ATTACHMENT G

Review of Rare Plant Occurrence and Big Game Assessment

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DATE: October 8, 2020

TO: Blake Bjornson, OneEnergy Development, LLC.

FROM: Erik Jansen and Karl Kosciuch, Western EcoSystems Technology, Inc.

RE: Review of Rare Plant Occurrence and Big Game Movement at the Goose Prairie Solar and Storage Project, Yakima County, Washington.

Introduction

OER WA Solar 1, LLC, a wholly-owned subsidiary of OneEnergy Development, LLC (OneEnergy) has proposed the development of the Goose Prairie Solar and Storage Project (Project) in Yakima County, Washington and is considering permitting through the Washington Energy Facility Site Evaluation Council (EFSEC). The Project will consist of up to 809 acres (ac) of private land and include a range of permanent and temporary impacts from the access roads, photovoltaic solar arrays, and other Project infrastructure. In 2019 and 2020, field surveys for Priority Habitats and Species (PHS), as defined by the Washington Department of Fish and Wildlife (WDFW 2008), were conducted consistent with recommendations in WDFW's Wind Power Guidelines (WDFW 2009) and site-specific feedback provided by WDFW. To provide additional information to complete Screening Questions in Part 3, Sections 8 and 9 of the EFSEC checklist for site certification, Western EcoSystems Technology, Inc. (WEST) conducted an assessment of special status plant species[1] occurrence and the potential for the Project to obstruct big game movement or migration corridors for three native big game species. This memorandum summarizes the characteristics of the Project Area, methods, and results for the following two topics,

1. To determine the likelihood for special status plant species listed by the Washington Department of Natural Resources (WDNR) to occur at the Project.
2. To determine the potential for the Project to create an obstruction or barrier to big game habitat and movement corridors using information from WDFW.

Project Area

The Project is located in the Columbia Plateau Ecoregion, which encompasses a large portion of south central Washington and the eastern half of Yakima County (Clarke et al. 1997). The landscape in this ecoregion is a mixture of cultivated agricultural lands, grasslands, and

[1] As defined here, "special status plant species" includes any species tracked by the Washington Natural Heritage Program (WNHP 2019) and is either a) listed as an endangered, threatened or candidate species under the Endangered Species Act, subject to the Washington State Environmental Protection Act; b) is designated by federal or state law, regulation, or other formal process for protection and/or management by the relevant agency or other authority.

sagebrush covering plains and valleys, with isolated mountain ranges and river systems (Clarke et al. 1997). Much of the land use within the region is used for military training at the U.S. Army Yakima Training Center which is located approximately 2.5 mi north of the Project, at the nearest point (Figure 1). The Project is located in the Moxee Valley on 809 ac of privately-owned land approximately 13 miles (mi) southeast of Yakima, Washington and is located directly north of Highway 24 along the perimeter of a heavily-developed agricultural corridor (Figure 1). Land use surrounding the Project consists primarily of hop (*Humulus lupulus*) cultivation, orchards, and livestock grazing. Annual average precipitation in the area is 11.7 inches and an annual maximum temperature of 55.8° Fahrenheit (Natural Resources Conservation Service [NRCS] 2004).

The landscape differs between the area north and south of Den Beste Road where a rocky, ephemeral wash is found. The landscape is characterized by a low, sloping terrace south of the wash and steeper slopes north of the wash (Figure 2). Elevations range from 1,382 ft above sea level (asl) in the southwest corner of the Project Area to 1,782 ft asl in the northeast. Upland soils are generally characterized as deep silt loams from the Willis (65%) and Moxee (21%) soil series (NRCS 2020). Drainages and washes contain cobbley, sandy loams from the Finley soil series (5%) and stoney silt loams from the Lickskillit soil series (1%).

Habitat types were mapped during field surveys conducted during spring 2019 and 2020 and consistent with those described by WDFW (WDFW 2008, WDFW 2009, Azerrad et al. 2011). The dominant habitat type within the Project Area consisted of lands enrolled in the U.S. Department of Agriculture's Conservation Reserve Program (CRP; 487 ac, 60%), followed by shrub-steppe habitat (195 ac; 24%). Smaller patches of eastside (interior) grasslands, pasture mixed environs, and croplands were also documented in the Project Area. No surface waters are found within the Project Area. The following provides a brief summary of each habitat type.

