Attachment B. Rare Plants Report

High Top Solar, LLC Project

Prepared for:

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March 2, 2022

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Acronyms and Abbreviations

Notation	Definition
BESS	Battery Energy Storage System
BMP	Best Management Practice
CCR	Cypress Creek Renewables, LLC
EFSEC	State of Washington Energy Facility Site Evaluation Council
ESA	Endangered Species Act
ESCP	Erosion and Sedimentation Control Plan
°F	degrees Fahrenheit
GPS	Global Positioning System
IPaC	Information for Planning and Consultation
kV	Kilovolt
MPE	Maximum Project Extent is defined as the area that contains the Project Footprint and additional construction areas. The larger extent of the MPE will allow for the shifting of project components, known as micro-siting, based on a final approved project design.
NRCS	Natural Resource Conservation Service
O&M	Operations and Maintenance
Project	High Top Solar, LLC Project
Project Site Control Boundary	Total of the leased areas and easements for the High Top Solar, LLC Project
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SR	State Route
Study Area	Survey Area for rare plants
TRC	TRC Environmental Corporation
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WNHP	Washington Natural Heritage Program

1.0 Introduction

Cypress Creek Renewables, LLC (CCR) proposes to construct and operate the High Top Solar, LLC Project (Project). As part of the environmental studies to be included in the Application for Site Certification to the State of Washington Energy Facility Site Evaluation Council (EFSEC), the Washington Department of Fish and Wildlife (WDFW) has requested a rare plant survey be conducted. The rare plant survey will provide EFSEC with the necessary information and analysis to determine if the Project may impact sensitive species, as mandated by the Washington State Environmental Policy Act (SEPA).

