noise resulting from construction activities, including implementation of standard noise reduction measures listed below. Due to the infrequent nature of loud construction activities at the site, the limited hours of construction, and the implementation of noise mitigation measures, the temporary increase in noise due to construction is considered to be a less than significant impact.</p> <p>The construction management protocols will include the following noise mitigation measures to minimize noise impacts:</p> <ul style="list-style-type: none"> • Maintain construction tools and equipment in good operating order according to manufacturers' specifications. • Limit use of major excavating and earth-moving machinery to daytime hours. • To the extent practicable, schedule construction activity during normal working hours on weekdays when higher sound levels are typically present and are found acceptable. Some limited activities, such as concrete pours, will be required to occur continuously until completion. 	EFSEC

		<ul style="list-style-type: none"> • Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks. • For construction devices that use internal combustion engines, ensure the engine’s housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers’ guidelines, if possible. • Limit possible evening shift work to low-noise activities such as welding, wire pulling, and other similar activities, together with appropriate material-handling equipment. • Use a complaint resolution procedure to address any noise complaints received from residents. 	
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4.16a.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.16a.F References

EPA (U.S. Environmental Protection Agency). 1980. Construction Noise Control Technology Initiatives. Technical Report No. 1789. Prepared by ORI, Inc. Prepared for USEPA, Office of Noise Abatement and Control. September 1980. Available at: <http://www.nonoise.org/epa/Roll5/roll5doc22.pdf>.

FHWA (Federal Highway Administration). 2006. FHWA Roadway Construction Noise Model User’s Guide, FHWA-HEP-05-054, January.

ISO (International Organization for Standardization). 1989. Standard ISO 9613-2 Acoustics – Attenuation of Sound during Propagation Outdoors. Part 2 General Method of Calculation. Geneva, Switzerland.

U.S. Census Bureau. 2020. Population and Housing Unit Estimates Datasets. Retrieved from <http://www.census.gov/programs-surveys/popest/data/data-sets.html>.

4.16b Light, Glare, and Aesthetics

4.16b.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
Visual Impact Assessment (Attachment P)	Complete (April 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y
Solar Glare Analysis Report (Attachment H)	Complete (April 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y
Solar Glare Reports (Attachment H, Appendix A)	Complete (March 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y
Federal Aviation Administration (FAA) Notice Criteria Tool (Attachment H, Appendix B)	Complete (March 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y

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

4.16b.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
General description of site	The Project Lease Boundary is an approximately 5,852-acre area that includes the Project Area (approximately 4,573 acres).
Visual Setting	As described in the Visual Impact Assessment (Attachment P), the visual setting of the Project Area is agricultural land with a mix of irrigated cropland, dryland agriculture, and open rangeland with a low number of related agricultural buildings and rural residential development. There is an existing substation facility surrounded by the two most northeastern Project parcels with existing transmission lines crossing the northern end of the Project Area. The Project Area is situated on private land with scattered WDNR- and BLM-managed land within an approximately 2-mile vicinity. The Hanford Reach National Monument is approximately 1 mile east of the Project Area; however, this nearby area of the Monument is part of the Fitzner-Eberhardt Arid Lands Ecology Reserve, use of which is

	<p>limited to agency-approved ecological research and environmental education activities (USFWS 2022). No designated federal, state, or local public recreation areas were identified within a 2-mile buffer of the Project Area. No roads in the vicinity of the Project Area have been identified as scenic roads or byways (FHWA 2022). There are a handful of rural residences adjacent to the Project Area and approximately 1 to 3 miles to the north. The nearest developed communities are Desert Aire, Washington, approximately 11 miles to the north/northwest, and Sunnyside, Washington, approximately 12 miles to the southwest.</p> <p>The Project site can be accessed from the north from SR 24 to SR 241 (Hanford Road) onto Wautoma Road, or from the south off of SR 241 (Hanford Road) and again onto Wautoma Road. SR 24 is 0.8 mile to the north of the Project Area. SR 241 runs adjacent to the Project Area to the west. Wautoma Road partially bisects the Project Area. Another major transportation route, SR 240, is approximately 5.5 miles to the east.</p> <p>Existing sources of artificial light in the Project Area are limited to structural lighting at scattered residential locations and security lighting from the existing substation. Mobile sources of light and glare originate from automobile traffic on surrounding roadways. Sources of glare in the Project Area include windows and reflective building materials such as metal roofs or siding.</p>
<p>Visibility of the site</p>	<p>The Visual Impact Assessment (Attachment P) determined that visibility of the Project Area varies between directional viewpoints. From viewpoints to the west, north, and south, depending on the intervening terrain, views of the Project Area tend to only be available within a couple miles from the Project Area. From viewpoints to the east, views of the Project Area may be available from a greater distance, but in general, also tend to be limited to a short distance from the Project Area due to intervening terrain.</p>

4.16b.C Changes to and from Existing Condition

4.16b.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	<p>Topical Area/issue</p>	<p>Changes</p>
	<p>Views</p>	<p>Depending on the viewpoint, views of the Project Area will shift from agricultural fields, local roadways, and existing substation and electrical transmission lines to solar arrays and supporting</p>