A large contiguous patch of CRP was found in the southern portion of the Project Area and included cool-season grasses and forbs. Downy brome (*Bromus tectorum*) was uniformly distributed throughout the CRP patch, at densities so high other native vegetation was absent in some areas. Co-dominant grasses included wheatgrass (*Pseudoroegneria* spp.) and fescue species (*Fectuca* spp.). Common forb species included various mustards (*Brassica* spp.), salsify (*Tragopogon porrifolius*), hawksbeard (*Crepis* spp.), redstem filaree (*Eroduim cicutarium*), annual Jacob's ladder (*Polemonium micranthum*), and yarrow (*Achillea millefolium*).

Shrub-steppe habitat was found along the rocky wash adjacent to Den Beste Road and in the northern half of the Project Area. Plant species within shrub-steppe were dominated by big sagebrush (*Artemisia tridentata*), threetip sagebrush (*A. tripartita*), and spiny hopsage (*Grayia spinosa*). Understory shrubs included several buckwheat species (*Eriogonum* spp.) and desert parsley (*Lomatium spp.*). Many of the forbs found in CRP were also found in shrub-steppe and included bulbous woodlandstar (*Lithophragma glabrum*) and lilies (*Calochortus* spp.). Despite the species diversity, many areas between shrubs contained dense patches of downy brome which excluded native species. The extent of shrub-steppe habitat included all areas that contained a 10 to 30 percent or greater shrub cover (WDFW 2009), the extent of which was modified by previous management activities such as shrub removal to enhance livestock forage or deteriorated through livestock grazing. Low-quality, degraded shrub-steppe habitat was found immediately north and adjacent of Den Beste Road where active cattle grazing reduced shrub

height, vegetative cover, vigor and compacted soils (Figure 2). Intact shrub-steppe was found along the rocky wash and northeast corner of the Project Area. Wildlife surveys conducted in 2019−2020 documented sensitive bird species in intact shrub-steppe habitat but not degraded shrub-steppe habitat, supporting the classification of degraded shrub-steppe habitat (WEST 2020). Although the underlying soil type is the same in the degraded and intact shrub-steppe habitat (Willis silt loam, 8 to 15% slopes) the degraded shrub-steppe habitat has lower function and value to wildlife evidenced by the loss of herbaceous vegetation and compromised shrub cover due to overgrazing. Compacted soils, cattle grazing, and competition with non-native grass species may also reduce the likelihood of special status plant species in degraded shrub steppe habitat.

Areas dominated by short to tall (<3.3 ft) grasses and absent of shrub cover were mapped as eastside (interior) grasslands which were found interspersed between patches of shrub-steppe north of Den Beste Road. Grasslands were comprised mostly of downy brome but contained a minor component of native grass species such as wheatgrasses and needleandthread (*Hesperostipa comate*). Grazing was evident within grasslands which reduced grass cover and species diversity.

Pasture and mixed environs bisected the Project Area north of Den Beste Road and a small patch was located within CRP. This habitat type included heavy ground disturbance associated with a transmission line, several abandoned buildings, a gravel quarry and manure stockpile. Vegetation within this habitat type was heavily trampled and soils impacted from cattle and vehicle usage. Bare ground with patches of low bunchgrass and scattered, degraded shrub cover characterized this habitat type.

Croplands were found in a small corner along the eastern edge of the Project Area and included a fruit orchard that was planted in 2019.

Table 1. WDFW (2009) habitat types delineated during 2019 and 2020 surveys at the Goose Prairie Solar Project, Yakima County, Washington.

