

Habitat Management Plan

Schnebly Coulee Solar Energy Project Kittitas County, Washington

Schnebly Coulee Solar Energy LLC

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Confidential Business Information

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1 INTRODUCTION

Schnebly Coulee Solar Energy, LLC (Schnebly Solar) has proposed the development of the Schnebly Coulee Solar Energy Project (Project) located approximately five miles (mi) east of Kittitas in Kittitas County, Washington. The Project consists of an alternating current (AC), solar photovoltaic (PV)-power generating facility which will be sited on approximately 695 acres (ac) of the 1,300 ac Project Area (Figure 1.1), with a capacity up to 90-megawatts. The Project Area overlays sections 11, 13, and 14, Township 17 North, and Range 20 East.

The Project will generate electricity using multiple arrays of PV-solar panels connected to electrical infrastructure. The PV-solar panels, known as modules, will be installed to form power blocks. Power block components will consist of the solar modules themselves, trackers, posts, cabling, inverters, transformers, and other structural or electrical components as required. The maximum height of the modules and inverters will be approximately 15 feet (ft) tall.

Underground AC electrical cables, buried to a minimum depth of 3 ft, will connect the electrical output of the Project to the substation. The cables will be arranged in several feeder circuits, with each circuit consisting of three 34.5-kilovolt (kV) single conductor cables with insulation that connect solar module blocks at each inverter and transformer to a switch in the substation. The cable lengths will vary given how far the module blocks are from the substation. The inverter circuit will be daisy-chained to collect electricity from each transformer in series. The cables may have junction boxes positioned intermittently for maintenance and cable routing design.

The Project substation will be built on the southeast portion of the Project Area to minimize the length of the transmission line. From the Project substation, an overhead 230 kV transmission generation-tie (gen-tie) line will connect to the Poison Springs Switchyard and be approximately 3.6 mi in length.

Western EcoSystems Technology, Inc. (WEST) developed this Habitat Management Plan (HMP) to provide a consolidated summary of the Project's efforts to characterize bird, small mammal, big game, and habitat resources within the Project Area, assess potential Project impacts, and to document conservation measures that have been or will be taken to avoid, minimize, and/or mitigate for those potential impacts. The HMP was developed to address the requirements stated in the Kittitas County Critical Areas regulations (17A Kittitas County Code [KCC]17A.04.060), Kittitas County Solar Power Overlay (17 KCC 17.61C), and Washington Administrative Code (WAC) 197-11 (2022). In the absence of federal guidance for commercial-scale solar projects, Project specific studies followed a tiered approach consistent with the *Land-Based Wind Energy Guidelines* (WEG; U.S. Fish and Wildlife Service [USFWS] 2012). Similarly, in the absence of state guidance for commercial-scale solar projects, studies and conservation measures were informed by the Washington Department of Fish and Wildlife (WDFW) *Wind Power Guidelines* (2009).

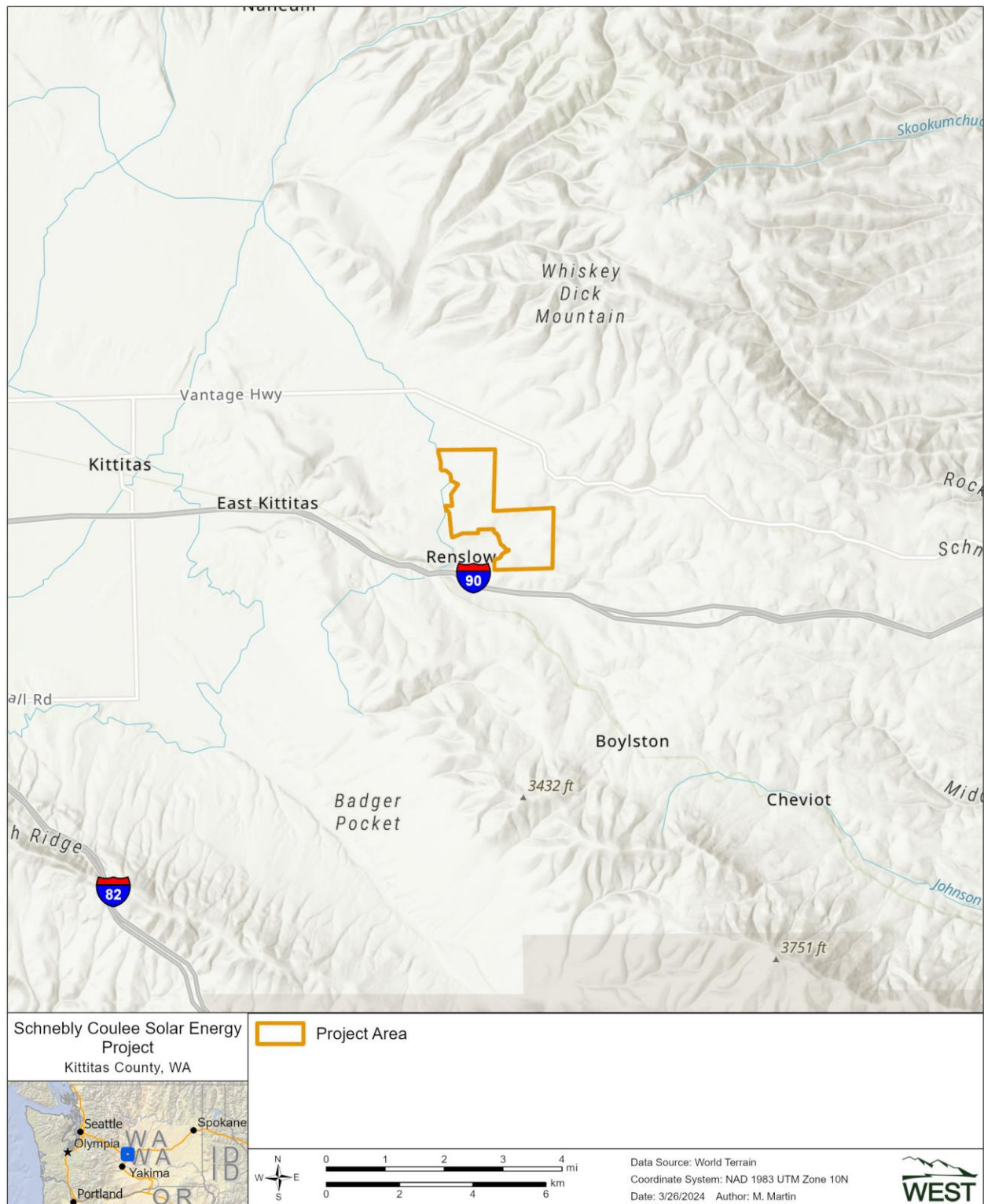


Figure 1.1. Location of the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

This HMP presents an analysis suitable to fully support KCC regulation 17A (2021) and Solar Power Overlay (17 KCC 17.61C; Kittitas County 2022), and includes the following major sections:

- Regulatory setting and agency correspondence;
- Desktop and field studies of wildlife and habitat resources;
- Potential impacts to birds, bats, big game, and aquatic resources;
- Wildlife conservation measures during siting, design and construction, operations and maintenance (O&M), and reclamation and decommissioning; and
- Compensatory mitigation.

This HMP will cover the anticipated 25-year functional life of the Project and potential extended operations for an additional 25 years and/or decommissioning of the Project. Schnebly Solar will update this HMP, as needed, throughout the Project's life. Should the Project be re-powered at the end of the Project's expected life, the HMP will remain in effect until the Project is decommissioned.

2 PURPOSE

The objectives of the HMP are as follows:

- Characterize wildlife and habitat resources and describe baseline conditions for bird, small mammals, big game, and habitat resources present within the Project Area from desktop and field studies.
- Document agency correspondence during development of the Project.
- Specify conservation measures that, when implemented during construction, operation, maintenance, and decommissioning at the Project, will avoid and minimize potential impacts for avian, small mammals, big game, and habitat resources located on and adjacent to the Project Area.
- Describe mitigation to offset potential impacts to wildlife and habitat resources.

3 REGULATORY POLICIES AND COORDINATION

Schnebly Solar maintains a commitment to work cooperatively to minimize adverse impacts to protected wildlife. Through the planning stages of the Project, Schnebly Solar and its consultants closely coordinated with federal and state agency personnel to identify required wildlife studies and establish siting considerations to ensure all parties understand the scope of the Project and potential issues identified and addressed during the planning process. Schnebly Solar will continue to work with the agencies to implement conservation measures intended to avoid, minimize, and/or mitigate potential impacts to wildlife and habitat resources, including those presented in this HMP.

3.1 Federal Regulations

3.1.1 Endangered Species Act

The federal Endangered Species Act of 1973 (Endangered Species Act 16 U.S. Code [USC] 1531 et seq. [1973]) provides for the listing, conservation, and recovery of endangered and threatened species. The USFWS implements the Endangered Species Act to conserve terrestrial species and resident fish species. Section 9 of the Endangered Species Act prohibits the unauthorized take of listed species. Under the Endangered Species Act, “take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” a listed species (Endangered Species Act 3(19); 16 USC 1532 (19) [1973]). The term “harm” has been further defined in agency regulations to mean habitat modification that kills or injures a federally listed species (50 Federal Register [FR] 39681 [September 30, 1985]).

3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA; 16 USC 703-712 [1918]) prohibits the take of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. Under the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 Code of Federal Regulations [CFR] 10.12 [1973]). The USFWS maintains a list of all species protected by the MBTA (50 CFR 10.13 [1973]). This list includes over 1,000 species of migratory birds, including eagles and other raptors, waterfowl, shorebirds, seabirds, wading birds, and passerines. At present, there is no MBTA permit authorizing the incidental or non-purposeful take of an MBTA-protected species.

On May 7, 2021, the USFWS issued a proposed rule for regulations governing take of migratory birds (86 FR 24573). This proposed rule would reinstate prohibitions for incidental take of migratory birds listed under the MBTA, and prosecutorial discretion would once again be used to determine violations. On October 4, 2021, the USFWS announced a final rule that confirms the USFWS will be reverting to the prosecutorial discretion model commonly used prior to 2016 (86 FR 54642). Currently, no permit is available for incidental take of MBTA species. However, the USFWS also announced an Advanced Notice of Proposed Rulemaking (86 FR 54667 [October 4, 2021]) regarding a permit program under the MBTA. Development of an Environmental Impact Statement is currently underway.

3.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (BGEPA; 16 USC 668-668d [1940]) prohibits the take of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles unless authorized by a permit. Under the BGEPA, take is defined as “...to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, or molest or disturb” (50 CFR 22.6 [1974]). The term “disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle; 2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (50 CFR 22.6 [1974]).

The BGEPA authorizes the Secretary of the Interior to permit the take of bald or golden eagles for several defined purposes, including when “necessary to permit the taking of such eagles for the protection of wildlife [...] or other interests in any particular locality” (16 USC 668a [1940]). Based on this authority, the USFWS published a final rule (Eagle Permit Rule) on September 11, 2009 (50 CFR 22.80 [2009]), authorizing permits for the take of bald eagles and golden eagles where take: 1) is compatible with the preservation of the bald and golden eagle, 2) is associated with and not the purpose of an otherwise lawful activity, and 3) cannot practicably be avoided.

On May 2, 2013, the USFWS published the *Eagle Conservation Plan Guidance* (ECPG; USFWS 2013) to assist wind energy developers in avoiding, minimizing, and mitigating risks to eagles during the construction and operation of a wind energy facility. The ECPG interpreted and clarified the permit requirements in the regulations at 50 CFR 22.80 (2009) and 22.85 (2009), but it did not impose any binding requirements beyond those specified in the regulations.

Effective January 17, 2017, the 2009 Eagle Permit Rule (74 FR 46836 [September 11, 2009]) was replaced by a new rule governing eagle take permits (2016 Eagle Rule; 81 FR 91494 [December 16, 2016]). The new rule adjusted the standards, maximum duration, and requirements for eagle take permits.

On February 12, 2024, the USFWS released revised permit regulations for incidental take of eagles under 50 CFR 22 (2024 Eagle Rule; 89 FR 9920 [February 12, 2024]), which will take effect 60 days after publication in the Federal Register. The 2024 Eagle Rule introduced a “general permit” program for authorizing incidental take of eagles, including general permit options for permitting power lines and certain activities that may cause bald eagle disturbance or nest take. Disturbance or nest take for golden eagles can be authorized under a “specific permit” under the 2024 Eagle Rule.

3.2 State Regulations

3.2.1 State Environmental Policy Act

Enacted in 1971, the Washington State Environmental Policy Act (SEPA; Revised Code of Washington [RCW] 43.21C; WAC 197-11) establishes the framework for Washington State and local agencies to consider the environmental consequences of a proposal before making decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies, or plans. Information provided during the SEPA review process helps agency decision-makers, applicants, and the public understand how a proposal would affect the environment. The SEPA lead agency is typically the local city or county government agency that receives the first application from the project proponent or the local jurisdiction where the greatest portion of the project is located.