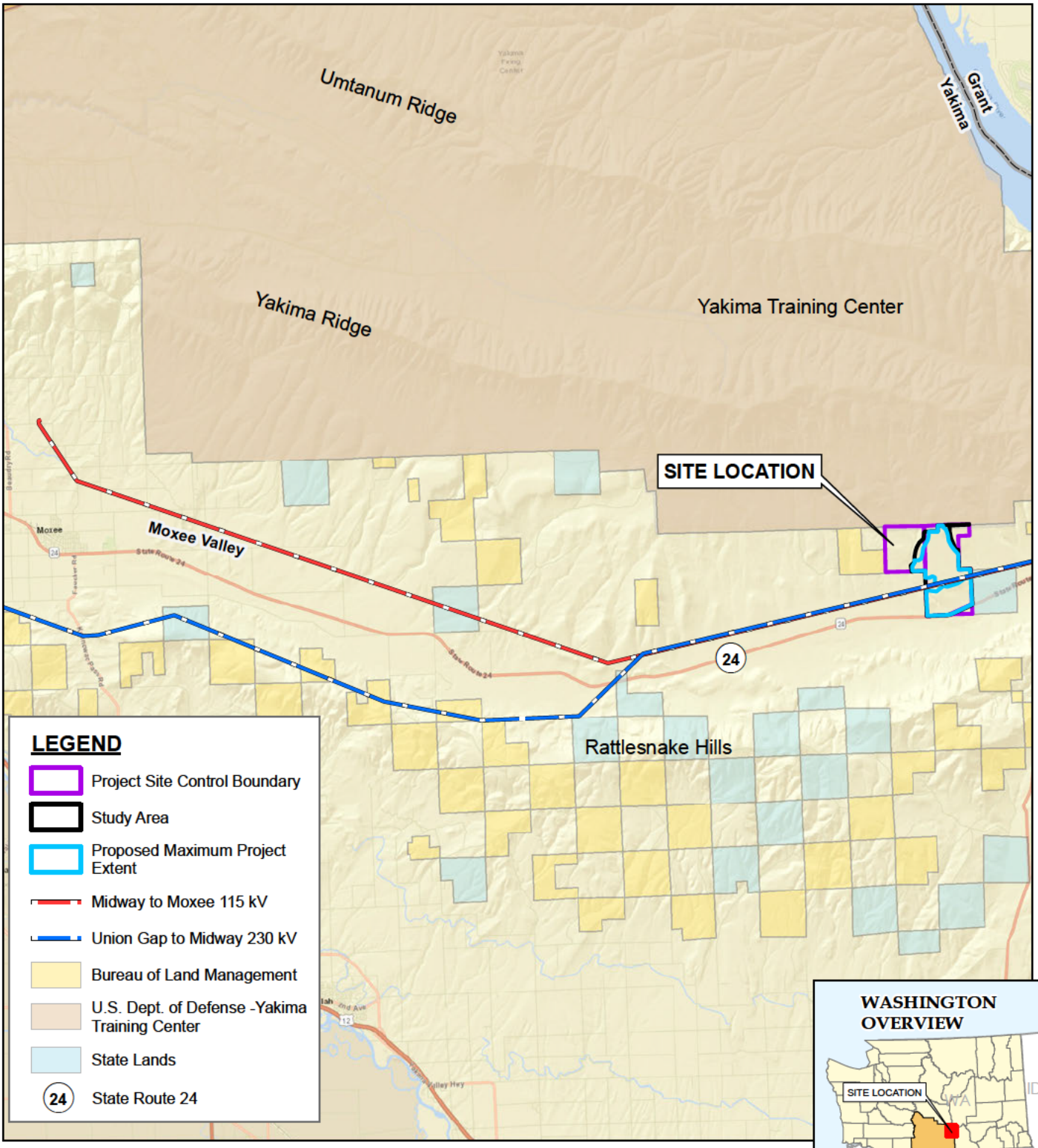
1.1 Background

The Project is situated north of Washington State Route 24 (SR-24), south of the Yakima Training Center, and approximately 20 miles east of the town of Moxee, in Yakima County, Washington (Figure 1-1). The Project Site Control Boundary (~1,564 acres) is defined as the total of the leased areas and easements for the Project (Figure 1-1). Within the Project Site Control Boundary, a smaller Study Area (1,114 acres) was defined for rare plant surveys (Figure 1-1). The Maximum Project Extent (MPE) (926.6 acres) is defined as the area that contains the Project Footprint and additional construction areas. The larger extent of the MPE will allow for the shifting of project components, known as micro-siting, based on a final approved project design.

The Project will use solar photovoltaic panels organized in arrays and aggregated to an injection capacity limited to 80 megawatts of alternating current solar capacity at the point of interconnection to the electric power grid. The Project will interconnect through a dedicated switchyard located on the Project adjacent to PacifiCorp's Union Gap-Midway 230 kilovolt (kV) transmission line that runs through the southern part of the Project. PacifiCorp's Union Gap-Midway 230 kV transmission line connects to PacifiCorp's shared Midway substation, which is approximately nine miles east and north of the Project and to PacifiCorp's Union Gap substation, which is approximately 25 miles west of the Project. A security fence will be installed within 20 feet of the final approved locations of the panel arrays. The exact fence line located will be micro-sited on the final approved design for the Project.

A Battery Energy Storage System (BESS) may be required for the Project. The BESS system will store energy from the Project or grid, which will be supplied to the electrical grid when needed. If required, the BESS will be located next to the Project substation (for alternating current coupled) or as smaller battery cabinets collocated throughout the MPE at the inverter pad locations (for direct current coupled).

An Operations and Maintenance (O&M) trailer and employee parking will be located just west of the Project substation. The trailer will be permanently located during the life of the Project and will include a bathroom. During construction, the employee parking area and the O&M trailer footprint will be used as a construction laydown yard. Access to the Project will be from SR-24 on the east side of the MPE.



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

TRC

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TRC - GIS

PROJECT:

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

TITLE:

HIGH TOP PROJECT OVERVIEW MAP

DRAWN BY:	R. BLAKE
CHECKED BY:	P. LORENZ
APPROVED BY:	E. BERGQUIST
DATE:	MARCH 2022
PROJ. NO.:	422984
FILE:	Fig 1-1_High Top_Overview Map Rare Plants.mxd

FIGURE 1-1

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2.0 Regulatory Requirements

Pursuant to the Federal Endangered Species Act (ESA), the United States Fish and Wildlife Service (USFWS) is responsible for ensuring compliance with the ESA for activities that may result in take of a species listed as threatened or endangered under the ESA. Under the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct." In general, persons subject to the ESA (including private parties) are prohibited from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

Within the State of Washington, the WDFW has the regulatory authority to manage and conserve wildlife resources within state borders. The WDFW maintains a list of Threatened and Endangered species, identified throughout the state as Species of Concern. These include those species listed as State Endangered, State Threatened, State Sensitive, or State Candidate, as well as species listed or proposed for listing by the USFWS or the National Marine Fisheries Service.

3.0 Summary of Consultation

On February 17 and 22, 2021, TRC Environmental Corporation (TRC) conducted initial consultation with Michael Ritter, Fish and Wildlife Area Habitat Biologist for the WDFW, on rare plant survey requirements. Michael Ritter provided guidance on document templates, survey methodologies, plant lists, and reference information. A Study Area for the Project was identified in March 2021 that included portions of the Project Site Control Boundary where the MPE was most likely to be located. Based on the direction from WDFW and the defined Study Area, TRC developed a study plan outlining the proposed rare plant surveys including target species and methodology. The target species for surveys were identified based on the desktop review as described in Section 4.1 and are listed in Table 5-2. The study plan was submitted on March 12, 2021 to Michael Ritter for preliminary feedback. Michael Ritter provided comments on the study plan March 15, 2021. Comments included concurrence on the targeted plant species for surveys and the proposed methodology. Mr. Ritter requested a second survey period later in the summer to cover a wider range of the targeted species flowering periods. The study plan was revised to include a second survey period in July 2021. The correspondence is provided in Appendix A.