Habitat Type	Area (ac)	% Composition
Conservation Reserve Program	487.3	60.3
Shrub-steppe - Intact	149.5	18.5
Eastside Grasslands	95.0	11.8
Shrub-steppe - Degraded	45.3	5.6
Croplands	16.9	1.8
Pasture Mixed Environs	14.5	2.1
Total	808.5	100

Methods

Special Status Plant Species

A list of special status plant species known to occur in Yakima County was obtained from the Washington Natural Heritage Program (WNHP 2019). A literature review and data-mining exercise was conducted for each of the plant species listed in Yakima County. Resources that contained the most spatially and temporally-relevant information was used, to the extent possible. The following primary resources were used:

- Field Guide to Rare Plants of Washington (Camp and Gamon 2011). Hardcopy and electronically (https://www.dnr.wa.gov/NHPfieldguide)
- Flora of the Pacific Northwest: an Illustrated Manual (Hitchcock and Cronquist 2018)
- Washington Department of Natural Resources Technical Reports (https://www.dnr.wa.gov/NHPspreports)
- Washington Department of Fish and Wildlife PHS on the Web (https://geodataservices.wdfw.wa.gov/hp/phs/)
- US Department of Agriculture, Natural Resources Conservation Service PLANTS Database (https://plants.usda.gov/java/)
- Washington Native Plant Society (https://www.wnps.org/)
- The Burk's Botany Collection at the University of Washington Herbarium (http://www.burkemuseum.org/research-and-collections/botany-and-herbarium)
- Natureserve (http://explorer.natureserve.org/)
- U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Yakima County (Lenfesty and Reedy 1985) and SSURGO GIS data for Yakima County (NRCS 2020; https://gdg.sc.egov.usda.gov/)

Using the resources listed above, we integrated site-specific habitat information from field surveys to help inform the likelihood of occurrence. The likelihood of a federal- and state-listed sensitive plant species to occur in the Project was determined by considering the species' range, habitat suitability, population size, and records of occurrence in the County. Based on these factors, the likelihood of occurrence was defined for each special status plant species using the following categories:

- Likely – Current records within the Columbia Plateau Ecoregion of Yakima County and considered a species with a widespread distribution[2] or a regional or local endemic species with suitable habitat in the Project Area.
- Possible – Current or multiple historic records[3] within the Columbia Plateau Ecoregion of Yakima County and is considered a species with sparse distribution with suitable habitat in the Project Area.
- Unlikely – Current or multiple historic records within the Columbia Plateau Ecoregion of Yakima County but is considered a disjunct or peripheral species and marginal suitable habitat is in the Project Area.
- None – Current or historic records within Yakima County and has a highly restricted distribution or niche habitat requirements that are not found in the Project Area.
- Unknown – No information found in resources available at the time of review.
- Presumed Extirpated – Not relocated since 1978 despite intensive searches and virtually no likelihood of rediscovery; considered extinct or extirpated in Washington.

For plant species with a likely or possible likelihood of occurrence, general information on the habitat where the species has been recorded, distribution patterns, and blooming period is provided to help inform the timing of future field surveys. For completeness, plant species that are unlikely to occur, have no likelihood, where the status of the species is unknown, or the species is presumed extirpated are reported in Appendix A.

Big Game Movement

Big game habitat and potential movement corridors within the Project and surrounding landscape were evaluated to determine potential affects from Project development. Varying levels of information on big game species occurrence and movement are available in Washington; the most comprehensive data are for mule deer and available through the Washington Connected Landscapes Project. The Washington Connected Landscapes Project modeled mule deer habitat, Habitat Concentration Areas (HCA) and movement corridors between habitats to illustrate habitat connectivity and inform wildlife conservation projects in the Columbia Plateau Ecoregion (Washington Wildlife Habitat Connectivity Working Group 2012). An HCA is defined as significant habitat areas that are expected or known to be important for mule deer based on actual survey information or habitat association modeling. Mule deer habitat was modeled using 22 variables

[2] Distribution Pattern: Species rarity is often correlated with geographic distribution patterns. The following patterns are recognized in Washington, as defined by WNHP (2020)

Widespread = widely distributed globally and in Washington, with more than 20 populations in the state
Regional Endemic = global range of taxon is between 16,500 to 250,000 km2 (or an area about the size of the state of Washington)
Local Endemic = global range of taxon is less than 16,500 km2 or about 1 degree of latitude x 2 degrees of longitude (about the size of an average county)
Sparse = widely distributed across the state but with relatively few populations (less than 20)
Disjunct = globally widespread but state population is isolated from the main contiguous range by a gap or more than 500 km
Peripheral = globally widespread but Washington population is at the margin of the main contiguous range of the taxon