		<p>components associated with a solar energy generation facility. These views will be experienced primarily by drivers traveling on SR 241 and Wautoma Road and residents of residences located within a mile of the Project Area. The Project Area will also be visible very briefly from SR 24.</p> <p>Attachment P identifies five key observation points (KOPs) that were selected to assess the level of visual change resulting from the Project using the BLM contrast rating system (BLM 1986) (see Figure 3 in Attachment P). This system uses criteria to evaluate the degree of visual contrast (i.e., none, weak, moderate, and strong) and was followed to objectively measure potential changes to the visual environment. The BLM's contrast rating system is summarized in Section 4 of Attachment P. The five selected KOPs provide views of each side of the Project Area from publicly accessible locations. Factors considered in the selection of the KOPs included locations with sensitive viewers (e.g., local residences, recreationists, and motorists) and potential for the Project Area to be visible (e.g., distance and view angle). Potential visual impacts at each KOP are evaluated using the BLM contrast rating system (see Section 7 of Attachment P).</p> <p>The Project will result in weak to strong contrast with the surrounding landscape based on the addition of the Project's structural components. The Project would not be visible from viewing locations to the east along SR 240 because of distance and the screening of the Project by terrain. Views along SR 241 are limited to approximately 1 mile to the north or south of the Project Area due to screening of the Project by terrain. From viewpoints to the south and west, views of the Project from SR 241 would be mostly limited to the edges of the Project closest to SR 241. Project facilities would screen views of the remainder of the Project to the east, though some additional Project facilities located at higher elevations could be visible. From the northern terminus of SR 241 and from the residences west of SR 241, the higher elevations will provide a more expansive view of the Project. Views from Wautoma Road and the adjacent residences are mostly limited to the closest edges of the Project. Views of the Project from the adjacent residences will be mostly obscured by existing structures and trees adjacent to the residences.</p> <p>Where the Project is visible, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape (e.g. existing fencing, roadway, substation, transmission towers and lines, utility poles and lines, agricultural structures) and would not block views of the surrounding hills. Views of the Project would attract attention and co-dominate or dominate the</p>
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		<p>landscape. Depending on the proximity, the Project would result in weak to strong contrasts with the existing landscape.</p> <p>See Attachment P for a detailed analysis of the KOPs, including representative visual simulations of how the Project may appear in the region (see Figures 9 and 10 of Attachment P).</p>
	Light	<p>The Project is not expected to create a substantial new source of nighttime lighting. The Project will provide external safety lighting for both normal and emergency conditions at the primary access points, Project substation, BESS, and O&M building. However, lighting will be designed to provide the minimum illumination needed to achieve safety and security and will be downward-facing and shielded to focus illumination in the immediate area. Therefore, the Project will not introduce a source of light that will significantly impact views in the area.</p>
	Glare	<p>The glare analysis conducted for the Project analyzed potential glare hazards to residents and motorists in the area. No glare impacts were predicted for SR 240, SR 241, SR 24, or receptor residences. See Attachment H for further discussion of the glare analysis and the modeling results. Therefore, the Project will not introduce a source of glare that will significantly impact motorists, residents, or views in the area.</p>

4.16b.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	N/A	N/A

4.16b.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Management Practices – Light, Glare and Aesthetics	<p>The Facility will implement BMPs including:</p> <ul style="list-style-type: none"> • Downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of 	N/A

		<p>steady-burning, high-intensity lights.</p> <ul style="list-style-type: none"> • Utilizing solar panels with an anti-reflective coating to minimize glare. • Maintenance of revegetated surfaces until the vegetation has been established. 	
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4.16b.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.16b.F References

BLM (Bureau of Land Management). 1986. Visual Resource Inventory. BLM Manual Handbook H-8410-1.

FHWA (Federal Highway Administration). 2022. America’s Byways, California, Central Valley Section Map. Available online at: <https://www.fhwa.dot.gov/byways/states/WA> (Accessed February 11, 2022).

USFWS (U.S. Fish and Wildlife Service). 2022. Hanford Reach National Monument. Accessing the Monument. Available online at: https://www.fws.gov/refuge/Hanford_Reach/Visit/Access.html.

4.17 Recreation

Part 4 Analysis is not required for this section.

4.18 Archaeological and Historical Resources

4.18.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 Survey for the Wautoma Solar Project, Benton County, Washington (Attachment Q)	December 2021 <u>Complete (May 2024)</u>	Prepared by Tetra Tech, environmental consultant for the Applicant. The DAHP, Confederated Tribes of the Warm Springs Reservation of Oregon, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Yakama Nation to <u>review have reviewed and provided comments and DAHP has concurred with the revised report (provided as Confidential Attachment Q).</u>	Y

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

4.18.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
Site Conditions from Cultural Resources Survey	<p>The Project Area covers approximately 4,573 acres of private land. Approximately 4,788 acres, inclusive of the Project Area, were surveyed for cultural resources in September and October of 2021 <u>and July of 2023</u>, including subsurface boundary probing of identified archaeological resources <u>and systematic probing to assess the potential for buried resources</u> (Survey Area). Additionally, an aboveground reconnaissance of historic property sites in the Survey Area as well as on adjacent parcels was conducted.</p> <p>The surveys identified 29 archaeological and historical resources. Within the Survey Area, 17 archaeological sites, 3 isolated finds, and 7 historic property sites were identified. Two additional historic property sites were identified through the aboveground reconnaissance survey on adjacent parcels.</p>