4.0 Methods

4.1 Desktop Review

Prior to conducting the field survey, TRC biologists performed a desktop review to determine the rare plants, species of concern, and habitats that have been documented in the vicinity of the Study Area. A USFWS Information for Planning and Consultation (IPaC) report was reviewed for federally listed threatened, endangered, candidate and species proposed for listing under the ESA that may occur in the Project vicinity (USFWS 2021, Appendix B). A formal IPaC was requested in March 2022 (Appendix B). State rare plants and species of concern were identified from the Washington Natural Heritage Program (WNHP) list of Washington plant species of conservation concern (WNHP 2019). The list of Washington plant species of conservation concern was updated August 31, 2021. The list updates were reviewed and there are no changes to species identified as having potential to occur in the Study Area. The WNHP defines

rare plants as “species that are native to Washington and at risk of extirpation in the state due to low numbers, few occurrences, high habitat specificity, high threats, or significant downward population trends” (WNHP 2020). The Washington plant species of conservation concern includes information on the federal and state listing and the NatureServe heritage rank of global and state conservation status for each species. For each species, the distribution pattern, county, and ecoregion where the species are found are included.

To identify the species with the potential to occur within the Study Area and associated suitable habitat, the following sources were consulted:

- Field Guide to the Rare Plants of Washington (Camp and Gamon 2011).
- Washington Department of Natural Resources (WDNR) Element Occurrence data (WDNR 2021).
- Burke Herbarium Image Collection Species Description (Giblin and Legler 2003).
- The Jepson Herbarium, University of California, Berkeley (Jepson Flora Project 2021).
- Flora of North America (1993).
- NatureServe (2021).
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) SSURGO soil data for Yakima County (USDA NRCS 2021).
- United States Geological Survey (USGS) Topographic Maps (Black Rock Spring and Cairn Hope Peak) (USGS 2020).

4.2 Field Surveys

Field surveys consisted of a systematic pedestrian survey of the Study Area to identify habitat, populations, or occurrences of the target rare plant species. In addition, the field survey verified habitat presence and rated habitat areas for each species as high, medium, or low potential habitat for each species.

Habitat quality was evaluated based on the characteristics unique to individual species and vegetation communities while taking into account level of disturbance, species composition, physical resources, and amount of habitat available. In general, high quality habitat has a high number of the habitat characteristics associated with an individual species. In areas of high and medium potential habitat, a 100% visual exam of the habitat was conducted. A meandering pedestrian survey was conducted in areas of low potential habitat. Dominant plant species were recorded for each area of potential habitat.

Identified populations or occurrences of rare plants were mapped as point, line, or polygon features using portable GPS units designed to gather location data to the sub-meter. Identified botanical features were photographed and data were collected in TRC’s Fulcrum electronic data collection software. Data collection included the examiner name, visit date, species names, number of plants present, plant count type (estimated or actual), percent cover, and whether the plant was alive or dead. The vegetation community where the species was found and its characteristics including habitat quality were noted.

Representative photographs were taken of observed targeted species and areas identified as suitable habitat for the targeted rare plant species. If requested by CCR or WDFW, TRC will provide the data to the WNHP Rare Plant Sighting Form (available here: https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf) for submittal to the WNHP.

The vascular plant species observed in the Study Area were recorded by genus and species. The majority of the species had sufficient characteristics to be identified by species. Specimens not readily identified in the field were collected and identified using the following plant keys and online references:

- Flora of the Pacific Northwest (Hitchcock and Cronquist 2018).
- Field Guide to the Rare Plants of Washington (Camp and Gamon 2011).
- Burke Herbarium Image Collection Vascular Plants, Macrofungi & Lichenized Fungi of Washington (Giblin and Legler 2003).
- Consortium of Pacific Northwest Herbaria (CPNWH 2021).

5.0 Results

The Study Area is found in the Columbia Plateau Ecoregion, a dry area receiving on average eight inches of precipitation a year. The climate in the Study Area and surrounding region consists of cool dry summers (average high 88 degrees Fahrenheit [°F]), and mild, wet, and cloudy winters (average low of 21 °F) with the wettest months being December and January. The landscape in this ecoregion is expansive sagebrush covering plains and valleys with isolated mountain ranges and river systems (Clarke and Bryce 1997). The Study Area is active rangeland with a low number of cattle present. Historically, the majority of the Study Area appears to have been plowed for agriculture. The local area is currently experiencing extreme drought. In July 2021, a drought emergency was declared for most of the watersheds in Washington including those in Yakima County.