[3] Historic records are defined by WNHP as species recorded prior to 1978 but with a possibility of rediscovery

(e.g., land cover, slope, housing density, energy development, transportation networks, etc.) and was expressed as an index (0 = non-habitat to 1 = best possible habitat). Habitat with an index >0.89 and at least 19 square miles were designated as an HCA and were considered areas of high-quality habitat. The same variables were used to model mule deer movement corridors and connectivity between HCAs. Movement corridors and connectivity between HCA's used a combination of resistance models, which incorporated deer specific dispersal habitat and barriers such as housing and transportation systems, and cost-weighted distance models which identified continuous swaths of land expected to encompass the best route for mule deer to travel between HCAs (Washington Wildlife Habitat Connectivity Working Group 2010).

Within Washington, information on habitat connectivity and movement corridors for two additional big game species, Rocky Mountain elk (*Cervus elaphus nelsoni*) and pronghorn antelope (*Antilocapra americana*) are not as extensive as mule deer. Data on big game winter ranges were identified through the WDFW PHS on the Web and spatial data on the species' range and predicted habitat were obtained from the U.S. Geological Survey Gap Analysis Project (USGS 2018). Species range and predicted habitat models used remotely-sensed biological data such as landcover type, patch size, canopy cover as well as avoidance of human impacts, and are appropriate when interpreting habitat connectivity and potential movement corridors on a landscape scale.

The data sources used in this analysis provide a landscape context to interpret big game ranges and potential movement areas. However, it is possible that individual big game animals occur in the Project area and could be displaced due to development. This analysis uses the most robust available data to assess the value of the Project to big game in a landscape context and not an individual animal context.

Results and Conclusions

Special Status Plant Species

Of the 365 sensitive plant species listed in Washington, 51 species are listed in Yakima County and the majority of which have extant (i.e., existing) populations (38 species, 74 percent). A small number of species are known from historic records only (7 species, 14 percent) or are believed to be falsely reported or unsubstantiated (6 species, 12 percent). Of the 38 species with extant populations in Yakima County, 24 species are state-listed[4] as sensitive, 11 species are threatened, and 3 species are considered endangered.

Of the 38 species known to occur within Yakima County, five species were classified as likely to occur and five were classified as possible to occur (Table 2). The bristle-flowered collomia (*Collomia macrocalyx*) was classified as threatened by WNHP whereas all remaining species were classified as sensitive. All but one species (bristly cryptantha; *Cryptantha spiculifera*) has been documented on the adjacent Yakima Training Center. All species were associated with shrub-steppe habitat which is found in the northern half of the Project Area. In addition to habitat,

[4] Washington state status is assigned by WNHP. Factors considered include abundance, distribution patterns, number of extant occurrences, vulnerability, threats, existing protection, and taxonomic distinctness. Endangered = in danger of becoming extinct or extirpated from Washington; Threatened = likely to become Endangered in Washington; Sensitive = vulnerable or declining and could become Threatened or Endangered in Washington.

plants were also associated with soil characteristics similar to types found in the Project Area (e.g., silty to gravelly loams) and topographic or hydrologic features (south-facing open slopes or dry washes).

The survey period for plants likely or possible to occur ranges from early March through August (Table 2). Survey periods are based on times that Camp and Gamon (2011) delineated as periods when plants would be most identifiable. Diagnostic characteristics varies by species and can include when plants are typically in bloom (i.e., flowering) or when seed pods persist long enough that still enable positive identification as is the case with the two species of milkvetch. Survey periods are general guidelines and may fluctuate annually based on changes in temperatures and precipitation levels.

Table 2. Special status plant species[1] that are likely or possible to occur within the Goose Prairie Solar and Storage Project, Yakima County, Washington.