A SEPA checklist was completed for this Project and will be included with the Kittitas County Conditional Use Permit application. Section B.5 of the SEPA checklist includes details regarding

threatened or endangered species known on or near the Project; proximity to a migration route, or other measures to preserve or enhance wildlife on the site; and a list of all invasive animal species present at the Project.

3.3 Kittitas County Code

3.3.1 Solar Power Production Facilities

As outlined in the Kittitas County *Comprehensive Plan*, Kittitas County established Solar Power Production Facilities (SPPF) guidance and an overlay map (17 KCC 17.61C; Kittitas County Ordinance 2018-018 and 2019-004) to identify and preserve prime agricultural land and designate areas appropriate for siting solar power facilities. Specifically, the purpose and intent of 17 KCC 17.61C is "...to establish a process for recognition and designation of properties in Kittitas County suitable for the location of SPPF, to protect the health, welfare, safety, and quality of life of the general public, to allow for development while protecting existing agricultural resources and rural character, to comply with the goals and requirements of the Washington State Growth Management Act, and to ensure compatibility with land uses in the vicinity of these facilities..." (Kittitas County Ordinance 2018-018).

The SPPF overlay map is divided into three Solar Overlay Zones (1–3), each with specific restrictions and siting requirements based on land designations in the Washington State Department of Agriculture (WSDA) agricultural land use geodatabase. The zones are organized as follows:

- **Zone 1:** Lands designated by the WSDA as agricultural land uses.
- **Zone 2:** Lands that are not designated by WSDA as agricultural land uses.
- **Zone 3:** Lands that are not designated by WSDA as agricultural land uses and are outside of irrigation district boundaries.

The Project Area occurs in Zone 2 (12.8%) and Zone 3 (87.2%; Figure 3.1).

3.3.2 Critical Areas – Fish and Wildlife Habitat Conservation Areas

The Washington Growth Management Act of 1990 (36 RCW 36.70A) requires that Kittitas County adopt and periodically update regulations based on the best available science, as defined by 365 WAC 365-195, that protect five types of critical areas. These critical areas are:

- Fish and Wildlife Habitat Conservation Areas (FWHCAs)
- Wetlands
- Critical aquifer recharge areas
- Frequently flooded areas
- Geologically hazardous areas

Kittitas County adopted a Critical Areas Ordinance (17A KCC 17A) on December 7, 2021, which was implemented on February 7, 2022. The purpose of the Critical Areas Ordinance is to establish

regulations pertaining to development that protect designated critical areas. The regulations (as defined by 17A KCC 17A.01.010) are intended to do the following:

1. “Prevent degradation of critical areas;
2. Conserve, protect, and (where feasible) restore critical areas and their functions and values;
3. Protect unique, fragile and/or valuable elements of the environment, including ground and surface waters, anadromous fish species, and other fish and wildlife and their habitats;
4. Protect the public health, safety, and general welfare from hazards associated with critical areas;
5. Further the goals and objectives of the Kittitas County *Comprehensive Plan* and all of its elements;
6. Implement the goals and requirements of the Washington Growth Management Act;
7. Allow for reasonable use of all properties in Kittitas County.”

Kittitas County requires an HMP when development is proposed within or adjacent to a known FWHCA (as defined by 17A KCC 17A.04.020 and 365 WAC 365-190-130). The HMP requirement may be waived on a case-by-case basis if the Director determines there are no potential impacts on designated species or habitats resulting from proposed development. FWHCAs can be designated in areas where, among other considerations, endangered, threatened, or sensitive species have a primary association or where state priority habitats and species occur. The Project Area contains wetlands and is within FWHCAs for mule deer (*Odocoileus hemionus*), white-tailed jackrabbit (*Lepus townsendii*), and American badger (*Taxidea taxus*; Figure 3.2).

Additionally, Washington Administrative Code allows WDFW to designate FWHCAs (Revised Code of Washington [RCW] 36.70A.505 and 36.70A.190; WAC 365-190-130) and recommends counties and cities classify and designate FWHCAs as part of land use planning. When classifying and designating FWHCAs, counties and cities are required to consult current information on WDFW priority habitats and species (PHS). WDFW PHS includes federal and state threatened, endangered, and candidate species as well as other vulnerable and unique species and habitats. WDFW has identified that the Project overlaps habitat suitable for loggerhead shrike (*Lanius ludovicianus*), sagebrush sparrow (*Artemisiospiza nevadensis*), sage thrasher (*Oreoscoptes montanus*), black-tailed jackrabbit (*Lepus californicus*), elk (*Cervus canadensis*), and Townsend’s ground squirrel (*Urocitellus townsendii*), in addition to overlapping the FWHCAs referenced above (Figure 3.2).

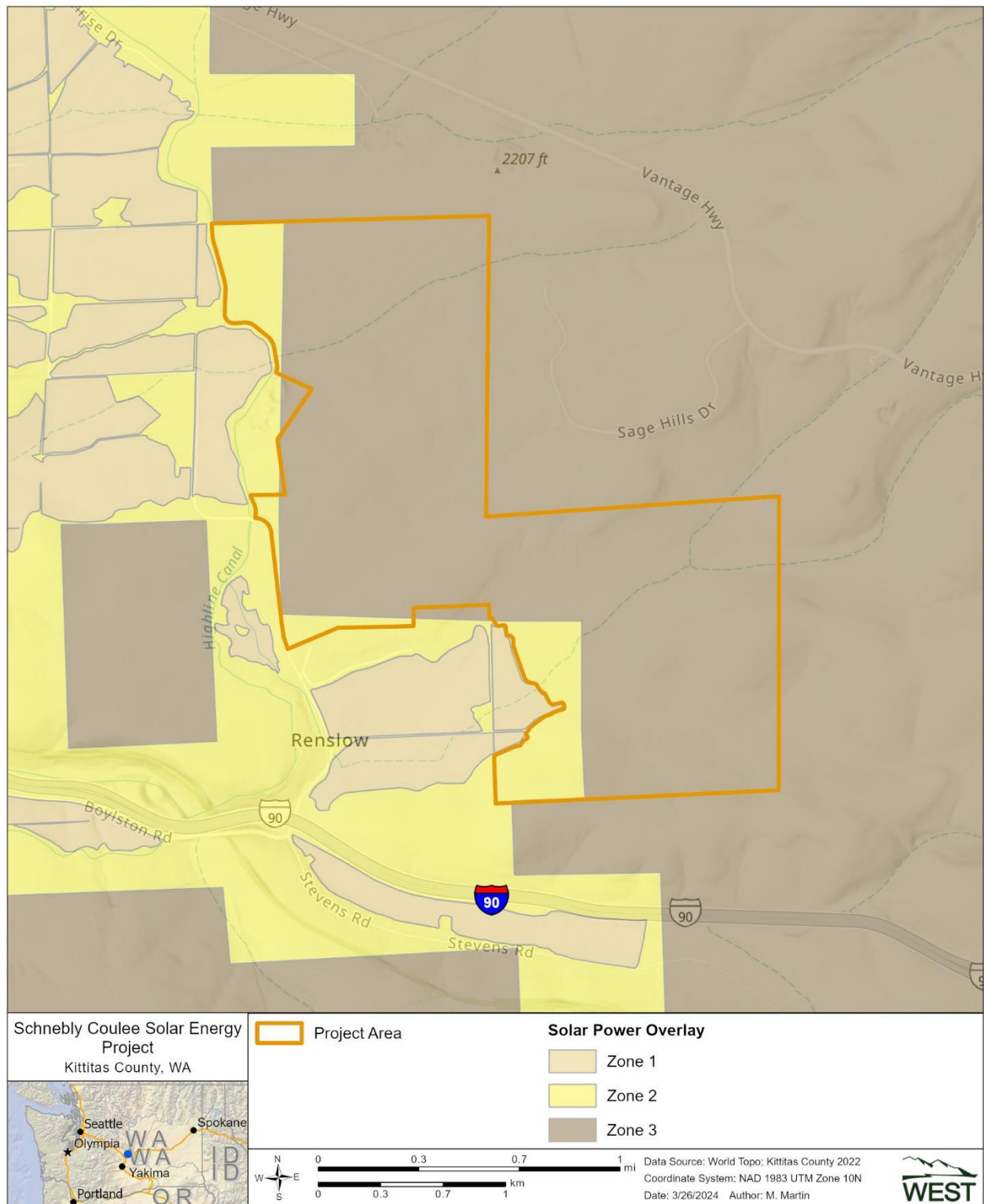


Figure 3.1. Solar Power Overlay Zones in relation to the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

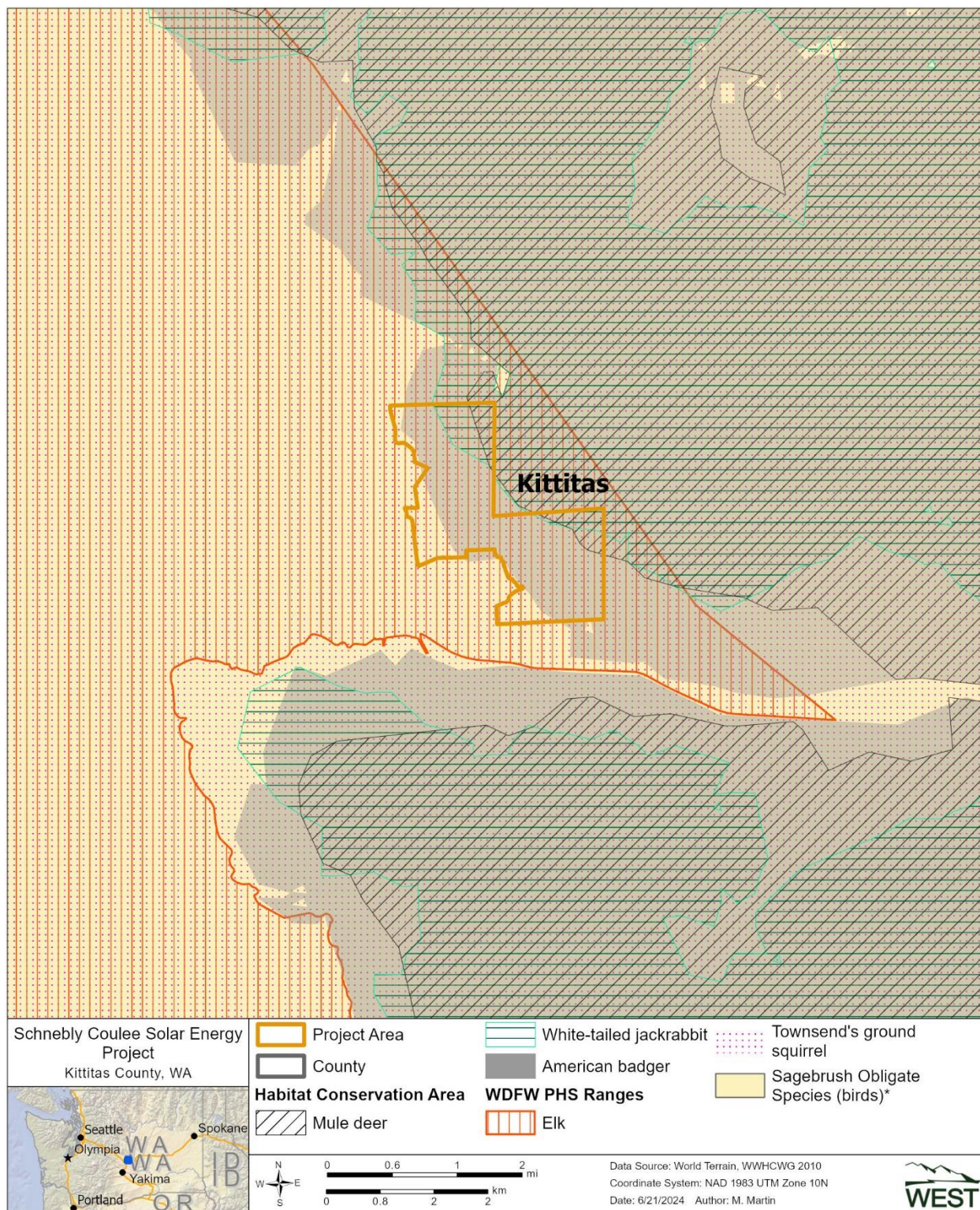


Figure 3.2. Habitat Conservation Areas and WDFW Priority Habitats and Species ranges in relation to the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

* Sagebrush Obligate Species (birds) = species whose ranges overlap the entire extent of the figure including loggerhead shrike, sagebrush sparrow, and sage thrasher.