The Study Area is located on a south-facing slope of an anticline. Numerous ravines and gullies are located across the south-facing slope; ravines found on higher and steeper portions of the anticline are reduced to gullies on lower slopes. Much of the alluvium at the toe of the slope may have originated from mass wasting events that long-ago created the ravines high on the slope (Foxworthy 1962). Ephemeral discontinuous channels and erosional features are found throughout the Study Area. Elevations within the Study Area range from 1,480 to 2,060 feet.

5.1 Desktop Review

5.1.1 Soils

Soils are derived from deposition of material resulting from erosion of the nearby McCullough Range. The soils in the Study Area are predominantly mixed alluviums ranging from gravelly sandy loam to stony sandy loam. The soils present in the Study Area, their extent, and their percent of the Study Area are listed in Table 5-1 and shown in Figure 5-1. Soils in the Study Area are well drained silt loams derived from predominantly loess and alluvium parent materials. The dominant soil map unit in the Study Area is Willis silt loam, 8 to 15 percent slopes (47 percent). Cryptobiotic crusts are present in the Study Area and are more common in the northern portions of the Study Area.

5.1.2 USFWS Information for Planning and Consultation (IPaC)

No federally listed plant species were shown as having the potential to occur in the Study Area

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TRC - GIS

Plot Date: 3/15/2022, 14:01:34 PM by RBLAKE -- LAYOUT: ANSI B(11"x17")
Path: S:\GIS\1-PROJECTS\CCR\Northwest\422984-High Top\Fig 5-1 High_Top_Soils Rare Plants.mxd
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet (Foot US)
Map Rotation: 0

LEGEND

- Project Site Control Boundary
- Study Area
- Proposed Maximum Project Extent
- Midway to Moxee 115 kV
- Union Gap to Midway 230 kV
- Bureau of Land Management
- U.S. Dept. of Defense -Yakima Training Center
- State Lands
- (24) State Route 24

Soil map Units

- (3) Bakeoven very cobbly silt loam, 0 to 30 percent slopes
- (36) Finley cobbly fine sandy loam, 0 to 5 percent slopes
- (55) Harwood-Burke-Wiehl very stony silt loams, 15 to 30 percent slopes
- (65) Kiona stony silt loam, 15 to 45 percent slopes
- (85) Moxee cobbly silt loam, 0 to 30 percent slopes
- (83) Moxee silt loam, 2 to 15 percent slopes
- (104) Ritzville silt loam, basalt substratum, 0 to 5 percent slopes
- (105) Ritzville silt loam, basalt substratum, 5 to 15 percent slopes
- (130) Selah silt loam, 8 to 15 percent slopes
- (187) Willis silt loam, 2 to 5 percent slopes
- (189) Willis silt loam, 8 to 15 percent slopes

NOTES

1. BASE MAP IMAGERY FROM ESRI/ MAXAR 2019.
2. SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITES STATES DEPARTMENT OF AGRICULTURE. WEBSOIL SURVEY. ACCESSED 02/21/2022.

N

0 1,000 2,000 Feet

1" = 1,250 '
1:15,000

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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

TITLE:
SOIL MAP UNITS IN THE HIGH TOP STUDY AREA

DRAWN BY:	R. BLAKE	PROJ. NO.:	422984
CHECKED BY:	M. WETHERBEE		
APPROVED BY:	E. BERGQUIST		**FIGURE 5-1**
DATE:	MARCH 2022		

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FILE NO.: Fig 5-1 High_Top_Soils Rare Plants.mxd

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Table 5-1. Soils in the Study Area

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

Source USDA NRCS 2021

5.1.3 Washington Natural Heritage Program

The 2019 list of Washington plant species of conservation concern includes 44 species for Yakima County. WNHP assigns Washington state status as either endangered (in danger of becoming extinct or extirpated from Washington), threatened (likely to become endangered in Washington), sensitive (sensitive, vulnerable, or declining and could become threatened or endangered in Washington), or extirpated (possibly extinct or extirpated in Washington). Of the species found in Yakima County, three of the species are listed as State Endangered, 13 are State Threatened, 24 are State Sensitive, and four of these species are listed as extirpated.

Based on the species range, habitat characteristics, and element occurrence locations and the general habitat, soils, topography, and elevation in the Study Area, 12 state sensitive species were identified as having potential to occur in the Study Area (Table 5-2).