Common Name[2]	Species	Habitat	Distribution Pattern[3]	Elevation (ft asl)	Blooming / Fruiting Period
Likely to Occur					
Columbia milkvetch	*Astragalus columbianus*	Shrub-steppe habitat on sandy loams or gravelly loams	Local Endemic; Current records from NE corner of County	420 - 2,330	Mid-late April through Mid-June
Pauper milkvetch	*Astragalus misellus var. pauper*	Shrub-steppe habitat found on open ridgelines and gentle upper slopes	Regional Endemic; Current records from NE corner of County	500 - 3,280	April through Mid-May
Bristle-flowered collomia	*Collomia macrocalyx*	Shrub-steppe habitat in dry open places on talus, rock outcrops, and lithosols. Typically vegetation is sparse and species diversity is low	Regional Endemic; Current records from NE corner of County	870 - 2,130	Late May to Early June
Dwarf mooncup	*Eremothera pygmaea*	Shrub-steppe habitat on unstable soil or gravel in steep talus, dry washes, banks and road cuts	Regional Endemic; Current record from E edge of County	450 - 2,050	June to August
Hoover's biscuitroot	*Lomatium lithosolamans*	Shrub-steppe habitat with basalt lithosols that are flat and well-drained with prominent rocks and gravel but little soil	Local Endemic; Current records throughout County	1,300 - 4,000	Early to late March
Possible to Occur					
Cottonball cryptantha	*Cryptantha gracilis*	Shrub-steppe habitat on basalt talus rock in dry, rocky or silty seasonal drainages	Sparse; historic record from NE corner of County	1,250 - 2,680	May to June

Table 2. Special status plant species[1] that are likely or possible to occur within the Goose Prairie Solar and Storage Project, Yakima County, Washington.

Common Name[2]	Species	Habitat	Distribution Pattern[3]	Elevation (ft asl)	Blooming / Fruiting Period
Desert cryptantha	*Cryptantha scoparia*	Shrub-steppe habitat on south facing slopes with full sun and little competing vegetation; grows between canyons with fine dry silt and talus	Sparse; historic record from NE corner of County	1,200 - 2,100	April to June
Bristly cryptantha	*Cryptantha spiculifera*	Shrub-steppe habitat on dry, open, flat or sloping areas with stable or stoney soils with low vegetation cover	Sparse; current records from E edge of County	450 - 3,500	May to July
Coyote tobacco	*Nicotiana attenuata*	Shrub-steppe habitats with dry sandy bottomlands, rocky washes and other dry open places	Sparse; Current records throughout County	320 - 2,640	June through August
Tufted evening-primrose	*Oenothera cespitosa ssp. cespitosa*	Shrub-steppe habitats and dry deserts; on loose talus; steep sandy or gravelly slopes	Peripheral; Current records in NE corner of County	410 - 1,800	Late April through Mid-June

[1] All species are considered sensitive by WNHP except for the bristle-flowered collomia which is listed as State Threatened

[2] Common name from Camp and Gamon (2011)

[3] *Local Endemic* = global range of taxon is less than 16,500 km^2 or about 1 degree of latitude x 2 degrees of longitude (about the size of an average county)
Regional Endemic = global range of taxon is between 16,500 to 250,000 km^2 (or an area about the size of the state of Washington)
Peripheral = globally widespread but Washington population is at the margin of the main contiguous range of the taxon
Sparse = widely distributed across the state but with relatively few populations (less than 20)

Table 3. Survey periods for special plant species that are likely or possible to occur within the Goose Prairie Solar and Storage Project, Yakima County, Washington.

Common Name	Species	Month					
		March	April	May	June	July	August
Columbia milkvetch	*Astragalus columbianus*		----	----	----	----	
Pauper milkvetch	*Astragalus misellus var. pauper*		----	----	----		
Bristle-flowered collomia	*Collomia macrocalyx*				----	----	
Cottonball cryptantha	*Cryptantha gracilis*			----	----	----	
Desert cryptantha	*Cryptantha scoparia*						
Bristly cryptantha	*Cryptantha spiculifera*			----	----	----	----
Dwarf mooncup	*Eremothera pygmaea*				----	----	----
Hoover's biscuitroot	*Lomatium lithosolamans*	----	----	----			
Coyote tobacco	*Nicotiana attenuata*				----	----	----
Tufted evening-primrose	*Oenothera cespitosa ssp. cespitosa*			----	----	----	