	<p>The 17 archaeological sites include 1 historic cistern and historic refuse scatter, 6 historic refuse scatters, 7 pre-contact lithic scatters, 1 historic wagon and cart, and 2 multi-component sites (one with a historic bridge abutment with associated historic refuse scatter and pre-contact lithic scatter, and the other with a historic refuse scatter and pre-contact lithic scatter). The 3 isolated finds are all pre-contact lithic flakes.</p> <p>The seven historic property sites include five BPA transmission lines and two historic buildings. The five transmission lines are the Midway-Grandview No. 1, Wautoma-Knight No. 1, North Bonneville-Midway No. 1, Wautoma-Rock Creek No. 1, and the Wine Country-Midway No. 1. The two historic building sites include the Robert Ranch (WA-KB-06) which is located on four parcels, both in the Survey Area and on adjacent parcels, and a small cabin (WA-KB-07). An additional two historic building sites were identified on adjacent parcels (WA-KB-V01 and WA-KB-V04).</p> <p>The following provides details regarding National Register of Historic Places (NRHP) recommendations for the identified resources:</p> <ul style="list-style-type: none"> • Sites <u>45BN2211, 45BN2197, 45BN2199, 45BN2200, 45BN2201, 45BN2206, and 45BN2207</u> WA-BB-01, WA-BB-04, WA-BB-05, WA-BB-07, WA-BB-08, WA-BB-09, WA-BB-14, and WA-BB-15 are historic-era archaeological sites that have been recommended not eligible for listing on the NRHP, and therefore, pending concurrence from DAHP, would not require an archaeological excavation permit under RCW 27.53.060. Site WA-BB-06 is a multi-component site that is also recommended not eligible for listing on the NRHP. This resource requires an archaeological excavation permit under RCW 27.53.060 if it cannot be avoided by the Project. • Eight precontact sites, <u>one historic period site</u>, one multi-component site, and three isolated finds were recorded that are potentially eligible for listing on the NRHP <u>or are protected under RCW 27.53</u>. These <u>these</u> includes sites <u>45BN1286, 45BN2121, 45BN2195, 45BN2196, 45BN2198, 45BN2202, 45BN2203, 45BN2204, 45BN2205, and 45BN2212, and IFs 45BN2208, 45BN2209, and 45BN2210 45BN1286, 45BN2121, WA-BB-02, WA-BB-03, WA-BB-10, WA-BB-11, WA-BB-12, and WA-BB-13, and IFs WA-BB-ISO-01, WA-BB-ISO-02, and WA-BB-ISO-03. These archaeological resources require an archaeological excavation permit under RCW 27.53.060 if they cannot be avoided by the Project. The boundaries of these sites have been confirmed with subsurface probing. These resources should be protected during Project construction and</u>
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	<p>operation with a 30-meter buffer perimeter that is flagged for avoidance prior to construction.</p> <ul style="list-style-type: none"> • Five BPA transmission lines are located within the Survey Area. <u>The North Bonneville-Midway No. 1, Midway-Grandview No. 1 line, Wine Country-Midway No. 1 line, and the Wautoma-Knight No. 1 line have been evaluated and are eligible or potentially eligible for listing in the NRHP within the context of the Multiple Property Documentation form prepared for the BPA Pacific Northwest Transmission system. Since these three transmission lines are eligible for listing in the NRHP under Criterion A, based on their association with the BPA, impacts to these transmission lines must be considered. No direct impacts are expected as part of this Project. Indirect impacts as a result of the change in setting will not be adverse. The BPA transmission system in the Pacific Northwest is listed in the NRHP. The Midway-Grandview No. 1 line and the Wautoma-Knight No. 1 line have been evaluated and are eligible for listing in the NRHP within the context of the Multiple Property Documentation form prepared for the BPA Pacific Northwest Transmission system.</u> Interconnection to the BPA system is not within the scope of this assessment and will be conducted by the BPA. • <u>BPA transmission lines North Bonneville-Midway No. 1, The Wautoma-Rock Creek No. 1, and the Wine Country-Midway No. 1</u> <u>does</u> not meet the criteria of NRHP eligibility to be considered for listing under the BPA Multiple Property Documentation, and <u>they are is</u> not individually eligible for listing because <u>they it lacks</u> integrity. No further measures are necessary to protect <u>these this</u> resources. • None of the historic building sites were found to be eligible for listing in the NRHP. No further measures are necessary to protect these resources.
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4.18.C Changes to and from Existing Condition

4.18.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.