Table 5-2. State Sensitive Species with Potential to Occur in the Study Area

Common Name	Scientific Name	Habitat Characteristics	Flowering period
Columbia milkvetch	*Astragalus columbianus*	Shrub-steppe habitats on sandy or gravelly loams, silts, rocky silt loams, and lithosols. Elevation range is 420 to 2,320 feet.	Mid-March to early May
Pauper milkvetch	*Astragalus misellus* var. *pauper*	On open ridgetops and gentle upper slopes, rarely middle and lower slopes. Elevation range is 500 to 3,280 feet.	April to mid-May

Common Name	Scientific Name	Habitat Characteristics	Flowering period
Narrow-stem cryptantha	*Cryptantha gracilis*	Sagebrush steppe habitats on basalt talus, in dry rocky or silty seasonal drainages, and pockets of silt on steep, somewhat unstable substrates. Elevation range is 1,250 to 2,680 feet.	May to June
Desert cryptantha	*Cryptantha scoparia*	Dry areas with full sun and little competing vegetation. South-facing slopes and ridges between small canyons with fine, dry silt, and talus. Sites may be a little more alkaline than surrounding areas. Elevation range is 1,200 to 2,100 feet.	April to June
Snake River cryptantha	*Cryptantha spiculifera*	Dry, open, flat, or sloping areas in stable or stony soils with low vegetative cover. Elevation range is 450 to 3,500 feet.	May to July
Dwarf evening-primrose	*Eremothera pygmaea (Camissonia pygmaea)*	Sagebrush steppe, on unstable soil or gravel in steep talus, dry washes, banks, and roadcuts. Elevation is 450 to 2,050 feet.	June to August
Suksdorf's monkeyflower	*Erythranthe suksdorfii (Mimulus suksdorfii)*	Open, moist, or dry places, from valleys and foothills to moderate or occasionally high elevations in the mountains. Seasonally moist swales, drainages, or vernal pools with sagebrush steppe vegetation. Microhabitats are often disturbed by small erosive events. Prefer disturbed substrate. Elevation range is 430 to 7,100 feet.	Mid-April continuing as long as habitat remains moist
Hoover's tauschia	*Lomatium lithosolamans* (*Tauschia hooveri*)	Basalt lithosols in shrub-steppe habitats. Flat, well-drained with prominent rocks and gravel, but very little soil in areas with low vegetation cover. Elevation range is 1,300 to 1,400 feet.	Early to late March
Hoover's desert-parsley	*Lomatium tuberosum*	Loose basalt talus in sagebrush steppe, typically on east- to north-facing slopes. Sometimes in channels of open ridgetops and talus on south- to southwest-facing slopes. Elevation range is 460 to 4,000 feet.	Early March to mid-April
False monkeyflower	*Mimetanthe pilosa*	Found in the sandy to gravelly soils along streams, seeps, and springs. Elevation range is 1,000 to 4,500 feet.	May to July
Coyote tobacco	*Nicotiana attenuata*	Dry sandy bottomlands, rocky washes, and other dry open places. Elevation range is 320 to 2,640 feet.	June to September
Caespitose evening primrose	*Oenothera caespitosa* ssp. *caespitosa*	Open sagebrush desert; on loose talus, steep sandy or gravelly slopes, the flat terrace of the Columbia River, roadcuts, and other exposed sites. Elevation range is 410 to 1,800 feet.	Late April to mid-June

5.2 Field Surveys

TRC biologists Erin Bergquist and Laura Giese conducted the botanical survey of the Study Area from May 3 through 9, 2021 and July 6 through 9, 2021. The first survey period was selected to cover the optimal time for positive identification, corresponding to either the flowering or seeding period of the majority of species (see Table 5-2). The second survey was conducted for the species that flower later in the summer: coyote tobacco (*Nicotiana attenuata*):

June to September; and dwarf evening primrose (*Eremothera pygmaea* and *Camissonia pygmaea*): June to August. Two species were past their flowering periods: Hoover's tauschia (*Lomatium lithosolamans* and *Tauschia hooveri*): early to late March; and Hoover's desert parsley (*Lomatium tuberosum*): early March to mid-April. Surveys will be conducted in late March or early April 2022 for these two species. The majority of the non-flowering *Lomatium* observed in the Study Area appeared to be common *Lomatium* species; however, none were in flower. The majority of the Study Area appeared to have been plowed historically. Two transmission line routes and the associated access road for the transmission line route are located across the middle of the Study Area running southwest to northeast. Slopes across the Study Area ranged from one to 10 percent. Portions of the shrub-steppe community in the northern portion of the Study Area were burned in the 1987 Lambing fire and the entire Study Area was burned in the 2016 Range 12 fire (Northwest Coordination Center 2021a, b).