3.3.2.1 Priority Habitats and Species

The Priority Habitats and Species (PHS) program is the WDFW's primary means of transferring fish and wildlife information from WDFW resource experts to local governments, landowners, and others who use it to protect habitat (WDFW 2021). As stated above, the WAC refers to PHS in sections pertaining to critical area ordinances (as defined by 17 KCC 17A.02.590 and 17A.02.600) and FWHCAs, specifically to include the following:

- **"State priority habitats and areas associated with state priority species.** The state Department of Fish and Wildlife should be consulted for current listing of priority habitats and species."
- **"Habitats and species of local importance.** Kittitas County recognizes that the priority habitats and species designated by the WDFW that occur within the County are locally important and are hereby designated as habitats and species of local importance."

Schnebly Solar, in coordination with WDFW and Kittitas County, will mitigate for impacts to PHS (see Section 7.0).

3.4 Agency Coordination

Communications with agencies regarding protected natural resources impacts and mitigation began in September 2018 and are summarized below:

- September 6, 2018: Washington Project Meeting; Agency in attendance: WDFW and USFWS
Summary: The objective was to provide WDFW and USFWS with an overview of upcoming wind and solar projects in Washington, including the Project. An overview of the Project was provided and a list of species of concern that may be in the Project Area was requested. WDFW mentioned Townsend's ground squirrel (*Spermophilus townsendii*), sagebrush-obligate songbirds, burrowing owl (*Athene cunicularia*), possibly greater sage-grouse (*Centrocercus urophasianus*), and elk (*Cervus canadensis*) migration would be WDFW's concern. WDFW put specific species concerns in writing in an email to Schnebly Solar in November 2018.
- January 14, 2019: WDFW PHS request by Enercon Services, Inc. (Enercon); Agency in attendance: WDFW
Summary: Enercon made a formal request to the WDFW PHS to obtain rare, threatened, and endangered plant and animal records for the Project Area (Enercon 2019). Data were received on January 22, 2019, containing all records within 1 mi of the Project Area.

- March 4, 2019: Project Meeting; Agency in attendance: WDFW
Summary: The objective was to provide WDFW with an overview of Tier 1 and Tier 2 Site Characterization Study (SCS), and plans for Tier 3 sensitive species surveys. The agencies concurred with Tier 3 survey methodology that followed WDFW survey protocols, confirmed Washington Department of Natural Resources was consulted for rare plants, and made recommendations on minimization strategies, such as wildlife-friendly fencing, revegetating efforts with native grasses, and was pleased the Project was sited to avoid impacting a big game migration corridor to the L.T. Murray Wildlife Area Complex.
- July 19, 2023: Project Coordination Meeting; Agency in attendance: WDFW and USFWS
Summary: The objective was to provide agencies with a summary of development timeline, Tier 1 and 2 SCS results (Enercon 2019), and results of Tier 3 surveys, including Wetlands and Other Waters (WOW) Delineation (Environmental Science Associates [ESA] 2024a); raptor nest survey, habitat mapping, and threatened, endangered, and sensitive species (TESS) surveys (ESA 2024b). It is important to note that the Project Area changed from 625 ac in the SCS (Enercon 2019) to 1,200 ac in the WOW Delineation, with an additional land parcel added equaling 1,300 ac in the Project Area as of July 2023. The agencies did not express significant concern regarding current findings presented for Tier 3 results but reiterated the need for additional discussions around shrub steppe mitigation once the project footprint/layout was close to final.
- September 7, 2023: Project Mitigation Meeting; Agency in attendance: WDFW
Summary: The objective of the meeting was to discuss habitat mitigation at the Project with WDFW. Habitat types were agreed upon and draft mitigation acreages and ratios were presented by Schnebly Solar. It was noted that a site visit was still needed for the additional 60 ac noted in the July 19, 2023, meeting. WDFW thanked Schnebly Solar for scaling down the developed area within the Project Area and for placing solar infrastructure within fenced in segments allowing for habitat connectivity and wildlife movement. WDFW requested time to discuss internally prior to providing feedback to Schnebly Solar.
- October 11, 2023: Mitigation Meeting Follow-up; Agency in attendance: WDFW
Summary: The objective of the meeting was for WDFW to provide feedback regarding proposed avoidance, minimization and mitigation measures presented at September 7, 2023, meeting. WDFW requested Schnebly Solar consolidate solar arrays and fence the Project as a whole rather than segments. Additional mitigation options were discussed including off-site seed propagation and establishment of conservation easements. Schnebly Solar and WDFW agreed to reconvene following consideration of WDFW feedback.
- November 30, 2023: Stream Typing Site Visit; Agency in attendance: WDFW
Summary: The objective of the meeting was for WDFW to assess streams within the northern portion of the Project to confirm stream typing and results in the WOW report (ESA 2024a). WDFW confirmed the ephemeral drainages 1, 2 and 3 do not meet the definition of Typed waters-Ns, Np or F.
- December 19, 2023: Mitigation Meeting Continued; Agency in attendance: WDFW

Summary: The objective of the meeting was for Schnebly Solar to present updated, proposed mitigation for the Project to WDFW and discuss incorporation of feedback received during the previous meeting on October 11, 2023. Schnebly Solar proposed layout revisions and fencing modifications consistent with WDFW recommendations. Additionally, proposed conservation easements, mitigation acreage and perimeter fencing specifications, offsite seed propagation, and fencing in areas of the Project per WDFW request were presented by Schnebly Solar. WDFW to discuss/consider internally.

- January 29, 2024: Layout and Mitigation Follow-up; Agency in attendance: WDFW

Summary: The objective of the meeting was for WDFW to provide feedback to Schnebly Solar regarding the previously proposed layout and mitigation plan for the Project presented in the December 19, 2023 meeting. WDFW requested Schnebly Solar to coordinate with Kittitas Reclamation District (KRD) to ensure Project fencing plans and KRD's upcoming efforts to install elk exclusionary fence along the irrigation canal adjacent to the Project were in alignment. WDFW also would provide preferred perimeter fencing designs for Schnebly Solar consideration and requested a site visit to potential conservation easements in spring to look at current habitat conditions.

- February 16, 2024: Fencing Coordination Meeting; Agency in attendance: WDFW and KRD

Summary: The objective of the meeting was to discuss modifications to the Project fencing design to accommodate a KRD fence along the canal, to the west of the Project. Additionally, the purpose of the meeting was to address the remaining fencing-related questions posed by WDFW to close out coordination ahead of permit submittal. Schnebly Solar proposed modification of fencing design to include a big game corridor to accommodate KRD plans for adjacent exclusionary elk fence and jump out location and incorporation of WDFW preferred elk perimeter fencing specs as feasible. The meeting concluded with WDFW thanking Schnebly Solar for coordinating and modifying fence lines where requested. Schnebly Solar and WDFW agreed to work to finalize the mitigation plan at the upcoming spring site visit.

- April 2, 2024: Site Visit; Agency in attendance: WDFW

Summary: The objective of the meeting was to conduct a site visit with WDFW of the proposed conservation easements to assess the quality of habitat and discuss potential uplift measures to support finalizing the HMP for the Project. Uplift ideas for the conservation easements considered during the site visit included collecting sagebrush prior to construction for replanting in offsite areas, noxious weed treatments, possible firebreaks, and installation of mountain bluebirds (*Sialia currucoides*) boxes.

- April 24 – June 18, 2024: WDFW Comments and Responses to Draft HMP

Summary: The objective of the correspondence was to address WDFW comments on the draft HMP and include agreed upon revisions in the HMP for WDFW final approval. WDFW requested including additional PHS species in discussion of Kittitas County CAO and that the Project Area is of high conservation value according to the Least Conflict Solar Siting tool. WDFW requested incorporation of the transmission line disturbance into mitigation and that clarification be added to reflect all land cover being treated as PHS shrubsteppe for consistency in mitigation. WDFW asked about adding wildlife features like bluebird boxes and considering fuel breaks as uplift measures for the conservation easements. Schnebly Solar agreed to update the HMP to include additional PHS species within the requested sections, Least Conflict Solar Siting tool habitat classifications, clarification that all habitat in the Project was being considered PHS shrubsteppe with respect to mitigation, incorporation of potential uplift measures discussed in early April 2024 site visit, and updated mitigation tables to reflect transmission line disturbance. Invenergy provided the updated disturbance and mitigation calculation tables with transmission line incorporated for WDFW review.

4 TIERS 1–3 DESKTOP AND FIELD STUDIES

To identify potential biological resource issues early in Project development, several desktop and field studies have been conducted for the Project (Table 4.1). A summary of all objectives, methods, and results of these studies are provided below.

Table 4.1. Summary of desktop and field surveys at the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

Survey Date	Survey	Reference	Summary of Findings
March 2019	Site Characterization Study	Enercon Services, Inc. 2019	Identified shrub/scrub steppe, grasslands, and list of special-status species that may occur.
March 2023	Wetlands and Other Waters Delineation Report	ESA 2024a	Identified five wetlands, six ephemeral drainages, and one intermittent irrigation canal within the Project Area.
August 2023	Wildlife and Habitat Survey Report	ESA 2024b	Identified eight special-status species and one occupied-active raptor nest. Shrubsteppe was the dominant habitat mapped.

ESA = Environmental Science Associates.

4.1 Tier 1 and 2 Site Characterization Study

The objective of the SCS was to identify potential wildlife or sensitive habitat issues within the Project Area, as stated in the USFWS WEG Tier 1 and Tier 2, and conduct a coarse-scale assessment as defined in the WDFW *Wind Power Guidelines*. The Project Area evaluated for the SCS was 625 ac (hereafter, the 625-ac Project Area) of the 1,300-ac comprising the current Project Area. The SCS was based on existing information obtained from publicly available

sources including reports, published literature, online databases, and geographic information system data, as well as a field reconnaissance visit on February 5 – 7, 2019 (Enercon 2019).

4.1.1 Methods

4.1.1.1 Desktop Analysis

A USFWS Information for Planning and Consultation (IPaC) report was generated for the 625-ac Project Area and 20-mi Study Area (USFWS 2019a) and WDFW PHS data (WDFW 2019a) for records of special-status species within 1 mi of the 625-ac Project Area (Appendix A of Enercon 2019). For purposes of the SCS, special-status species included state and federal candidate, threatened, and endangered species; federal species of concern; bald and golden eagles; WDFW PHS, species identified in *Washington's State Wildlife Action Plan* (WDFW 2015); Washington Natural Heritage Program (WNHP) plant species; and other species that were identified during agency consultations as requiring consideration (Enercon 2019). The analysis areas in the SCS differed by natural feature of interest as described in Table 4.2.

Table 4.2. Analysis area buffers for Site Characterization Study at the Schneibly Coulee Solar Energy Project, Kittitas County, Washington.

Natural Feature of Interest	Analysis Area Buffer (miles)
Land cover	5
Wetlands and riparian areas	2
State, federal, and special status lands	20
Federal- and state- protected species	20
Eagle nests	10
Bat hibernacula	20
Bat maternity colonies	5
USGS Breeding Bird Survey routes	20
National Audubon Society Christmas Bird Counts	20
Raptor nests	5

Source: Enercon Services, Inc. 2019.

USGS = U.S. Geological Survey.

Additional sources were consulted to make a determination on whether there was suitable habitat and potential impacts in the analysis areas. The following sources provided additional information on species, such as habitat preferences, morphological characteristics, and species' ranges.

- U.S. Geological Survey (USGS) National Land Cover Database (NLCD; USGS 2011, Homer et al. 2015)
- USGS National Map (2016)
- USGS Gap Analysis Program Protected Areas of the U.S. database (2016)
- USFWS National Wetlands Inventory (NWI) website (2019)
- USGS National Hydrography Dataset (NHD; 2016)
- Federal Emergency Management Agency Floodplains (2019)
- USFWS IPaC system (2019a)
- USFWS Environmental Conservation Online System Species Profiles (2019b)
- WDFW PHS (WDFW 2019a)
- USFWS Birds of Conservation Concern (2008)

- USGS Breeding Bird Surveys (USGS 2001, Pardieck et al. 2018)
- Christmas Bird Counts (National Audubon Society [Audubon] 2019a)
- Important Bird Areas (IBA; Audubon 2019b)
- eBird, an online database of bird distribution and abundance (2019)
- Bat Conservation International (2016)
- WDFW SalmonScape (2019b)
- WDFW *Periodic Review for the Greater Sage-Grouse in Washington* (Stinson 2016)
- *Washington's State Wildlife Action Plan* (2015)
- Washington Native Plant Society (2019)
- WNHP (2018)
- WSDA (2017)

4.1.1.2 Field Reconnaissance

A field reconnaissance was conducted on February 5 – 7, 2019, to conduct a coarse-scale ground truth of NLCD land cover types, and areas where land cover types provide habitat for special-status species. Specifically, potential habitat for state- and federally listed species were evaluated during the site reconnaissance. During the field reconnaissance, the biologist also recorded wildlife species observed and documented any habitats, land features, and land use practices that could indicate the potential for eagles, raptors, bats, and special-status bird species to occur in the Project Area.