<input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes
	Topical Area/issue	Changes
	Disturbance of archaeological and historic property sites.	The Project has been designed to avoid direct impacts to cultural resources that are eligible or unevaluated/potentially eligible for listing on the NRHP. As currently designed, the Project has no direct impacts to

		<p>such resources, which are avoided by a minimum of 30 meters. These resources include the following: 45BN1286, 45BN2121, <u>45BN2195, 45BN2196, 45BN2198, 45BN2202, 45BN2203, 45BN2204, 45BN2205, and 45BN2212</u>, WA-BB-02, WA-BB-03, WA-BB-10, WA-BB-11, WA-BB-12, and WA-BB-13, and IFs <u>45BN2208, 45BN2209, and 45BN2210</u>, WA-BB-ISO-01, WA-BB-ISO-02, WA-BB-ISO-03, the Midway-Grandview No. 1 line, <u>Wine Country-Midway No. 1 line</u>, and the Wautoma-Knight No. 1 line.</p> <p>Eight <u>Seven</u> archaeological sites are not avoided by the current design: <u>45BN2211, 45BN2197, 45BN2199, 45BN2200, 45BN2201, 45BN2206, and 45BN2207</u>, WA-BB-01, WA-BB-04, WA-BB-05, WA-BB-07, WA-BB-08, WA-BB-09, WA-BB-14, and WA-BB-15. These sites are historic-era refuse scatters or farm equipment pieces that have been recommended in confidential Attachment Q as not eligible for listing on the NRHP. The sites are not considered significant register-eligible resources and, pending concurrence by DAHP, any impacts on them would not be considered significant impacts and would not require a permit under RCW 27.53.</p> <p>If any pre-contact-era archaeological site or any NRHP-eligible or unevaluated/potentially eligible historic-era site would be impacted by the Project's final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53.</p>
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4.18.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes

	<p>Avoidance of significant impacts to archaeological and historical resources.</p>	<p>As currently proposed, the Project has been designed to avoid a 30-meter buffer around NRHP-listed or unevaluated/ potentially eligible resources. The Applicant re-designed portions of the Project to avoid archaeological and historical sites following completion of the survey.</p> <p>If any pre-contact-era archaeological resource or an NRHP-eligible historic-era archaeological resource is impacted by the Project’s final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53.</p>
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4.18.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	<p>Mitigation</p>	<p>Applicable law and how well it addresses the impact</p>	<p>Expert agency participation</p>
	<p>Avoidance of Protected Sites</p>	<p>Given protection under RCW 27.53 of sites 45BN1286, 45BN2121, 45BN2195, 45BN2196, 45BN2198, 45BN2202, 45BN2203, 45BN2204, 45BN2205, and 45BN2212, and IFs 45BN2208, 45BN2209, and 45BN2210, WA-BB-02, WA-BB-03, WA-BB-10, WA-BB-11, WA-BB-12, and WA-BB-13, WA-BB-ISO-01, WA-BB-ISO-02, and WA-BB-ISO-03, these archaeological resources are recommended to be avoided by the Project’s final layout.</p> <p>A minimum avoidance buffer of 30 meters (100 feet) around the sites has been recommended in confidential Attachment Q and is achieved in the current Project design. If avoidance of these buffers is infeasible during final design, monitoring of construction activities within the buffer may be necessary. If avoidance of the sites themselves is infeasible, additional testing and excavation may be required under an Excavation Permit from DAHP under RCW 27.53. If impacts cannot be avoided, mitigation may be required and would be coordinated with DAHP and interested tribes.</p>	<p>DAHP, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon</p>

	<p>Archaeological Excavation Permit</p>	<p>Pre-contact archaeological sites, regardless of register eligibility, or NRHP-eligible or unevaluated historic-era archaeological sites that cannot be avoided in the Project's final layout/design, require an archaeological excavation permit from DAHP under RCW 27.53.060 before they can be disturbed. This requirement is limited to the site boundaries themselves. Based on the register eligibility evaluations in confidential Attachment Q, no such sites will be impacted by the current design and no permit is necessary for the current design.</p>	<p>DAHP, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon</p>
	<p>Unanticipated Discovery Plan</p>	<p>In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find should be halted and directed away from the discovery until it can be assessed in accordance with steps in the Unanticipated Discovery Plan (provided as Appendix G in Attachment Q). This appendix to the Cultural Resources Report does not contain any confidential information and can be shared with Project personnel and contractors.</p>	<p>DAHP, County, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon</p>
	<p>Continued Coordination with Native Americans</p>	<p>Only regulatory agencies can formally consult with tribes. Informal communications are included with this ASC as part of resource identification efforts and as due diligence.</p>	<p>DAHP, County, Confederated Tribes and Bands of the Yakama Nation, Wanapum, Samish, Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Warm Springs Reservation of Oregon</p>

4.18.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.18.F References

Rooke, Lara, Brady Berger, Sydni Kitchel, and Kaley Brown. 2021. Cultural Resources Survey for the Wautoma Solar Project, Benton County, WA. Prepared for Innergex by Tetra Tech, Bothell, WA.

4.19 Cultural Resources

4.19.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 Survey for the Wautoma Solar Project, Benton County, Washington. (Attachment Q)	December 2021 <u>Complete (May 2024)</u>	Prepared by Tetra Tech, environmental consultant for the Applicant. The DAHP, Confederated Tribes of the Warm Springs Reservation of Oregon, Wanapum, Samish, and Yakama Nation. <u>Washington Department of Archaeology and Historic Preservation has concurred with the cultural resource survey report.</u>	Y