The field survey identified a total of 60 species, the majority of which are weedy invasive or early successional species commonly associated with disturbance. The plant list for the Study Area is included in Appendix C. Appendix D contains representative photos of the typical vegetation communities present in the Study Area. Vegetation diversity and cover of native forbs was low in the majority of the Study Area. Common species observed were cheatgrass (*Bromus tectorum*), crested wheatgrass (*Agropyron cristatum*), Russian thistle (*Salsola tragus*), tumblemustard (*Sisymbrium altissimum*), flixweed (*Descurainia sophia*), fiddleneck (*Amsinckia intermedia*), and blue mustard (*Chorispora tenella*). Native grass, forb, and shrub species were more common in the northern portion of the Study Area including Indian ricegrass (*Oryzopsis hymenoides*), needle and thread (*Hesperostipa comata*), Sandberg bluegrass (*Poa secunda*), green rabbitbrush (*Chrysothamnus viscidiflorus*), big sagebrush (*Artemisia tridentata*), phlox longifolia (*Phlox longifolia*), Carey's balsamroot (*Balsamorrhiza careyana*), and slender hawksbeard (*Crepis atribarba*).

5.2.1 Rare Plant Species Observed

During the May 2021 surveys, one population of Columbia milkvetch (*Astragalus columbianus)* was mapped [redacted]. No individuals or populations of the other target species were encountered during either the May or July 2021 surveys.

The Columbia milkvetch population [redacted] The plants ranged in size from less than five inches across to greater than 12 inches across. Individuals were robust with numerous pods. Representative species and habitat photos can be found in Appendix D. Additional milkvetch plants were present but were lacking the distinctive pods that support positive identification.

[redacted] Estimated percent vegetative cover was 70. Associated species included big-seed macrocarpum (*Lomatium macrocarpum*), Sandberg bluegrass, cheatgrass, redstem storksbill (*Erodium cicutarium*), salsify (*Tragopogon dubius)*, and common fiddleneck. A large patch of sagebrush was located to the west of the population.

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Figure 5-2. High Top Rare Plant Survey Results

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6.0 Potential Project Impacts

During the May 2021 surveys, one population of a Washington State Sensitive Species, Columbia milkvetch, was identified [redacted]

7.0 Mitigation Measures

To minimize impacts from the proposed Project, the following best management practices (BMPs) would be implemented. These would include the following measures:

- Flag/fence each mapped Columbia milkvetch polygon within a 100-foot buffer of the MPE for construction equipment avoidance.
- Provide education training to construction and operation staff and contractors on how to recognize the Columbia milkvetch and its flowering and seed set times.
- Avoid applying water-based or polymer additive dust palliative such as lignin sulfonate for dust abatement on roads and disturbed areas within 300 feet of the mapped population of the species, as needed.
- Prepare an Erosion and Sedimentation Control Plan (ESCP) to manage construction-related ground disturbances. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants.
- Project has been designed to avoid surface disturbance in mapped populations of the Columbia milkvetch.
- Implement the noxious weed control plan to limit further spread of noxious weeds in the MPE. Noxious weeds will be controlled in compliance with Revised Code of Washington (RCW) 17.10.140 and the Noxious Weed Management Plan. All herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations including RCW 17.21. In compliance with RCW 17.10.140, weed control will only use herbicides that are approved for use in the state of Washington by the United States Environmental Protection Agency and Washington State Department of Agriculture.
- Limit the use of herbicides within 200 feet of the mapped Columbia milkvetch populations and individual Columbia milkvetch. Herbicide spraying will not be conducted when winds are greater than 15 miles an hour.

8.0 Summary of Effects and Significant Unavoidable Impacts After Mitigation

Impacts to the Columbia milkvetch populations will be avoided by placement of facilities and panels outside the Columbia milkvetch-mapped populations.

9.0 References

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Appendix A. Agency Consultation Log

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Appendix B. IPaC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
Phone: (360) 753-9440 Fax: (360) 753-9405
http://www.fws.gov/wafwo/

In Reply Refer To: January 21, 2022
Consultation Code: 01EWFW00-2022-SLI-0504
Event Code: 01EWFW00-2022-E-01270
Project Name: High Top Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated and proposed critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. The species list is currently compiled at the county level. Additional information is available from the Washington Department of Fish and Wildlife, Priority Habitats and Species website: http://wdfw.wa.gov/mapping/phs/ or at our office website: http://www.fws.gov/wafwo/species_new.html. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether or not the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). You may visit our website at http://www.fws.gov/pacific/eagle/for information on disturbance or take of the species and information on how to get a permit and what current guidelines and regulations are. Some projects affecting these species may require development of an eagle conservation plan: (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Also be aware that all marine mammals are protected under the Marine Mammal Protection Act (MMPA). The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas. The importation of marine mammals and marine mammal products into the U.S. is also prohibited. More information can be found on the MMPA website: http://www.nmfs.noaa.gov/pr/laws/mmpa/.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Related website:
National Marine Fisheries Service: http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