4.1.2 Results

4.1.2.1 Land Cover and Wetlands and Riparian Areas

Land cover within the 625-ac Project Area was a mixture of shrub/scrub (79%), grassland/herbaceous (18%), developed, open space (2%), and cultivated crops (less than 1%; Enercon 2019). All habitat is designated as shrubsteppe according to WDFW PHS layers (WDFW PHS 2022). The site visit confirmed the land cover types identified from desktop review were generally consistent with habitat observed within the 625-ac Project Area. However, grasslands within the 625-ac Project Area were highly disturbed and did not represent natural grasslands. USGS NHD and USFWS NWI data were used to map water features in the 625-ac Project Area and multiple rivers and a freshwater pond totaling 6.5 ac (1%) of the total land cover were found (Enercon 2019).

4.1.2.2 State-managed, Federally Administered, and Other Special Status Lands

There are two state-managed wildlife areas, L.T. Murray Wildlife Area Complex and Wenas Wildlife Area, located within 20 mi of the Project Area (i.e., Study Area; Enercon 2019). There are no state- or federally managed lands within the Project Area (Enercon 2019). The Quilomene-Colockum Audubon IBA is located 0.52 mi northeast of the Project Area.

4.1.2.3 Federal and State-protected Species

The likelihood of a federal- and state-listed endangered wildlife/plant species or threatened wildlife species occurring in the Project or Study areas was based on current and historical distributions, and habitat associations (Table 4.3). Two plant species, 12 avian species, four mammals, and

two amphibians listed as sensitive, threatened, state-candidate, or PHS have the potential to occur in the Project Area (Appendix A of Enercon 2019). Species observed during the site reconnaissance included bald eagle (protected under the BGEPA) and loggerhead shrike (*Lanius ludovicianus*; state candidate species).

4.1.2.4 Big Game

Big game species such as mule deer and Rocky Mountain elk (*Cervus canadensis nelsoni*) are monitored and managed by WDFW and are recognized as PHS species. The Project Area is adjacent to WDFW-designated winter range for mule deer and elk and the Quilomene migration corridor (Enercon 2019). The desktop review mapped likely habitat for mule deer and elk within the Project Area (Enercon 2019).

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
Birds							
bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA	Bald eagles forage near water and steppe/shrubsteppe habitats spring, summer, fall, and winter. Nests are made in large trees during spring and summer (USFWS 2019a, 2019b).	Occurs	Occurs	Occurs	Occurs
Columbian sharp-tailed grouse	<i>Tympanuchus phasianellus columbianus</i>	ST	Habitat consists of perennial bunchgrasses, forbs, and shrubs. In Washington, prefers riparian areas with deciduous trees and shrubs that provide cover and winter habitat (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
common loon	<i>Gavia immer</i>	SS	Habitat includes remote freshwater lakes. The species is sensitive to human disturbance (Enercon 2019).	None	None	None	None
ferruginous hawk	<i>Buteo regalis</i>	ST*	Shrubsteppe habitat offers possible foraging area, although no ferruginous hawks were observed during the site reconnaissance (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
flamulated owl	<i>Psilosops flammeolus</i>	SC	Habitat includes open pine (Pinus spp.) forest at generally high elevations. Can be found in the ponderosa pine (Pinus ponderosa) zone of the Cascades and Blue Mountains (Enercon 2019).	None	None	None	None
golden eagle	<i>Aquila chrysaetos</i>	BGEPA, WDFW, PHS, SC	Golden eagles favor partially or completely open country, especially around mountains, hills, and cliffs. The eagles use a variety of habitats ranging from arctic to desert, including tundra, shrublands, grasslands, coniferous forests, farmland, and areas along rivers and streams. Nests within a 10-mile radius (WDFW 2019a).	Likely	Likely	Likely	Likely

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
greater sage grouse	<i>Centrocercus urophasianus</i>	ST	Large, intact shrubsteppe habitat with sagebrush (<i>Artemisia</i> spp.) canopy and herbaceous understory. Generally, habitat consists of sage/brush bunchgrass communities with medium to high canopy cover and a diverse grass understory (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
Lewis's woodpecker	<i>Melanerpes lewis</i>	SC	Habitat includes scattered or logged forest, river groves, burns, and foothills. Often found in cottonwood groves and open pine-oak (<i>Pinus-Quercus</i> spp.) woods (Enercon 2019).	None	None	None	None
loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Habitat includes semi-open country with lookout posts, and grassland or desert with a few scattered trees or large shrubs (Enercon 2019).	Occurs	Occurs	Occurs	Occurs
marbled murrelet	<i>Brachyramphus marmoratus</i>	FT	Marbled murrelets require late successional forest with specific nest tree characteristics. The Project is outside of the species' critical habitat (USFWS 2019a, Enercon 2019).	None	None	None	None
northern goshawk	<i>Accipiter gentilis</i>	SC	Habitat includes mature and old-growth forests with more than 60% closed canopy. Goshawks hunt inside the forest or along its edge. Generally restricted to wooded areas (Enercon 2019).	None	None	None	None
sagebrush sparrow**	<i>Artemisiospiza nevadensis</i>	SC	Habitat includes vast windy sagebrush steppe, dry bushy foothills, chaparral, and deserts (Enercon 2019).	Likely	Likely	Likely	Likely

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
sage thrasher**	<i>Oreoscoptes montanus</i>	SC	Habitat includes dense sagebrush with scattered bunchgrasses and bare ground. Breeds almost entirely in sagebrush areas. Widespread in migration and winter (Enercon 2019).	Likely	Likely	Likely	Likely
Vaux's swift	<i>Chaetura vauxi</i>	SC	Relies on large hollow trees to nest. Usually found in old-growth forest. Forages over forests, grasslands, and aquatic habitats (Enercon 2019).	None	None	None	None
white-headed woodpecker	<i>Picoides albolarvatus</i>	SC	Habitat includes pine forest in western mountains. Often uses large well decayed snag for nesting and roosting. The woodpeckers forage on the bark of ponderosa pines (Enercon 2019).	None	None	None	None
yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT	Yellow-billed cuckoos use wooded habitats with dense cover and water. Nests are often placed in willows (<i>Salix</i> spp.) along streams and rivers. The Project is outside of the species' critical habitat (USFWS 2019a, Enercon 2019)	None	None	None	None
Mammals							
black-tailed jackrabbit	<i>Lepus californicus</i>	SC	Species inhabits shrubsteppe habitat. Distribution is concentrated in the semi-arid Columbia Plateau. Areas used include habitat with sagebrush and rabbitbrush (Enercon 2019).	Occurs	Occurs	Occurs	Occurs

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
gray wolf	<i>Canis lupus</i>	FE	Gray wolves are habitat generalists and can occupy almost any habitat where adequate prey is available, and human caused mortality is limited. Wolves are limited by availability of disturbance-free habitat. Wolves are primarily found in forested landscapes with adequate prey (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
Merriam's shrew	<i>Sorex merriami</i>	SC	Habitat includes various grassland, including grasses in sagebrush scrub and pinyon-juniper (<i>Pinus-Juniperus</i> spp.) woodlands. It prefers drier habitats than those used by other shrews. It may utilize burrows and runways of other animals (Enercon 2019).	Possible	Possible	Possible	Possible
mule deer	<i>Odocoileus hemionus</i>	WDFW, PHS	Rocky Mountain mule deer inhabit areas east of the Cascades in Washington, preferring open forests and sagebrush meadows. The deer thrive at the interface of openings and cover patches. Found on the Quilomene Deer Wintering Range (WDFW 2019a).	Occurs	Occurs	Occurs	Occurs
North American wolverine	<i>Gulo gulo luscus</i>	FPT	The wolverine is a carnivore that occupies arctic, alpine, and subalpine habitats. In Washington, the wolverine occurs in the alpine and subalpine habitats of the Cascades, Blue Mountains, and Rocky Mountains. The wolverine lives in rugged, remote country, spending most of the time in high elevations near or above the timberline (Enercon 2019).	None	None	None	None

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
Rocky Mountain elk	<i>Cervus canadensis nelsoni</i>	WDFW, PHS	Rocky Mountain elk occur primarily in the mountain ranges and shrublands east of the Cascades crest. Elk are hardy animals that have few physiological needs for cover. Ideal elk habitat includes productive grasslands, meadows, or clearcuts interspersed with closed-canopy forests. Year-round ranges for Rocky Mountain elk vary from 2,500 to 10,000 acres, and usually includes distinct summering and wintering areas. Found on the Quilomene Elk Wintering Range (WDFW 2019a).	Occurs	Occurs	Occurs	Occurs
Townsend's big eared bat	<i>Corynorhinus townsendii</i>	SC	Habitat includes pine forests and desert scrub habitats near caves or other roosting areas. These bats occupy a broad range of arid and moist habitats (Enercon 2019).	Possible	Possible	Possible	Possible
white-tailed jackrabbit	<i>Lepus townsendii</i>	SC	Habitat includes open prairie and plains, and shrublands among pine forests. Where in competition with black-tailed jackrabbit, this species tends to move to higher elevations (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
Fish							
bull trout	<i>Salvelinus confluentus</i>	FT	Bull trout breed in cold water and require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. The Project is outside of the species' critical habitat (USFWS 2019b).	None	None	None	None

Table 4.3. Wildlife species of concern, status, preferred habitat, and potential seasons of occurrence for species known or likely to occur within the Schneibly Coulee Solar Energy Project Area, Kittitas County, Washington as reported by Enercon (2019).

Wildlife Type/ Common Name	Scientific Name	Status	Habitat by Season Equivalent National Land Cover Database Land Cover Types	Seasons of Potential Occurrence and Likelihood of Occurrence			
				Spring	Summer	Fall	Winter
Herpetofauna							
Columbia spotted frog	<i>Rana luteiventris</i>	SC	Habitat includes lakes, ponds, and marshes. It is highly aquatic and rarely found away from permanent quiet water (Enercon 2019).	None	None	None	None
western toad	<i>Anaxyrus boreas</i>	SC	Habitat includes mountain meadows to desert flats common around marshes and small lakes. It digs burrows in loose soil or uses the burrows of small mammals (Enercon 2019).	Unlikely	Unlikely	Unlikely	Unlikely
Plants							
pauper milkvetch	<i>Astragalus misellus</i> var. <i>pauper</i>	Sens; Sens	Located in Kittitas County, and found in western margin of the Columbia Basin. Usually found with sagebrush (WNHP 2018).	Likely	Likely	Likely	Likely
snowball cactus	<i>Pediocactus nigrispinus</i>	Sens; Sens	Located in Kittitas County. Found in the higher deserts of the pacific northwest (WNHP 2018).	Possible	Possible	Possible	Possible

* Species uplisted from state threatened (ST) to state endangered (SE; WDFW 2023)

** Species observed during site visit on April 2, 2024.

BGEPA = Bald and Golden Eagle Protection Act of 1940; FE = federally endangered; FPT = federally proposed threatened; FT = federally threatened; PHS = Priority Habitat and Species; SC = state candidate; Sens = sensitive, vulnerable or declining and could become Threatened or Endangered in Washington; Sens = sensitive; all USFWS candidate and delisted species and WNHP species of concern ranked S1, S1S2, S1S3, S2, or S2S3 found on at least one U.S. Forest Service or Bureau of Land Management managed area in Washington (WNHP 2020); SS = state sensitive species; ST = state threatened; WDFW = Washington Department of Fish and Wildlife; WNHP = Washington Natural Heritage Program; USFWS = U.S. Fish and Wildlife Service

4.2 Tier 3 Surveys

In 2023, ESA conducted a desktop analysis and field wetland delineation of all WOW (ESA 2024a) and field surveys for TESS and habitats (*Wildlife and Habitat Survey Report*) within the Project Area (ESA 2024b; Table 4.1). The Project Area evaluated for the WOW and TESS surveys included the 625-ac Project Area and additional parcels for a total of 1,300 ac defining the Project Area. A summary of the objectives, methods, and results of these studies are provided below.

4.2.1 Wetlands and Other Waters Delineation

The objectives of the WOW Delineation conducted by ESA (2024a), was to describe the extent of all wetlands and waters within the Project Area and identify features with potential to be considered Water of the U.S. (WOTUS) as defined by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency and subject to the Clean Water Act of 1972 (CWA; Section 404; 33 USC 1344) and Rivers and Harbors Act (Section 10; 33 USC 403) and identify “waters of the State” regulated under Washington State law. This delineation report adheres to regulatory requirements described in 17A KCC 17A.07 – Critical Areas, Wetlands (Kittitas County 2021). USACE, not applicants or the applicants’ consultants, determines whether a wetland is a WOTUS, which are regulated under the federal CWA (33 USC 1251-1387 [1972]). If USACE determines a wetland is not subject to the CWA, the wetland may still be a “water of the State” and subject to regulation by Ecology and local jurisdictions.