Big Game Movement

Mule Deer

Using the Washington Connected Landscapes Project HCA data Mule deer habitat was modeled as low-quality in the southern portion of the Project Area and followed a gradient to medium and high-quality (index >0.5) in the northern portion (Figure 3). Because of the lack of shrub cover and existing human disturbance from Highway 24 and the Bonneville Power Administration transmission line infrastructure that bisects the Project Area, CRP grasslands in the southern portion of the Project Area were modeled as lowest quality. In contrast, upland shrub-steppe habitat and croplands in the northern portion of the Project Area provides suitable foraging habitat while the drainages along the dry wash provides winter, fawning and fawn-rearing habitat (Myers 2012). No perennial waters were identified in previous habitat mapping surveys for the Project, however, cattle stock ponds and ephemeral stream drainages may provide water resources for mule deer. The effect of how exclusion to these water resources on mule deer from the development of the Project is unknown in context to resources present in the surrounding landscape. However, the Project will be designed such that the ephemeral streams are not fenced, allowing for movement of wildlife, including big game.

The northern portion of the Project Area is located along the edge of HCA (ID# 35) that extends north of the Project into the undeveloped landscape of the U.S. Army's Yakima training Center (Figure 3). The southern portion of the Project Area is outside of a HCA due to lower quality habitat and human disturbance in the surrounding Moxee Valley. Because of the Project's location on the outside perimeter of a large, unfragmented HCA, removal of higher quality habitat in the

northern portion of the Project Area would not substantially reduce available habitat on the landscape or the within the HCA. Existing human disturbance from vehicle traffic, residential housing, and commercial/agricultural operations in the Moxee Valley fragment movement corridors between HCA 35 and 43 (Figure 4). The high level of human disturbance in the Moxee Valley and southern portion of the Project Area interrupts mule deer movement, creating resistance to natural movement patterns (Figure 4). Potential movement corridors between HCAs are located approximately 5 miles east of the Project where the Moxee Valley narrows and distance between the HCAs is the shortest and considered the most energetically efficient (e.g., least cost path; Figure 5). Due to the intensity of existing development in the surrounding landscape, construction of the Project would not interfere with potential movement corridors and linkages between HCAs.

Rocky Mountain Elk

The Project is located within the range of elk but on the edge of suitable habitat as modeled by Gap data (Figure 6). In Washington, low-elevation shrub-steppe habitat provides females with calving areas and important bedding areas during late summer months and thermoregulation in the winter (McCorquodale et al. 1986, McCorquodale 1987, McCorquodale 1993). Despite no tree cover and limited opportunities for shelter, shrub-steppe habitat is an important foraging resource for elk (Vander Haegen et al. 2001). Access to open water resources are an important determinant of habitat usage (McCorquodale et al. 1986). With a range that overlaps the Project Area, the Yakima elk herd is one of the largest in the state with over 8,000 individuals on nearly a million acres of public land (Bernatowicz 2019). WDFW considered the northern portion of the Project Area elk wintering habitat with approximately 130 individuals associated with the Department of Energy's Arid Lands Ecology Reserve (Appendix B). Pending final project design, development of the Project Area could exclude elk from approximately 300 acres of habitat along the edge of the highly fragmented Moxee Valley, as predicted by Gap data (Figure 6). The potential impact to elk habitat could be reduced though the preservation of a corridor through the intact shrub-steppe habitat. Construction of the Project would not remove nor limit access to open water resources. Removal of habitat from Project construction does not appear to substantially reduce the amount of habitat or connectivity within the elk range.

Pronghorn Antelope

The Project is not located within the range of pronghorn antelope, thus impacts from Project construction are highly unlikely (Figure 7). Starting in 2011, the Yakima tribe started reintroducing pronghorn onto the Yakima reservation and currently totals 225 individuals (Fidorra et al. 2019). Located approximately 8.5 miles southwest at the nearest point, dispersal of pronghorn from the reservation is likely over time; however, natural barriers such as the Yakima River and human-made barriers that include highways, fences and the Moxee Valley highly restrict animal dispersal and potential resulting impacts from Project construction.