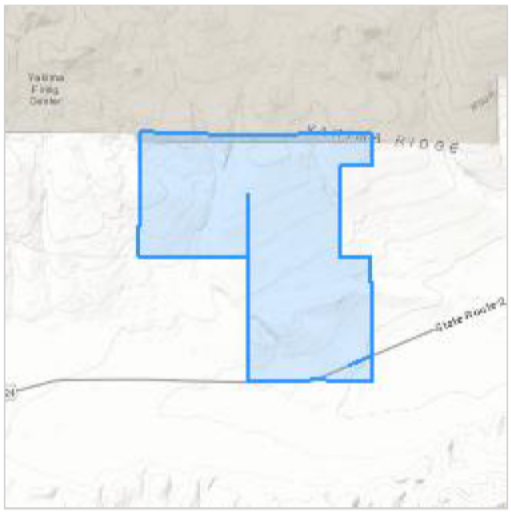
This species list is provided by:

Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
(360) 753-9440

Project Summary

Consultation Code: 01EWFW00-2022-SLI-0504
Event Code: Some(01EWFW00-2022-E-01270)
Project Name: High Top Solar Project
Project Type: POWER GENERATION
Project Description: Proposed 80MW Solar Site
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.53416085,-119.98888410000521,14z



Counties: Yakima County, Washington

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout *Salvelinus confluentus* Population: U.S.A., conterminous, lower 48 states There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8212	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Yakima County, Washington

Local office

Washington Fish And Wildlife Office

(360) 753-9440
(360) 753-9405

510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263

http://www.fws.gov/wafwo/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Gray Wolf Canis lupus — Endangered
U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico.
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/4488

Gray Wolf Canis lupus — Proposed Endangered
Western Distinct Population Segment
No critical habitat has been designated for this species.

North American Wolverine Gulo gulo luscus — Proposed Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5123

Birds

NAME	STATUS
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **proposed** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE.

"BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Long-billed Curlew Numenius americanus
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

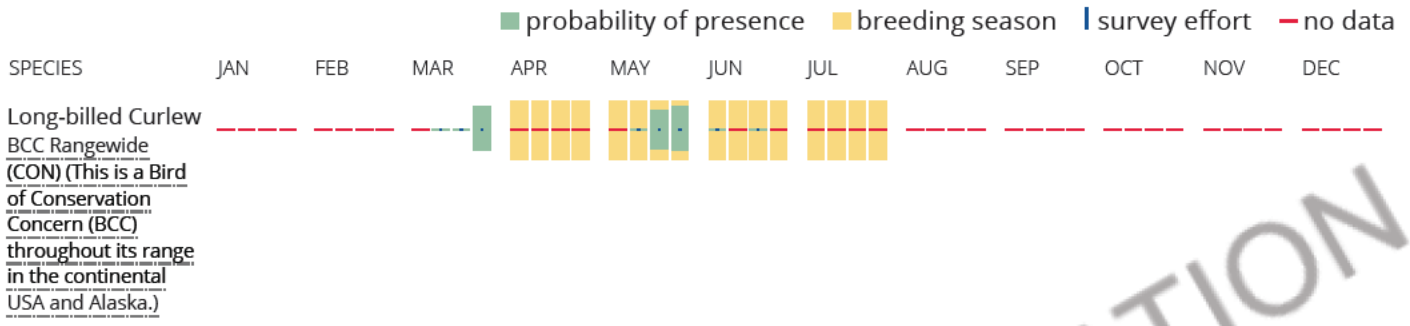
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix C. Plant List

Appendix C. May and July 2021 Surveys Plant List for the High Top Project
Yakima County, Washington