4.2.1.1 Methods

A WOW Delineation of the Project Area was performed on October 18 – 21, 2022, and October 23, 2023, following the wetland delineation manual and regional supplement provided by USACE, as well as guidance provided in the *Appendix H – Checklist & Sample Outline for a Delineation Report*, developed by Ecology, which is based on reporting guidance developed by USACE and published in *Components of a Complete Wetland Delineation Report*. Given the Project is in Central Washington, the *Arid West Regional Supplement* and associated datasheet and plant indicator list were used. Guidance to identify and delineate streams included (ESA 2024a).

4.2.1.2 Results

Delineated features within the Project Area included five wetlands, six ephemeral drainages without an ordinary high water mark, and one intermittent stream (i.e., irrigation canal). Details of each resource are described in Table 4.4 and shown in Figure 4.1. Wetland 1 was determined to be potentially jurisdictional by ESA. The remaining four wetlands were determined to be unlikely federally jurisdictional, but likely jurisdictional by the State. All ephemeral drainages were determined to be unlikely federally or state jurisdictional as none of the ephemeral streams met the criteria defined in either the current guidelines for defining WOTUS (USEPA 2023) or Kittitas CAO 17A.04.020 to be considered a water of the State. Additionally, a site review was completed with WDFW on November 30, 2023 for which WDFW provided confirmation that ephemeral drainages 1, 2 and 3 do not meet the definition of Typed waters-Ns, Np or F (CU-24-00003 Appendix H - WDFW Record on Stream Typing).

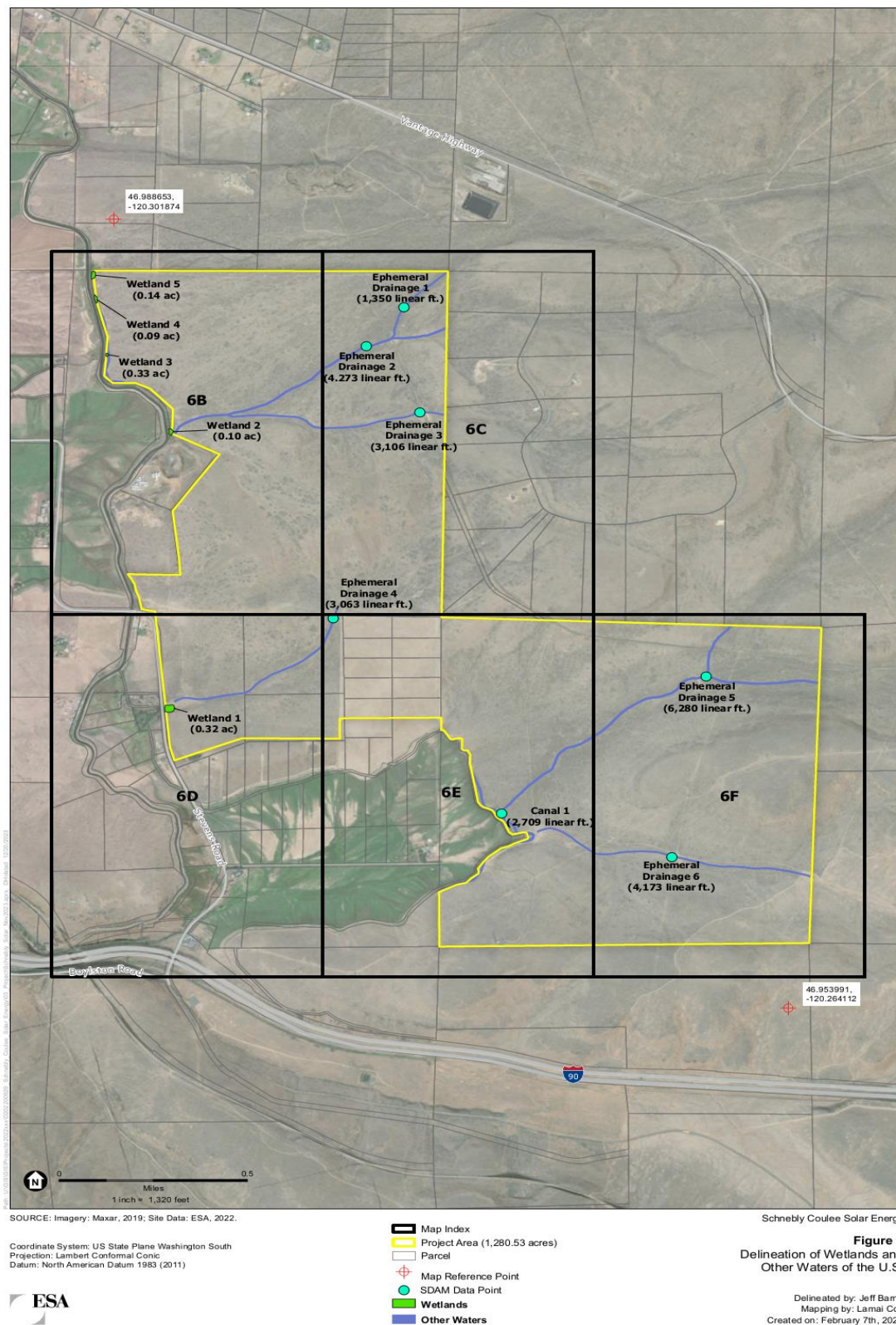


Figure 4.1. Delineation of Wetlands and Other Waters in the Project Area at the Schnebly Coulee Solar Energy Project, Kittitas County, Washington, on October 18 – 21, 2022, and October 23, 2023.

Table 4.4. Field delineation summary of findings in the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington, October 18 – 21, 2022.

Water Resource	Delineated Size in Project Area	Cowardin Class	HGM Class	Potentially Jurisdictional? (Ecology/USACE)
Wetland 1	0.32 ac	PEM1h	Depressional	Yes/Yes
Wetland 2	0.10 ac	PEM1h	Depressional	Yes/No
Wetland 3	0.33 ac	PEM1h	Depressional	Yes/No
Wetland 4	0.09 ac	PEM1h	Depressional	Yes/No
Wetland 5	0.14 ac	PEM1h	Depressional	Yes/No
Ephemeral Drainage 1	1,350 linear ft	N/A	N/A	No/No
Ephemeral Drainage 2	4,273 linear ft	N/A	N/A	No/No
Ephemeral Drainage 3	3,106 linear ft	N/A	N/A	No/No
Ephemeral Drainage 4	3,063 linear ft	N/A	N/A	No/No
Ephemeral Drainage 5	6,280 linear ft	N/A	N/A	No/No
Ephemeral Drainage 6	4,173 linear ft	N/A	N/A	No/No
Canal 1	2,709 linear ft	R4SB3x	N/A	No/No

ac = acre; Ecology = Washington Department of Ecology; ft = foot; HGM = Hydrogeomorphic Classification; N/A = not applicable; PEM = Palustrine emergent wetland; R4SB3x: Riverine, Intermittent, Streambed, Cobble-Gravel, Excavated; USACE = U.S. Army Corps of Engineers.

Classification from Cowardin et al. 1979.

4.2.2 Threatened, Endangered, or Sensitive Wildlife Species Surveys

The objective of the TESS surveys were to conduct pre-construction field surveys for special-status species within the Project Area (ESA 2024b). Wildlife and plant species likely to occur in the Project Area compiled during the SCS (Enercon 2019), along with input from the WDFW, were used to design field surveys for TESS. WDFW and USFWS identified species of interest to include Townsend's ground squirrel, burrowing owl, and pauper milkvetch (*Astragalus misellus* var. *pauper*).

4.2.2.1 Methods

TESS surveys were conducted during three survey periods: April 26 – 28, May 16 – 18, and October 23 – 24, 2023, and followed WDFW and USFWS species and taxon specific guidelines (ESA 2024b). In brief, biologists walked wandering, informed transects within the Project Area scanning for sign or observation of focal species. In addition to transect surveys, separate surveys tailored for each focal species were conducted following species-specific protocols. In brief, surveys to identify and determine occupancy of ground squirrel burrows and colonies followed WDFW approved protocols outlined in *Status and Habitat Use of the Washington Ground Squirrel (Spermophilus washingtoni) on State of Oregon Lands* (Morgan and Nugent 1999) for areas of unknown occupancy of Washington ground squirrels. Surveys for burrowing owls aimed to identify the extent of occupied burrows within the Project Area following protocols outlined in the California Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines* (1993). Surveys for pauper milkvetch were to document the location of individual plants within the Project Area and followed the Intuitive Controlled Survey method outlined in *Survey Protocols for Survey and Manage Strategy 2 Vascular Plants* (Whiteaker et al. 1998). See ESA (2024b) for additional details.

4.2.2.2 Results

No observations or evidence of Townsend's ground squirrel, burrowing owl, or pauper milkvetch was observed during TESS surveys. Nine special-status species, including four state candidate species (sage thrasher, sagebrush sparrow, loggerhead shrike, and black-tailed jackrabbit) were observed during TESS surveys. Although Townsend's ground squirrels and burrowing owls were not detected during TESS surveys, these species are "known to be present in the greater vicinity" of the Project (WDFW personal communication, 2024). Additional species observations included five Birds of Conservation Concern (USFWS 2008), short-eared owl (*Asio flammeus*), sage thrasher, grasshopper sparrow (*Ammodramus savannarum*), prairie falcon (*Falco mexicanus*), and northern harrier (*Circus hudsonius*). Signs of mule deer and elk, which are designated as PHS were also observed in the Project Area (ESA 2024b). Both sage thrasher and sagebrush sparrow were also detected during the April 2024 site visit.

4.2.3 Raptor Nest Surveys

The objective of the raptor nest surveys was to locate and document raptor nests and determine territory occupancy and breeding status within the Project and Raptor Nest Study areas (0.5-mi buffer around the Project; ESA 2024b).

4.2.3.1 Methods

The ground-based raptor nest surveys were conducted by two ESA biologists from April 26 – 28, 2023, in accordance with guidance outlined in the WEG, *Wind Power Guidelines*, ECPG, and the *Updated Eagle Nest Survey Protocol* (USFWS 2020). The Spring 2023 survey effort coincided with the breeding season for raptors in the region (USFWS 2007). The entirety of the Project area was included within the Raptor Nest Study area assessed during the April 2023 survey.

4.2.3.2 Results

One raptor nest was identified within the Project Area and determined to be an occupied and active red-tailed hawk (*Buteo jamaicensis*) nest. No other raptor nest structures were recorded within the Project or 0.5-mi Raptor Nest Study area including those that appeared in poor condition, abandoned, or inactive.

4.2.4 Habitat Mapping

The objective of habitat mapping was to characterize and map general habitat types within the Project Area to inform siting and mitigation requirements for potential temporary and permanent impacts to habitat resulting from Project development. Habitat types were consistent with those described by the WDFW PHS List (2019a) and included shrubsteppe, eastside steppe, and freshwater wetlands (ESA 2024b).