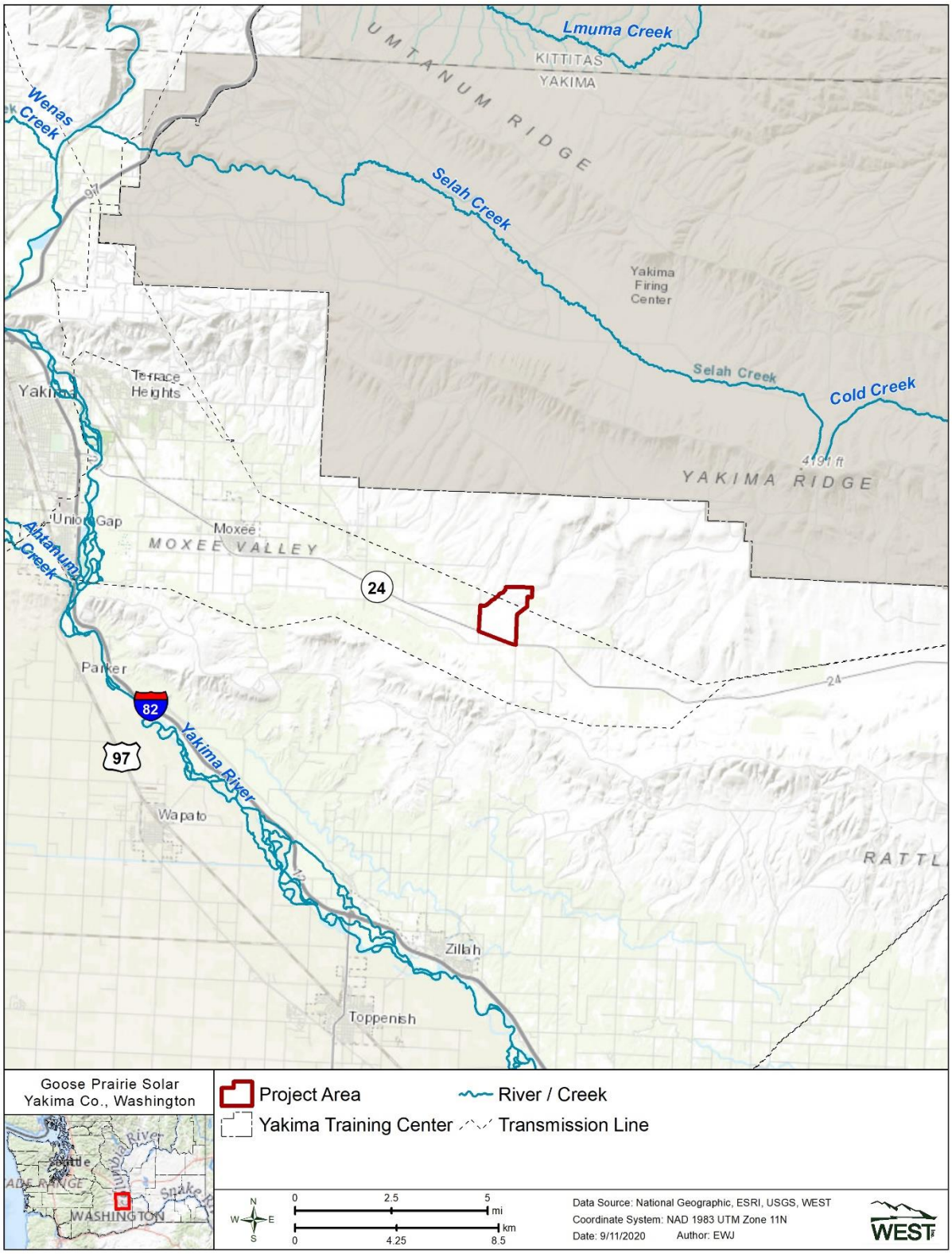

Figure 1. Vicinity map of the Goose Prairie Solar and Storage Project, Yakima County, Washington.