Scientific Name	Common Name	Family	Native
Achillea millefolium	Yarrow	Asteraceae	Yes
Agoseris heterophylla	Annual agoseris	Asteraceae	Yes
Agropyron cristatum	Crested wheat	Poaceae	No
Amsinckia intermedia	Common fiddleneck	Boraginaceae	Yes
Antennaria parvifolia	Small-leaved pussytoes	Asteraceae	Yes
Artemisia tridentata	Big sagebrush	Asteraceae	Yes
Astragalus columbianus	Columbia milkvetch	Fabaceae	Yes
Astragalus purshii	Wolly-pod milk-vetch	Fabaceae	Yes
Astragalus speirocarpus	Medick milkvetch	Fabaceae	Yes
Balsamorhiza careyana	Carey's balsamroot	Asteraceae	Yes
Bromus tectorum	Cheatgrass	Poaceae	No
Castilleja sp.	Paintbrush	Orobanchaceae	Yes
Ceratocephala testiculata (Ranunculus testiculatus)	Bur (curveseed) buttercup	Ranunculaceae	No
Chaenactis douglasii	Douglas' dustymaiden	Asteraceae	Yes
Chenopodium album	Lambsquarters	Chenopodiaceae	Yes
Chorispora tenella	Blue mustard	Brassicaceae	No
Chrysothamnus viscidiflorus	Yellow rabbitbrush	Asteraceae	Yes
Clematis sp.	Clematis	Ranunculaceae	Yes
Convolvulus arvensis	Bindweed	Convolvulaceae	Yes
Conyza canadensis	Horseweed	Asteraceae	Yes
Crepis atribarba	Slender hawksbeard	Asteraceae	Yes
Crepis intermedia	Limestone hawksbeard	Asteraceae	Yes
Delphinium nuttallianum	Upland larkspur	Ranunculaceae	Yes
Descurainia pinnata	Tansy mustard	Brassicaceae	Yes
Descurainia sophia	Flixweed	Brassicaceae	No
Elymus elymoides	Squirreltail	Poaceae	Yes
Epilobium brachycarpum	Tall annual willowherb	Onagraceae	Yes
Erigeron concinnus	Navajo fleabane	Asteraceae	No
Erigeron linearis	Desert yellow daisy	Asteraceae	Yes
Eriogonum ovalifolium	Cushion buckwheat	Polygonaceae	Yes
Erodium cicutarium	Redstem stork's bill	Geraniaceae	No
Foeniculum vulgare	Sweet fennel	Apiaceae	No
Hesperostipa comata	Needle and thread grass	Poaceae	Yes
Hirschfeldia incana	Shortpod mustard	Brassicaceae	No
Kochia scoparia	Kochia	Amaranthaceae	No
Koeleria macrantha	Junegrass	Poaceae	Yes

Scientific Name	Common Name	Family	Native
Krascheninnikovia lanata	Winterfat	Chenopodiaceae	Yes
Lappula occidentalis	Western stickseed	Boraginaceae	Yes
Lepidium draba	Hoary whitetop (cress)	Brassicaceae	No
Lepidium perfoliatum	Clasping pepperweed	Brassicaceae	No
Lomatium farinosum	Northern biscuitroot	Apiaceae	Yes
Lomatium grayi	Pungent desert parsley	Apiaceae	Yes
Lupinus argenteus	Silvery lupine	Fabaceae	Yes
Machaeranthera (Dieteria) canescens	Hoary tansyaster	Asteraceae	Yes
Mentzelia albicaulis	Whitestem blazingstar	Loasaceae	Yes
Nestotus stenophyllus	Narrowleaf goldenweed	Asteraceae	Yes
Nothocalais troximoides	Sagebrush false dandelion	Asteraceae	Yes
Oryzopsis hymenoides	Indian ricegrass	Poaceae	Yes
Pascopyrum smithii	Western wheatgrass	Poaceae	Yes
Penstemon richardsonii	Cutleaf beardtongue	Scrophulariaceae	Yes
Phacelia linearis	Threadleaf phacelia	Boraginaceae	Yes
Phalaris arundinacea[a]	Reed canary grass	Poaceae	No
Phlox hoodii	Spiny phlox	Polemoniaceae	Yes
Phlox longifolia	Longleaf phlox	Polemoniaceae	Yes
Phlox speciosa	Showy phlox	Polemoniaceae	Yes
Phragmites australis[a]	Common reed	Poaceae	Yes/No
Poa bulbosa	Bulbous blue grass	Poaceae	No
Poa secunda	One sided blue grass	Poaceae	Yes
Pseudognaphalium stramineum	Cottonbatting plant	Asteraceae	Yes
Salsola tragus	Russian thistle	Amaranthaceae	No
Sisymbrium altissimum	Tumble mustard	Brassicaceae	No
Taraxacum officinale	Common dandelion	Asteraceae	No
Tragopogon dubius	Salsify	Asteraceae	No
Triteleia grandiflora	Large-flower tritelia	Asparagaceae	Yes
*Typha angustifolia**	Narrowleaf cattail	Typhaceae	No
*Urtica dioica**	Stinging nettle	Urticaceae	Yes
*Verbascum thapsus**	Common mullein	Scrophulariaceae	No
Zigadenus venenosus	Deathcamas	Liliaceae	Yes

[a] Species found in Wetland only

[b] Native to Washington, however the non-native genotype of phragmites is listed as noxious weed species in the State of Washington.

Appendix D. Representative Photos

Confidential - Not for Public Distribution