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

4.19.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
Existing tribal hunting or fishing rights	The Project consists of private land owned primarily by the Roberts Ranch (Roberts Family), non-tribal members. The Roberts Family does not allow tribal hunting and fishing on their property. Therefore, tribal hunting and fishing do not occur within the Project Area.
Existing tribal plant gathering	As stated above, the Project consists of private land owned by non-tribal members. Therefore, tribal plant gathering does not occur within the Project Area.
Tribal cultural sites	Nine of the archaeological sites identified by the cultural resources survey within the Survey Area are pre-contact-era sites associated with Native American activities. However, no tribal cultural sites (i.e., traditional cultural properties, historic properties of religious and cultural significance to Indian tribes, or sacred sites) have been identified through the Applicant's communications with the tribes to date. <u>The Yakama Nation has affirmed to EFSEC that there are traditional cultural properties (TCPs) within the vicinity of the Project area.</u>

A usual and accustomed area	<u>According to DAHP's interactive map of Tribal Areas of Interest, The the</u> Project is within the usual and accustomed area of the Confederated Tribes of the Warm Springs Reservation of Oregon, Wanapum, Samish, and Yakama Nation.
Material culture artifacts	Archaeological sites are representations of Native American material culture that contain artifacts. Nine of the archaeological sites identified by the cultural resources survey of the Project are pre-contact-era sites associated with Native American activities.
Activities on the site could impede views of tribal cultural sites	No tribal cultural sites (i.e., traditional cultural properties, historic properties of religious and cultural significance to Indian tribes, or sacred sites) have been identified, through the Applicant's communications with the tribes to date, as having impacts due to the Project. The Yakama Nation has affirmed to EFSEC that there are traditional cultural properties (TCPs) within the vicinity of the Project area.

4.19.C Changes to and from Existing Condition

4.19.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.

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes				
	<table border="1"> <thead> <tr> <th>Topical Area/issue</th> <th>Changes</th> </tr> </thead> <tbody> <tr> <td>Tribal cultural sites</td> <td>The Project has been designed to avoid direct impacts to all cultural resources that are eligible for listing on the NRHP when feasible. As currently designed, the Project has no direct impacts to such resources. However, as the design progresses, the Project layout may be changed such that impacts to the resources are created. The Applicant would continue to engage with the Tribes regarding the archaeological sites and the potential impacts of the Project on these sites (see Section 4.19.D below). If any protected sites are impacted by the Project, the Applicant would obtain a Department of Archaeology and Historic Preservation (DAHP) excavation permit and perform all necessary archaeological work in order to comply with Revised Code of Washington (RCW) 27.53.</td> </tr> </tbody> </table>	Topical Area/issue	Changes	Tribal cultural sites	The Project has been designed to avoid direct impacts to all cultural resources that are eligible for listing on the NRHP when feasible. As currently designed, the Project has no direct impacts to such resources. However, as the design progresses, the Project layout may be changed such that impacts to the resources are created. The Applicant would continue to engage with the Tribes regarding the archaeological sites and the potential impacts of the Project on these sites (see Section 4.19.D below). If any protected sites are impacted by the Project, the Applicant would obtain a Department of Archaeology and Historic Preservation (DAHP) excavation permit and perform all necessary archaeological work in order to comply with Revised Code of Washington (RCW) 27.53.
Topical Area/issue	Changes				
Tribal cultural sites	The Project has been designed to avoid direct impacts to all cultural resources that are eligible for listing on the NRHP when feasible. As currently designed, the Project has no direct impacts to such resources. However, as the design progresses, the Project layout may be changed such that impacts to the resources are created. The Applicant would continue to engage with the Tribes regarding the archaeological sites and the potential impacts of the Project on these sites (see Section 4.19.D below). If any protected sites are impacted by the Project, the Applicant would obtain a Department of Archaeology and Historic Preservation (DAHP) excavation permit and perform all necessary archaeological work in order to comply with Revised Code of Washington (RCW) 27.53.				

4.19.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	<table border="1"> <thead> <tr> <th>Topical Area/issue</th> <th>Changes</th> </tr> </thead> <tbody> </tbody> </table>	Topical Area/issue	Changes
Topical Area/issue	Changes		

	Tribal cultural sites	As currently proposed, the Project has been designed to avoid cultural sites, including avoidance of all resources that are eligible or potentially eligible for the NRHP or are protected under RCW 27.53. The Applicant re-designed portions of the Project to avoid cultural sites following completion of the survey.
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4.19.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	See mitigation measures listed in 4.18.D. Coordination and open communications will continue with interested tribes during Project permitting and design to incorporate tribal input regarding avoidance of potential impacts to cultural resources, including traditional use areas or other areas of significance to tribes. Lines of communication will remain open to better facilitate any response to unanticipated discoveries during construction.		DAHP, Confederated Tribes and Bands of the Yakama Nation, Wanapum , Samish , Confederated Tribes of the Umatilla Indian Reservation , and Confederated Tribes of the Warm Springs Reservation of Oregon

4.19.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.20 Traffic and Transportation

4.20.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 are proposed for traffic and transportation.			