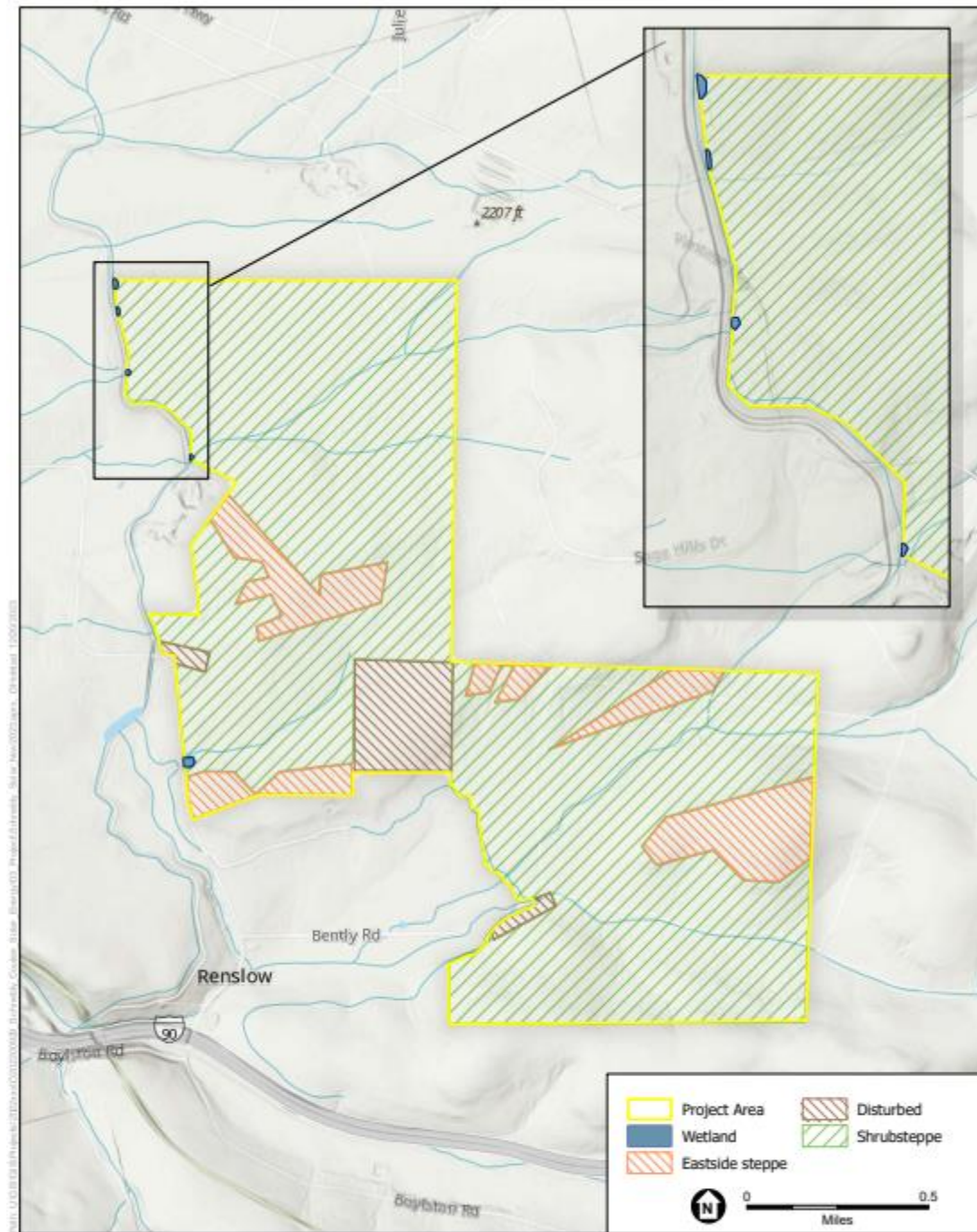
4.2.4.1 Methods

Habitat types were mapped using aerial imagery and field verified by qualified ESA biologists on April 26 – 28, 2023, May 16 – 18, 2023, and October 23 – 24, 2023. Following field verification, an ESA geographic information system specialist digitalized final habitat designations and created a habitat map of the Project Area (ESA 2024b).

4.2.4.2 Results

The dominant habitat type in the Project Area was shrubsteppe (1,072 ac, 84% composition of the Project Area), consisting of native shrub species including big sagebrush (*Artemisia tridentata*), rabbit brush (*Ericameria nauseosa*), and bitterbrush (*Purshia tridentata*). Eastside steppe (146 ac, 11% composition of the Project Area) was present in patches throughout the Project Area and consisted of native bunchgrasses including Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), and needle-and-thread grass (*Hesperostipa comata*) with a low density of shrubs. However, areas field identified as eastside steppe, are being considered shrubsteppe with respect to mitigation in accordance with Schnebly Solar and WDFW coordination. Disturbed land (61 ac, 5% of Project Area) existed in isolated patches along the northwestern and southwestern border, and throughout the central portion of the Project Area and consisted of areas that were developed, cultivated, grazed, and/or dominated by non-native grasses and forbs and were predominantly comprised of bare ground and non-native weedy species including diffuse knapweed (*Centaurea diffusa*), cheatgrass (*Bromus tectorum*), Russian thistle (*Salsola tragus*), field mustard (*Brassica rapa*), and clasping pepperweed (*Lepidium perfoliatum*).

Wetlands (less than 1 ac, less than 1% composition of Project Area) were characterized in a previous WOW report (ESA 2024a) and existed along the northwestern border of the Project Area (Figure 4.2). A non-native invasive plant species, cheatgrass was present throughout the Project Area while other weedy species were mainly confined to areas of ground disturbance present along fence-lines, double-track roads, and disturbed land habitats.



SOURCE: Basemap: Esri; Habitats & Study Area: ESA.

Schnebly Coulee Solar Energy

Figure 6
Habitats Map



Figure 4.2. Habitat types within the Schnebly Coulee Solar Energy Project Area, Kittitas County, Washington, reprinted from Environmental Science Associates 2024b.

5 POTENTIAL IMPACTS TO WILDLIFE AND HABITAT

Impacts to wildlife from construction and operation of a solar energy project can be direct or indirect. *Direct impacts* to wildlife resources can occur during different phases of project development (e.g., construction, operation, and decommissioning) and at different spatial scales (e.g., within or outside the Project Area). Direct impacts include wildlife fatalities resulting from interactions with facility development or infrastructure. Some potential direct impacts from PV-solar development include:

- Collisions: overhead lines, substations, PV-panels, buildings, fences, vehicle, and equipment collisions
- Avian power line interactions
- Habitat loss, fragmentation, and/or alteration during construction, operation, and decommissioning.

Indirect impacts associated with habitat loss, fragmentation, or alteration can also occur during construction, operation, and decommissioning of a facility as well. Indirect impacts can be difficult to predict, especially at locations where the impacts have not been studied. In this document, indirect impacts will focus on what could occur at the Project, particularly habitat loss and/or alteration and the potential effects of fencing disrupting wildlife movements.

This section focuses on impacts that have the potential to occur at the Project, particularly for birds, small mammals, and big game species. Information from the results of the SCS and field studies, combined with WEST's solar energy experience in the Project's region and the U.S., was used to assess potential impacts from the Project.

5.1 Birds

5.1.1 Eagles

5.1.1.1 Direct Impacts

Potential direct impacts to nesting eagles from construction and operation activities could include injury or mortality due to vehicle collisions, but the likelihood of their occurrence should be low as there are no known eagle nests within 2 mi of the Project. Although there are not currently any eagles nesting within 2 mi of the Project Area, some rim-rock cliff faces that could potentially be suitable for golden eagles nesting have been identified within 1 mi of the Project Area (Enercon 2019). Enercon (2019) also reported that the Project Area supports several small- and mid-sized mammal prey species, which could act as an eagle attractant. Bald eagles have been observed in-flight above the Project Area, but these observations were thought to be commuting individuals as the Project is located between higher quality nesting and foraging habitats along the Columbia River, Yakima River, and nearby Parke Creek drainage (Enercon 2019). No electrocution or collision risk to eagles would apply to the buried 34.5 kV collector lines. The potential for collision risk with the overhead 230 kV gen-tie transmission line would be low given the low probability of eagle use of the Project Area, the relatively low risk of raptors colliding with overhead power lines, and line collision risk for eagles has primarily been associated with crossing lines daily in

concentrated movement corridors (Olendorff and Lehman 1986, Bevanger 1994, Mojica et al. 2009, Avian Power Line Interaction Committee [APLIC] 2012). Potential direct impacts to eagles would be reduced through implementation of conservation and mitigation measures required by USFWS for protection of wildlife and other resources and management recommendations by WDFW (see Section 6).

5.1.1.2 Indirect Impacts

Indirect impacts from loss of foraging habitat for bald eagles are likely minimal given the lack of immediately nearby nesting habitat and the prevalence of higher quality aquatic foraging habitats beyond the Project Area along the Columbia and Yakima Rivers, their associated drainages, and wetland areas. Indirect impacts from loss of foraging habitat for golden eagles is higher as the Project Area hosts small- and mid-sized mammals including hares, rabbits, and numerous rodent species, which could provide a high-quality foraging ground for golden eagles (Enercon 2019). Potential indirect impacts to eagles would also be reduced through implementation of conservation and mitigation measures (see Section 6).

5.1.2 Other Birds

5.1.2.1 Direct Impacts

5.1.2.1.1 Photovoltaic Solar

Potential direct impacts to birds resulting from collisions with PV-solar panels or associated Project infrastructure is possible based on the limited studies to date. No publicly available studies of avian mortality at PV-solar facilities in Washington or the Pacific Northwest are known to exist; however, Kosciuch et al. (2020) summarized publicly available data on avian mortality at 13 PV solar facilities located in three Bird Conservation Regions (BCRs) in the Southwest U.S. between 2013 and 2018. The authors' results included 669 avian fatality detections, which included 86 identifiable species from 17 taxonomic orders over 13 "site-years" examined. The number of detections by species across all studies ranged from 1–145 individuals. Of these taxonomic orders, songbirds and pigeons/doves had the highest number of fatality detections. Other taxonomic orders with detections included raptors, hummingbirds (*Trochilidae* spp.), woodpeckers (*Picidae* spp.), and several orders of water-associated birds. Of the species identified, the most widely represented species was the mourning dove (*Zenaida macroura*), which was found at 62% (eight of 13) of site-years. The most common songbirds found were the western meadowlark (*Sturnella neglecta*) and horned lark (*Eremophila alpestris*), which were found in 54% (seven of 13) and 46% (six of 13) of site-years, respectively.

Fatalities or injuries of water-obligates (i.e., species that rely on water for takeoff and landing) and water-associated birds (i.e., species that use water for some aspect of their life history) at solar energy facilities has led some scientists to suggest a lake-effect hypothesis which suggests species might interpret solar facilities as water (Kagan et al. 2014, Walston et al. 2015, Huso et al. 2016). Kosciuch et al. (2020) determined that carcasses of water-obligate birds (e.g., grebes, loons, coots, and diving ducks) were documented in 90% of studies (n = 10) in the Sonoran and Mojave Desert (SMD) BCR, whereas water obligates were detected in 50% of studies (n = 2) in the Coastal California BCR and none of the studies (n = 1) in the Great Basin BCR. Carcasses of

water-associated birds (e.g., shorebirds) were detected at 60% of studies in the SMD BCR but none of the studies in the Coastal California BCR and Great Basin BCR.

The way aquatic habitat birds (water-obligates and water-associated birds) perceive polarized light is poorly understood. As such, the lake-effect hypothesis cannot be used to predict if water-associated bird fatalities would occur at a proposed solar project because the mechanism for any causal effect is unknown. The presence of aquatic habitat birds found as fatalities at PV-facilities in the desert/scrub habitat but not at paired reference sites provides the most compelling evidence that birds were attracted to the facility (Kosciuch et al. 2021). However, there is still uncertainty in the applicability of the lake effect hypothesis to varying geographic locations and whether it applies to all aquatic habitat birds or is limited to specific species (Kosciuch et al. 2020).

The study of avian impacts at utility-scale PV-solar facilities is an emerging science and potential correlates of risk at these facilities (e.g., Project size, bird density, proximity to habitat features) are not well understood, making quantitative predictions of fatalities at the Project difficult. However, species composition of the fatalities at existing PV-projects could be relevant for the proposed Project. There were detections of two species found at studies in Southwestern U.S. that are species of concern that occur at the Project: loggerhead shrike and sage thrasher (Enercon 2019). Habitat for the loggerhead shrike and sage thrasher are present in the Project Area.

Construction of the Project could lead to direct impacts to local avian species such as injury or mortality resulting from collisions with construction equipment in the Project Area. These impacts are unlikely under the current plan of development and the wildlife conservation measures intended to prevent these impacts (see Section 6).

5.1.2.1.2 Avian Power Line and Substation Interactions

Potential impacts assessed for power line operation included avian electrocution and collision risks; however, these risks vary, based on the line location, voltage, and configurations relative to area habitats and bird presence/use. For this Project, the 34.5 kV collector lines from the PV-modules to the Project substation will be buried, eliminating the electrocution or collision risk from these underground lines.

Electrocution risk to birds on the 230 kV gen-tie line (Figure 5.1) would not apply given line size and clearances required by the National Electrical Safety Code for 230 kV transmission lines exceed the necessary phase-to-phase and phase-to-ground clearances for the largest birds in this region (i.e., a golden eagle).

The potential risk of birds colliding with the overhead 230 kV gen-tie lines is expected to be low. This assessment is based on the proposed transmission line route (Figure 5.1) between the Project substation and the Poison Springs Switchyard, which does not bisect habitats that are known to concentrate bird use.

The potential electrocution risk to birds, mammals, or reptiles (e.g., snakes) from the Project substation operation is difficult to predict. Substations often attract songbird nesting, raven and owl use, climbing mammals, and common predators to songbird nests (eggs and chicks). This risk would only apply to the 34.5 kV low-voltage side of the substation, where clearances are smaller, and then only to wildlife large enough to make a phase-to-phase or phase-to-ground contact. Given eagles and other raptors are not common in substations, this risk would likely apply more to more common species, such as common ravens, great horned owls, and raccoons. If wildlife access and electrocution were to be documented, this would likely be sporadic and considered more of a facility operational issue.

5.1.2.2 Indirect Impacts

Construction of the Project will result in habitat impacts that could lead to indirect impacts of displacement of local avian species in the Project Area. These impacts are difficult to predict; however, as the revegetation of the disturbed habitats over time may or may not change the avian species composition using these habitats. Potential impacts to avian species would be offset through implementation of compensatory mitigation (see Section 7).

5.2 Small Mammals

Small mammals such as black-tailed jackrabbit, a Washington state candidate species, have been documented in the Project Area (ESA 2024a). Potential impacts to small mammals could include creation of additional avian predator perches from Project fencing and infrastructure or alteration of movement patterns, habitat loss and fragmentation from development, and disturbance from construction noise. No information is available on how solar development impacts small mammals however, power lines have the potential to negatively affect small mammal populations as power lines have been attributed to increased abundance of avian predators such as common ravens (*Corva corax*). The USFWS determined that there was no evidence to suggest that fencing was a substantial threat to pygmy rabbit movements, as such it is anticipated that Project fencing would have similar impacts for small mammals at the Project (75 FR 60516 [September 30, 2010]). Any potential noise disturbance during construction would be temporary and unlikely to have lasting impacts. Wildlife conservation (Section 6) and mitigation measures (Section 7) are intended to offset impacts to small mammals related to habitat loss and/or fragmentation in the Project Area resulting from development.

5.3 Big Game

The two most common impacts to big game species include loss of habitat and movement options (Sawyer et al. 2022). The security fencing required around the Project perimeter precludes any use of the enclosed habitat by big game and would result in a loss of native shrublands which are especially important for big game. Depending on the size and layout configuration, the Project may also alter or impede seasonal movements or migrations of big game. Potential winter habitat for elk and mule deer is present in the Project Area (Enercon 2019).

The Washington Connected Landscapes Project modeled habitat quality, habitat concentration areas (HCAs), resistance surfaces (ability for movement), connectivity, and linkages among HCAs for elk and mule deer throughout Washington (Washington Wildlife Habitat Connectivity Working Group 2010). The Quilomene migration corridor within the L.T. Murray Wildlife Area Complex, is designated as critical elk and mule deer winter range and is located less than a mile northeast of the Project Area. The East Slope Cascades Mule Deer Management Zone, where the Project is proposed, is a priority for WDFW because it supports a large, but generally declining, migratory population of mule deer. Further, the area has a high risk of wildfires and is losing habitat to energy development and mining operations. The northeastern edges of the Project Area overlap with one mule deer HCA (Figure 3.2) but there are no important linkages among mule deer HCAs in or near the Project Area. The Project Area does not overlap with any HCAs or important linkages for elk.

The Project Area is near several roadways, including Interstate Highway 90. Solar projects located adjacent to major highways in big game range may increase the risk of wildlife-vehicle collisions by redirecting wildlife towards roadways (Sawyer et al. 2022). The Project Area is located 0.7 mi from Highway 90, and greater than 300 ft from smaller roadways, no increase in wildlife-vehicle collisions is expected.

Pronghorn (*Antilocapra americana*) range in Washington is limited to reintroduction efforts that are currently underway on the Yakima Reservation, which is outside the Project Area. Pronghorn population numbers in Washington are very low (i.e., less than 300 individuals; Oyster et al. 2017). Based on the limited range of the species and low population numbers in Washington, pronghorn are unlikely to occur within the Project Area and no indirect impacts are anticipated for pronghorn.

Overall, there is limited overlap with mule deer HCAs, no overlap with elk HCAs in the Project Area, and little likelihood that pronghorn would be present in the area. Impacts to big game are intended to be mitigated through conservation measures (see Section 6) and compensatory mitigation (see Section 7).

5.4 Aquatic Resources

No direct or indirect impacts are expected to aquatic features identified in Section 4.2.1. Resources delineated in the field will be avoided by permanent infrastructure to the maximum extent possible.

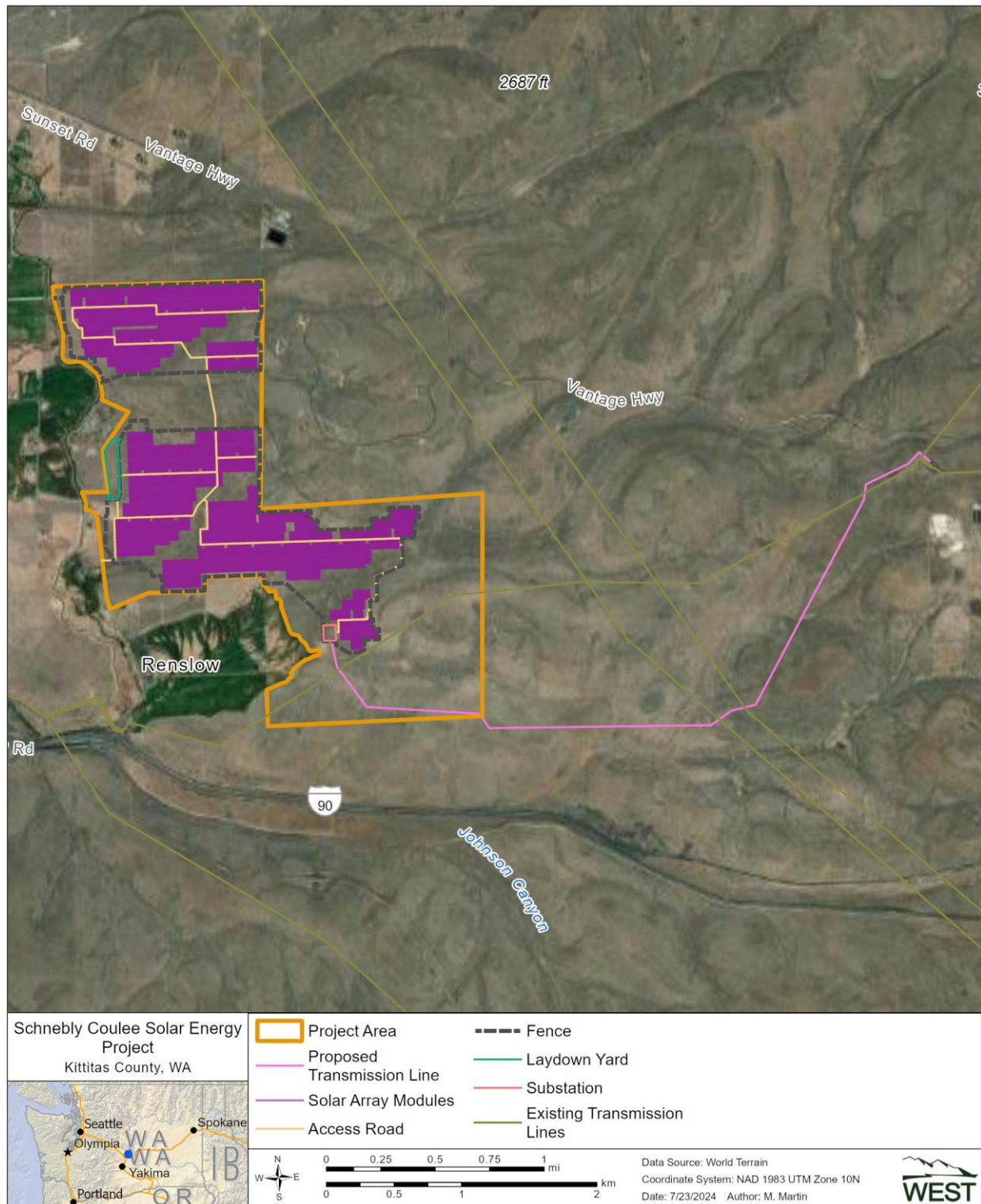


Figure 5.1. Project Area layout, proposed fencing and transmission line at the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

6 CONSERVATION MEASURES

The Project has or will implement the following conservation measures derived from federal (e.g., USFWS 2012, 2013, 2015) and state (e.g., Larsen et al. 2004, WDFW 2010) agencies or other organizations (e.g., APLIC 2006, Association of Fish and Wildlife Agencies 2023) during the full lifecycle (Larsen et al. 2004, WDFW 2010).

6.1 Project Siting

The Project was sited to avoid and minimize impacts to environmental resources to the extent possible. Macro-siting considerations for the Project include the following:

- The Project was sited in an area that is unlikely to support any state or federally threatened or endangered listed species.
- The Project was sited outside of areas designated for environmental resource conservation, such as natural area preserves and natural resources conservation areas, naturally occurring ponds or waters of the State as defined by WAC 222-16.
- The Project was sited outside of Audubon's IBA, National Wildlife Refuges, Wilderness Areas, known bird migration or stopover sites, and high concentrations of wildlife or other specially designated areas.
- The Project was sited outside of designated Critical Fish and Wildlife Habitat Conservation Areas.
- The Project was sited to avoid all wetland features.
- The Project was sited to avoid the documented red-tailed hawk nest in the northwest corner of the Project Area (ESA 2024a).

6.2 Facility Design and Construction

The following Best Management Practices (BMPs) will be incorporated into the design and construction of Project facilities, as relevant and applicable:

- Consolidation of solar panel arrays within the northwest portion of the Project Area to conserve larger contiguous swaths of quality shrubsteppe.
- Site preparation will occur in a manner to minimize grading, vegetation removal, and topsoil removal.
- All cut and fill from grading will be balanced onsite such that no fill will be imported and no soil will be exported from the site.
- Construction vehicles will limit activities to service roads, laydown areas, and locations of necessary construction activity, and will follow a 25 mi per hour speed limit.
- Construction will follow guidelines required in the Washington Construction Stormwater General Permit administered by Ecology, including use of BMPs to minimize possible impacts from erosion or other impacts to soil and water.
- Vegetation will be preserved using a drive-and-crush (primarily) or mowing (secondary) methods over excavation or grading, when possible. Drive-and-crush is a technique in which vegetation is “crushed” by vehicle and equipment tires or tracking machinery instead of being physically removed from the surface. Mow-and-go is a technique in which vegetation is mowed or cut low to the ground before construction; typically, between 1 and 3 in. Clearing or grubbing of vegetation does not occur in either scenario, which greatly improves the retention of topsoil, native vegetative cover onsite, and expedites revegetation success in semi-arid and arid environments.
- Where vegetation clearing is expected, clearing will occur outside of the migratory bird nesting season (April 1 – August 31), to the extent practicable, to avoid potential impacts to nesting birds. If Project construction commences during the migratory bird season, the Project will conduct a pre-construction nest clearance survey prior to starting construction to identify and avoid any active nests present onsite.
- Topsoil will be managed in an effort that preserves as much of the inherent material as possible. Topsoil resources will be identified using a third-party consultant to physically measure topsoil depths throughout the Project Area. Salvage quantities will be determined based on this survey to highlight how much material will need to be stripped, stockpiled, and replaced to match original depths to the extent possible. Stockpiled topsoil will be stabilized by planting a temporary seed mix into the surface and then crimping straw mulch, or applying hydromulch, over the seed. Upon completion of civil construction activities, topsoil will be returned to the surface at levels that closely match pre-construction depths, to the extent practical. Any excess topsoil will be evenly distributed over the landowner’s property from where it originated.
- The 230kV gen-tie transmission line will be constructed consistent with the recommendations of APLIC (2006, 2012) guidelines for bird protection on power lines, where applicable.

- WDFW preferred elk perimeter fencing specifications will be incorporated into the Project fencing design to the extent feasible. If possible, specifications will consist of 8-ft high elk fence, no barbed wire at the top, and composed of 12 in horizontal openings with vertical openings tapering from 8 in at the bottom and top to 3 in at the middle to allow small mammals and birds to enter/exit and to keep big game safely out. In the event constructability, safety concerns or other unforeseen circumstances prevent this design from being utilized, fencing specification will consist of 8-ft high elk fence, no barbed wire at the top, and 4-8" square openings. The substations will be separately fenced with 6-ft high security fencing with barbed wire.
- Modification of Project and fencing design to accommodate big game movement and KRD plans to install an adjacent exclusionary elk fence:
 - The Project design was modified to install a 1,300-ft-wide corridor through the northern half of the Project (Figure 5.1) to accommodate KRD planned installment of an adjacent big game jump out location and east to west movement of big game.
 - Extending perimeter fencing to abut KRD fence at the canal in the northern portion of the Project to prevent big game passage. Gates will be installed at each end of this fenced segment to allow for quick release of wildlife, if necessary.
- Fencing in areas of the Project, that would otherwise not be fenced, to prevent elk permeability and support WDFW and KRD's initiative to reduce local landowner/elk conflicts.
- Prior to construction, all supervisory construction personnel will be instructed on the HMP and 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 the resources, and to ensure that this information is disseminated to applicable contractor personnel, including the correct reporting procedures. Personnel will also be instructed on how to use an incidental reporting process to document bird or bat casualties during construction within the Project Area.
- The establishment and spread of invasive species and noxious weeds within the Project Area will be managed.
- Construction disturbance will be limited by flagging the limits of construction, and ongoing environmental monitoring will be conducted during construction to assure that flagged areas are avoided (17A KCC 17A).