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

4.20.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
Transportation Systems	<p>Figure A-10 in Attachment A shows the road network in the Project vicinity. Access to the Project is via SR 241 to Wautoma Road. SR 241 is classified by the Washington State Department of Transportation (WSDOT) as a Rural Major Collector by the WSDOT Functional Classification Map (2022). Wautoma Road is classified by Benton County Public Works Department Public Works Map (2022) as a Rural Local Access road. The intersection of Wautoma Road and SR 241 is located in Yakima County. Access to Wautoma Road would occur solely from SR 241, and SR 241 will be accessed mostly from the north via SR 24 and, to a lesser extent, from the south at the town of Sunnyside. Access to SR 24 will occur via SR 240 from Richland, as well as via I 82 from Yakima. SR 24 to SR 241 would be the preferred route for the limited oversize deliveries for Project construction, such as support poles for the transmission line or the main power transformers.</p> <p>The roads leading to the Project Area are paved and include I-82, SR 240, SR 24, and SR 241. The regional highways and local streets that may be used by workers coming from homes or hotels to the Project Area are paved. The intersection with SR 24 and SR 241 is a two-way stop-controlled four-leg intersection. Section 4.20.C below provides a summary of anticipated Project construction routes.</p> <p>The assessment provided in this section relies on WSDOT data, as well as aerial and street imagery provided by Google Earth Pro (2022). Based on a review of this imagery and information provided on the WSDOT Corridor Sketch Summary Viewer (WSDOT 2022a), a summary of road conditions (all asphalt) by route follows:</p>

	<ul style="list-style-type: none"> • SR 24: Mostly good to very good condition, with less than 5 percent of the route considered fair condition (per SR 24 Corridor Sketch Summary 2018). • SR 241: Appears to be in fair to good condition by aerial and street imagery, although the street imagery is dated 2012. No WSDOT ratings are available. • SR 240: Approximately 80 percent good to very good condition, with over 15 percent in fair condition and under 5 percent poor and very poor condition (per SR 240 Corridor Sketch Summary 2018). • I-82: Approximately 80 percent good to very good condition, with approximately 15 percent fair and 5 percent poor and very poor (per I-82 Corridor Sketch Summary 2018). • Wautoma Road: Appears to be in fair to good condition by aerial and street imagery, although the street imagery is dated 2012. <p>Traffic counts have not been collected in direct association with the Project. However, available data regarding traffic levels from the WSDOT Traffic GeoPortal (WSDOT 2022b) and from the Yakima County Transportation Department (pers. comm., B. Sheffield February 2, 2022) are as follows (WSDOT 2022b):</p> <ul style="list-style-type: none"> • Wautoma Road: 53 Average Daily Traffic (ADT) near the intersection with SR 241. (2014) • SR 241: 1,400 ADT near the intersection with SR 24. (2020) • SR 24: 3,100 ADT near the intersection with SR 241. Near the intersection with I-82, the ADT is 19,000. (2020) • SR 240: 4,500 ADT near the intersection with SR 24. (2020) • I-82: 42,000 to 46,000 ADT near the intersection with SR 24. (2020) <p>Traffic data are not available for other roads in the Project Area.</p> <p>WSDOT generically classifies state highways in rural areas with a level of service “C” as acceptable, indicating speeds near free flow but restricted freedom to maneuver. Site-specific level of service information for the state routes near the Project have not been developed by WSDOT, and Yakima and Benton Counties do not maintain information for state highways. However, it is anticipated that the actual level of service in the vicinity of the Project is closer to “B” or “A”, indicating relatively free flow of traffic most of the time. Based on WSDOT Corridor Sketch Summaries, I-82 and SR 241 perform non-congested along 100 percent of the route, while SR 24 and SR 240 perform non-congested along approximately 90 percent of the routes, with approximately 10 percent of each road considered congested on a regular basis.</p>
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Waterborne, Air, and Rail Traffic	<p>There are no shipping ports near the Project. However, the Ports of Seattle, Vancouver, or Portland are the most likely ports to receive solar equipment, which will then be trucked to the Project Area. The Port of Seattle is approximately 140 miles northwest (180 miles driving distance) from the Project. The Port of Portland is approximately 206 miles west of the Project via roadways. The Port of Vancouver is approximately 315 miles northwest of the Project via roadways.</p> <p>Air transportation is not anticipated for use in Project construction or operation. The Yakima Air Terminal in the city of Yakima provides air service to Seattle.</p> <p>Union Pacific Railroad’s network includes a track between Wallula and the city of Yakima, which is to the west and south of the Project. Rail transportation is not anticipated for use in Project construction or operation.</p>
Public and Pedestrian Traffic	The traffic access route consists of interstate highways and rural state routes that are not in areas associated with public transit, pedestrian demand, or pedestrian-oriented land use.
Parking	No designated parking areas are currently present at the Project location.
Movement of People or Goods	The existing conditions related to the movement of people and goods near the Project is described above, under “Transportation Systems,” “Waterborne Air and Rail Traffic,” and “Public and Pedestrian Traffic.”
Transportation Hazards	Given the mountainous terrain along transportation routes, steep grades and winding sections of roads are occasionally present along the access routes. Inclement weather such as snow and icy conditions may also contribute to hazards on steep and winding roads.

4.20.C Changes to and from Existing Condition

4.20.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.