6.3 Operations and Maintenance

The following BMPs will be implemented during the O&M phase of the Project, as relevant and applicable:

- All vehicle parking and storage of any spare equipment will be confined to the O&M facility area.
- Maintenance vehicles will limit activities to service roads to the extent practicable and will follow a 25 mi per hour speed limit on service roads.

- Mowing and other treatment of vegetation will be conducted only if it will help encourage desired vegetation and/or to avoid shading the panels, otherwise vegetation will be encouraged to grow up to 18 in. to provide structure and diversity for wildlife.
- If mowing is required, it will occur outside of the WDFW-recommended period of April 1 – June 30, unless a safety concern is identified, to provide for nesting habitat and to allow grasses and forbs to pollinate and set and drop seed, which will provide food to birds and wildlife (Ritter 2021).
- All noxious weeds will be managed in accordance with the Washington Weed Law of 1969 (RCW 17.10).
- All unnecessary lighting will be turned off at night to limit attracting wildlife, particularly migratory birds.
- Motion detectors or timers and hoods will be installed on exterior lights at the O&M building and substation to minimize skyward light.
- All personnel will be instructed to avoid harassment and disturbance of local plants and wildlife. Personnel will also be instructed on how to use an incidental reporting process to document bird or bat casualties during routine maintenance work and at other times that personnel are within the Project Area.

6.4 Reclamation and Decommissioning

The following BMPs will be implemented during the reclamation and decommissioning phase of the Project, as relevant and applicable:

- Reclamation will begin as soon as possible to reduce the likelihood of ecological resource impacts in disturbed areas.
- Any areas temporarily disturbed by construction or decommissioning that will not be covered with gravel or by permanent structures will be replanted with naturalized vegetation and maintained until firmly established.
 - The vegetation will consist of weed-free naturalized shrubs, grasses, and forbs from local sources, where available, to help control non-native vegetation. Planted seed will have good seed-soil contact for germination and growth rates to enable vegetation to become firmly established.
 - Develop a reseeding/restoration and a weed management plan in consultation with the Kittitas County Noxious Weed Control Board (Kittitas County Ordinance 17 RCW 17.10).

7 COMPENSATORY MITIGATION

Based on consultation with the WDFW, Schnebly Solar agreed to treat all habitat as shrubsteppe habitat with respect to mitigation of impacts at the Project (Table 7.1). Schnebly Solar will fulfill mitigation requirements by establishing Conservation Easements on two adjacent offsite properties (Poison Springs 1 and 2) and within the Project Area but outside of Project fencing (Figure 7.1).

Table 7.1. Mitigation ratios and mitigation acres for shrubsteppe habitat by disturbance type for Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

Disturbance Type	2:1 Ratio	1:1 Ratio	Total acres
Disturbed Areas (array area, inverters, roads, substation)	493	0	986
Outside Disturbed Areas, Up to the Fence ¹	0	158	158
Laydown yard ²	0	9	9
Transmission Line ³	24	0	48
Total	517	167	1,201

¹ Does not include areas that would otherwise not be fenced if not requested by WDFW.

² Temporary disturbance, outside the fence line.

³ Accounts for maximum anticipated disturbance for 3.6 miles of transmission route, including: Vegetation clearing along ROW access and power poles- ground disturbance will be minimized to the extent feasible and include a combination of drive and crush where vegetation is shorter and scraping/grading where vegetation is more dense and topography is steep. Where clearing/scraping of vegetation occurs, disturbance corridor will be 10 ft wide and a maximum of 16 ft wide along ROW access and 50-75 ft radius around power poles. A maximum of 40 power poles is assumed.

Conservation Easements would restrict use of each site for the life of the Project or the duration of impacts, including reclamation. Schnebly Solar proposes to uplift mitigation sites adjacent to, and within, the Project Area to enhance value for wildlife and plant communities and to meet WDFW standards (Table 7.2; Figure 7.1). All mitigation sites are on private land and adjacent to Bureau of Land Management parcels. A Conservation Easement would be acquired on these lands to ensure the biological integrity of the landscape. Conservation Easement would prohibit any rights to construct residential, industrial, or commercial buildings, or grow irrigated crops. Conservation Easement would allow grazing at or below current levels and would continue to utilize a seasonal grazing approach. Schnebly Solar will work closely with the landowner to ensure livestock grazing practices do not result in a reduction of baseline habitat conditions. Schnebly Solar will also work with WDFW to coordinate sagebrush harvest at the Project during the fall season prior to construction to allow for seed propagation to occur in an offsite area. Details regarding this effort will be worked out through close collaboration with WDFW in advance of site construction.

Table 7.2. Proposed Conservation Easements for the Schnebly Solar Energy Project, Kittitas County, Washington.

Mitigation Site (Conservation Easement)	Township, Range, Section(s)	Acres	Distance to Project (mi)¹
Poison Springs 1	T17 R21 S19	352	0.0
Poison Springs 2	T17 R21 S20	509	1.1
Within the Project Area	T17 R20 S11 & 13	548	n/a
Total		1,409	

¹ Closest distance in miles between Project Area and mitigation site.

mi = mile, R = Range, S = Section, T = Township.

7.1 Uplift Measures

As part of the mitigation, Schnebly Solar proposes several uplift measures to be implemented within the Conservation Easements. Schnebly Solar will continue to work closely with WDFW to review and implement uplift measures, as feasible, including:

- A noxious weed monitoring and treatment plan will be created, including mapping baseline noxious weed conditions, noxious weed treatment strategies, early detection and rapid response for novel weed populations, and monitoring every 5 years to assess treatment efficacy. Noxious weeds will be prevented and controlled as is reasonably possible by applying herbicides to established patches of target species.
- Enhancements of sagebrush habitat through seeding and/or planting native or naturalized species in areas disturbed by natural or management activities, such as herbicide treatment. To the extent feasible, livestock may be excluded from revegetated areas for two growing seasons to allow desirable vegetation to become established.
- Schnebly Solar will consider options to install and maintain a potential firebreak on the conservation easements to protect and preserve natural habitats both within and adjacent to the conservation easements. Specifics of the firebreak location, installation and maintenance will be subject to further discussions with WDFW.
- Installation of nesting boxes for mountain bluebirds (*Sialia currucoides*) within the Conservation Easements.

7.2 Monitoring Procedure

A monitoring plan will be established for mitigation sites. The monitoring plan is intended to quantitatively verify that mitigation sites meet success criteria set in the compensatory mitigation agreement. The mitigation plan will include, but is not limited to:

- Baseline habitat categorization study prior to construction of the Project and implementation of mitigation requirements, including mapping habitat types and noxious weeds in the easement areas. The baseline study will establish repeatable methods to quantitatively measure habitat conditions, such as target native vegetation, shrub cover, and noxious weeds, as the conditions pertain to success criteria listed below. Vegetative cover will be assessed using appropriate methods (e.g., drone-derived imagery, lidar, line-intercept or plot surveys) to determine progress toward meeting success criteria).
- Repeatable photo points or equivalent method by a qualified investigator (e.g., botanist, wildlife biologist, range specialist).
- A monitoring schedule including photo point monitoring and vegetation monitoring as necessary to assess progress toward success criteria.
- A reporting plan and guidelines for adaptive management will be sent to WDFW.

7.3 Success Criteria

Mitigation of Project impacts may be considered successful if Schnebly Solar or Conservation Easement holder protects or enhances sufficient habitat within mitigation areas to meet compensatory mitigation goals, per requirements from the WDFW Requiring or Recommending Mitigation Policy (1999). Schnebly Solar may demonstrate success based on evidence that habitat quality at mitigation sites was uplifted by any means of the following where possible:

- Uplift and maintain vegetative cover above baseline conditions.
- Reduce and prevent noxious weed establishment at mitigation sites.
- Reduce cover of exotic annual grasses below baseline conditions.

7.4 Adaptive Management

If cover of native vegetation at mitigation sites degrades below baseline conditions, as determined during scheduled monitoring, Schnebly Solar shall describe if/why maintenance actions were not effective and then propose and implement adaptive management. Schnebly Solar will protect the quantity and quality of habitat within mitigation areas for the life of the Project.

If Schnebly Solar cannot demonstrate that the mitigation sites are trending toward the habitat quality goals within 5 years, Schnebly Solar will propose adaptive management that may include additional noxious weed treatments, supplemental planting or seeding, or other vegetation management.

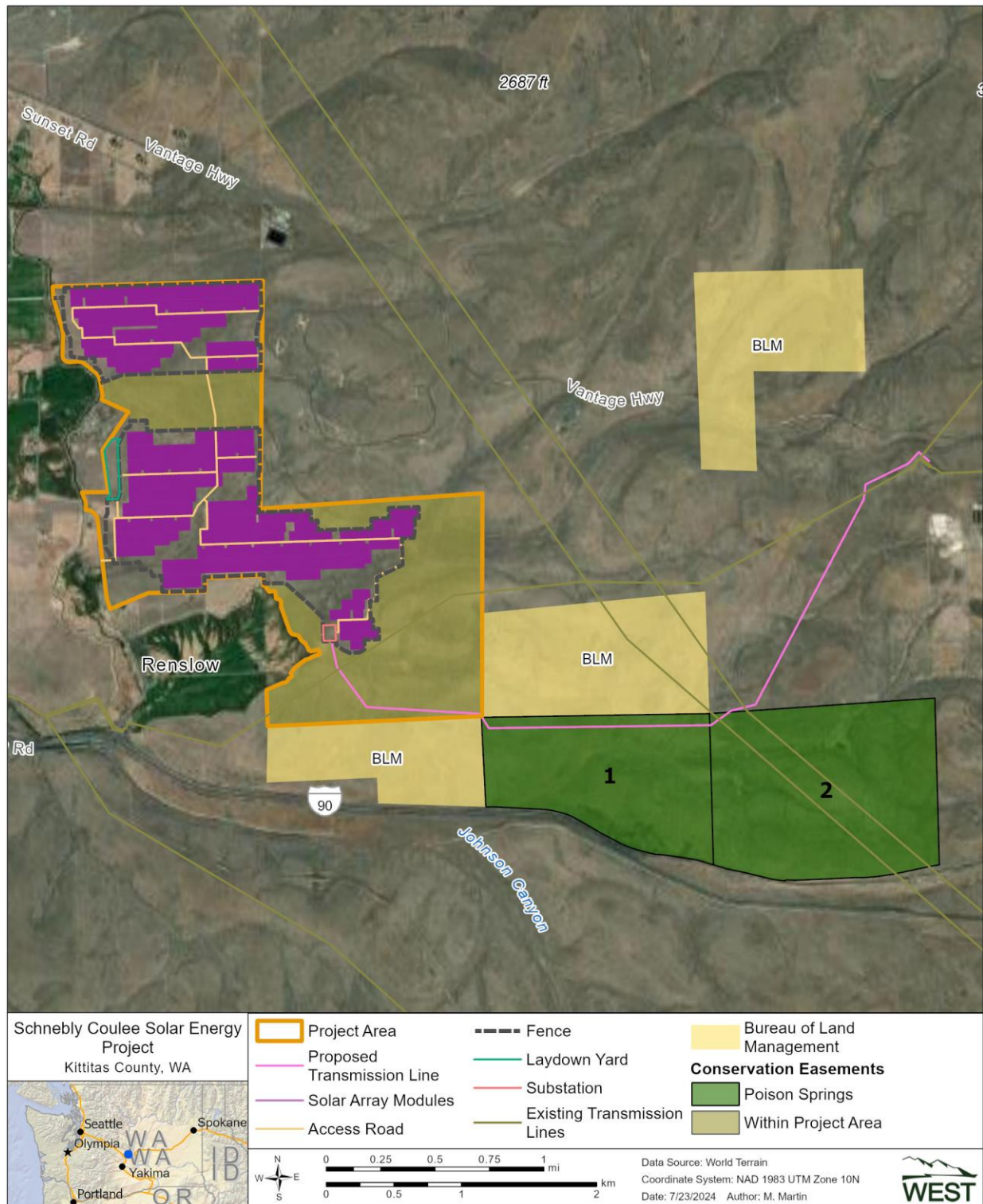


Figure 7.1. Conservation easements adjacent to, and within, the Project Area at the Schnebly Coulee Solar Energy Project, Kittitas County, Washington.

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