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
	Topical Area/issue	Changes
	Transportation Systems	<p>Improvements</p> <p>There are no anticipated changes or improvements to existing transportation infrastructure except for the proposed access locations on SR 241 and Wautoma Road. New service roads constructed for the Project will be private and internal to the Project Area. These roads will be inside the Project fence line and will not provide any new travel routes for area residents. The</p>

	<p>Applicant will obtain County Right-of-Way Access Permits and a WSDOT Right-of-Way Access Permit for the proposed Project approaches on county and state routes based on final design.</p> <p>Construction</p> <p>During the estimated 22-month construction period, Project construction would add a peak of 1,210 one-way vehicle trips (i.e., 605 round trips) and an average of 588 one-way vehicle trips (i.e., 294 round trips) per day. Peak traffic numbers would occur over a 3-month period, with the numbers tapering up and down before and after the peak. The primary source of construction traffic would be worker commutes to the Project, originating from nearby communities including Yakima, Sunnyside, and Richland/Tri-Cities. Based off available lodging and housing, the worker commutes were divided as follows:</p> <ul style="list-style-type: none">• 60 percent of workers commute from Richland/Tri-City area• 35 percent of workers commute from Yakima• 5 percent of workers commute from Sunnyside or neighboring communities <p>The trip estimate is based on the Project's estimated peak and average workforces, with a carpool factor of zero (to assume worst-case scenario), an average of 20 heavy truck equipment deliveries per day (peak of 35), and an average of 44 water truck deliveries per day (peak of 55). It is likely that some carpooling will occur, which would reduce the trips generated by worker commutes.</p> <p>Construction traffic would include 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 would also provide concrete for component foundations and materials for the solar module blocks themselves. In addition to concrete and gravel, water trucks delivering water to the Project would be required. An average capacity of 4,000 gallons per water truck was assumed for trip generation calculations. Water would be needed for dust control during road construction and for the temporary concrete batch plant (see Section 2.B.8.d). Semi-trailer flat beds carrying electrical equipment and materials required for solar panel construction and power transmission equipment also will be necessary. These truck delivery and water truck trips are expected to occur during off-peak hours throughout the workday. All truck deliveries are assumed to come from west of the Project along the interstates, and then SR 24 to SR 241, given the location of the Port of Seattle. It is assumed construction crews will drive pick-up trucks to and from the Project.</p>
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		<p>During the 22-month construction period, traffic on SR 241 in the vicinity of the Project would increase from an average of 1,400 trips per day to an average of 1,978 trips per day. The majority of these trips would consist of worker commute vehicles during the morning and evening commute times. Worker commutes would add up to approximately 225 vehicles to SR 241 during the morning commute and again in the evening, with approximately 95 percent of the workers arriving from the north (Richland or Yakima areas) and 5 percent arriving from the south (Sunnyside area). Equipment deliveries are expected to be approximately 35 per day during 7 months of peak construction activity and would taper before and after the peak construction activity, averaging 20 truck deliveries per day over the life of the Project. Water truck deliveries are expected to be an average of 44 per day and a peak of 55 per day. As a conservative assumption for this application, water truck deliveries are assumed to come either from the Moxee, Washington or Sunnyside, Washington areas. Equipment and water truck deliveries will occur during off-peak hours. Given the current uncongested nature of SR 241, the temporary increase in traffic counts, and anticipated traffic control measures described below, significant impact to traffic flow is not expected.</p> <p>Traffic on SR 24 would also increase temporarily during construction. ADT on SR 24 west of the intersection with SR 241 would increase from 3,100 to an average of 3,386 near the Project, while east of the intersection with SR 241, the increase would be from 3,100 to an average of 3,370. The western portion of SR 24 near I-82 at Yakima is the most congested portion of the road with a current ADT of 19,000, which is estimated to increase to an average ADT of 19,198 during construction. This equates to an approximately 1 percent increase, primarily consisting of passenger vehicle traffic for worker commutes. Additional delays during construction could occur on SR 24 near I-82, but given the percentage of traffic increase, these delays would be minimal. Significant impact to traffic flow along the remaining portions of SR 24 are not expected given the uncongested nature of the current state.</p> <p>SR 240 would likewise see an increase of traffic counts during construction. Existing traffic counts near SR 24 reveal an ADT of 4,500, which would increase to average of 4,770 during construction. Similar to SR 24, SR 240 has a currently congested portion at I-182 near Richland. It is safe to assume that some of the worker traffic would travel to the Project from areas north of I-182; therefore, only a relatively small increase in traffic would be seen on the busiest portions of SR 240. The remaining stretch of SR 240 toward SR 24 is considered uncongested, and the increase in traffic due to construction of the Project is not likely to change this current uncongested status.</p>
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		<p>Some worker commuting traffic and truck deliveries from Yakima will travel along I-82 near SR 24. Considering the current 42,000 to 46,000 trips per day on I-82, the possibility of an additional 198 trips would not significantly impact the current uncongested state of this roadway.</p> <p>The timing of peak construction activity on site may overlap with the harvest season; however, harvest vehicles typically travel throughout the day and are not limited to prime commuting hours, which is when the highest impact of workers commuting to the Project will occur.</p> <p>Operations Operations traffic would be negligible since there will be four or fewer permanent employees. The limited number of daily trips anticipated during Project operations would be negligible relative to current and projected level of services (LOS).</p> <p>Panel washing is expected to occur for approximately 2 to 3 weeks each year as part of the operations and maintenance phase. It is assumed the permanent operations employees would be utilized for the panel washing, and therefore, no additional worker trips are expected. Water truck trips may be required to bring water to the site for panel washing. If required, water truck deliveries are estimated to occur 1 to 2 times per day during panel washing. These deliveries will likely be during off-peak hours.</p>
	Waterborne, Air, and Rail Traffic	No changes will occur to waterborne traffic as a result of Project construction or operation because the Port of Seattle is of sufficient size to accommodate any solar equipment that may be shipped to the Project. No changes will occur to rail or air traffic as a result of Project construction or operation because construction and operation of the Project would not use these modes of transportation. Furthermore, the glare analysis (see Part 4, Section 4.16b, and Attachment H) concluded that no glare hazard will exist for air traffic or roadways as a result of solar panel operations.
	Public and Pedestrian Traffic	No changes will occur to the routing of public transit or the use of pedestrian and bike routes as a result of Project construction or operations. Also, none of these facilities are located close to the Project site.
	Parking	<p>During construction, workers would park in designated areas of the construction site, off public roads. Construction would not adversely affect the availability of parking for other users because no parking is currently available.</p> <p>Parking needs during operations would be limited to occasional use by up to four employees at the O&M building. The Project will have a gravel parking area at the O&M building to accommodate these employees. As the O&M building is internal</p>

		to the Project, no vehicular backing up or maneuvering would occur within a public right-of-way.
	Movement of People or Goods	<p>Improvements to the two Project approaches along SR 241 may temporarily impede traffic along that roadway. Therefore, a Traffic Control Plan will be prepared for approval by WSDOT.</p> <p>Similarly, a Traffic Control Plan will be created in coordination with Benton and Yakima Counties for construction of approaches along Wautoma Road.</p> <p>Post construction Project operations will not affect the movement of people or goods within or surrounding the Project Area.</p>
	Transportation Hazards	<p>By complying with local, state, or federal requirements related to traffic and transportation, the Project will not restrict vehicular use or increase local safety hazards. Furthermore, Project construction routes were chosen to minimize the use of urban roads to the extent possible.</p> <p>The Applicant will obtain oversize and overweight haul permits in compliance with WSDOT and Benton County requirements to safely haul equipment on highways and county roads. The Applicant will also obtain applicable permits from WSDOT, Benton County, and Yakima County for access to public road right-of-way. A Traffic Control Plan will be prepared in coordination with WSDOT and the Benton and Yakima Counties Public Works Departments to mitigate transportation hazards during the construction of Project accesses to public right-of-way. As described in Part 4, Section 4.13.C.1, the Project's BESS components would be delivered to the Project in compliance with 49 CFR §173.185, which regulates the transportation of lithium-ion batteries.</p> <p>For these reasons, the Project will not result in significant transportation hazards or impacts to traffic safety.</p>

4.20.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Topical Area/issue	Changes
	N/A	N/A

4.20.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?

<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	WSDOT Oversize and Overweight Permit	A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including RCW 46.44 and WAC 468-38.	WSDOT
	WSDOT Right of Way Access Permit	Per WAC 468-51, the Applicant will obtain a General Permit from WSDOT to upgrade the portion of the approach off SR 241 that is within the WSDOT right-of-way.	WSDOT
	Benton County and/or Yakima County Right of Way Access Permit	Based on final Project design, the Applicant will obtain access permits to construct approaches to County road right-of-way from Benton and Yakima Counties pursuant to County Standards.	Benton County Public Works Department, Yakima County Public Works Department
	Traffic Control Plan	<p>A Traffic Control Plan will be prepared in consultation with WSDOT for traffic management during improvement of highway access. This plan would contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and would be in accordance with 23 CFR §655 Subpart F that provides for the Federal Highway Administration to maintain the Manual on Uniform Traffic Control Devices for Streets and Highways, which defines standards for traffic control.</p> <p>A Traffic Control Plan will be prepared in coordination with Benton County and Yakima County Public Works Departments for traffic management during construction and for construction of access approaches from county right-of-way.</p>	WSDOT, Benton County Public Works Department, Yakima County Public Works Department

4.20.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?

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
	Environmental Element	Additional changes or effects
	N/A	N/A

4.20.F References

Benton County Public Works. 2022. Public Works Map. Available online at:

<https://bentonco.maps.arcgis.com/apps/webappviewer/index.html?id=6c2cc10410ad4009b53d3a7779c96b5e>.

Google Earth. 2022. Aerial Imagery for the Wautoma Solar Project Area. Image date April 2021. Accessed February 16, 2022.

WSDOT (Washington State Department of Transportation). 2022a. Corridor Sketch Summary Map. Available online at:

<https://wsdot.maps.arcgis.com/apps/View/index.html?appid=fc716ce9593943198c491c383fc1c009>.

WSDOT. 2022b. Traffic GeoPortal. Accessed February 2022. Available online at:

<https://www.wsdot.wa.gov/data/tools/geoportal/?config=traffic>.

WSDOT. 2022. Functional Classification Map. Available online at:

<https://wsdot.maps.arcgis.com/home/webmap/viewer.html?layers=5fa0e9671d104edfad b7fa4e7f9ed17f>.

Yakima County Transportation Department. 2022. Personal communication from Brett Sheffield of the Yakima County Transportation Department via email dated February 2, 2022, regarding traffic counts for Wautoma Road.

4.21 Public Services and Facilities

Part 4 Analysis is not required for this section.

4.22 Utilities

Part 4 Analysis is not required for this section.