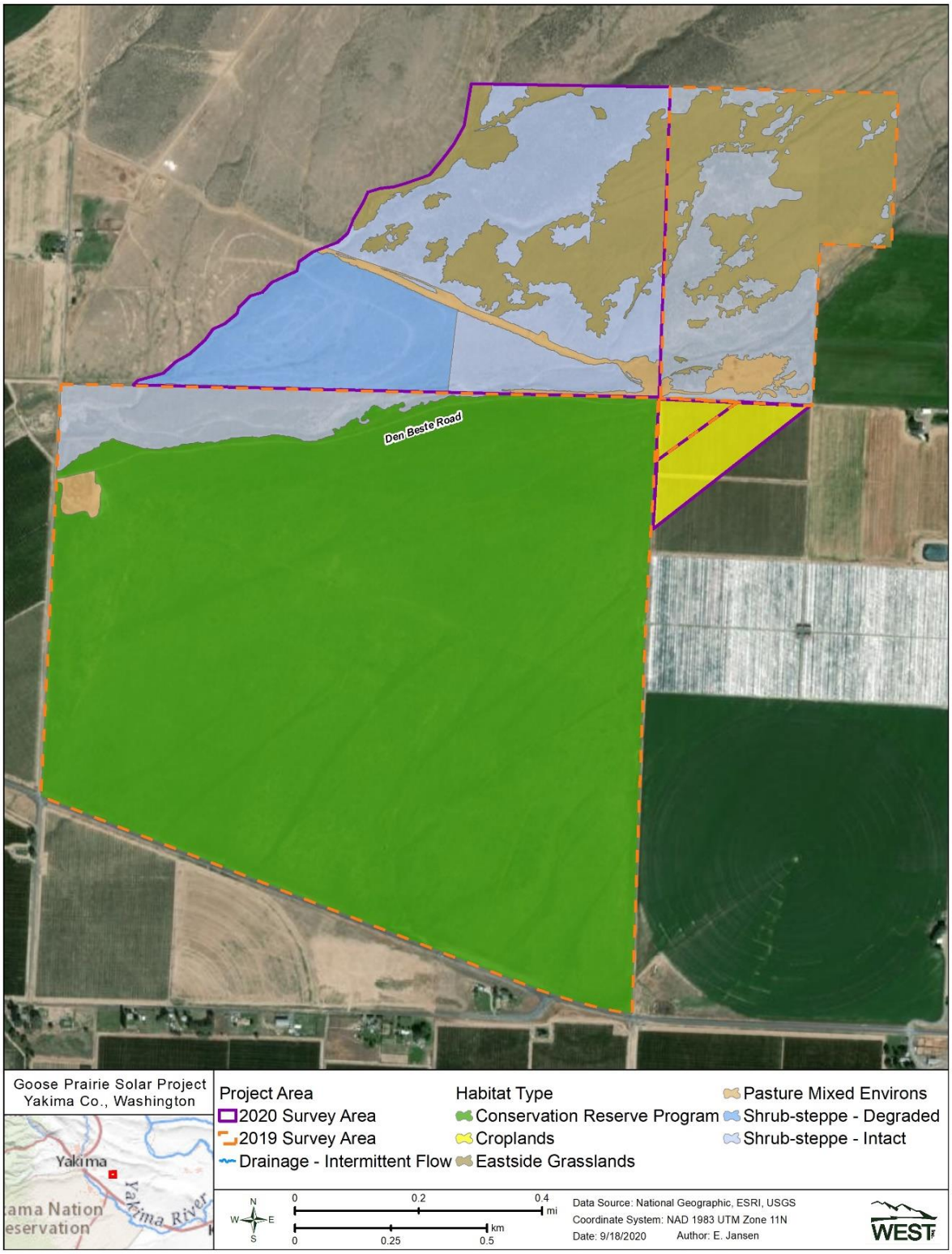

Figure 2. WDFW (2009) habitat types delineated in 2019 and 2020 within the Goose Prairie Solar and Storage Project Area, Yakima County, Washington.

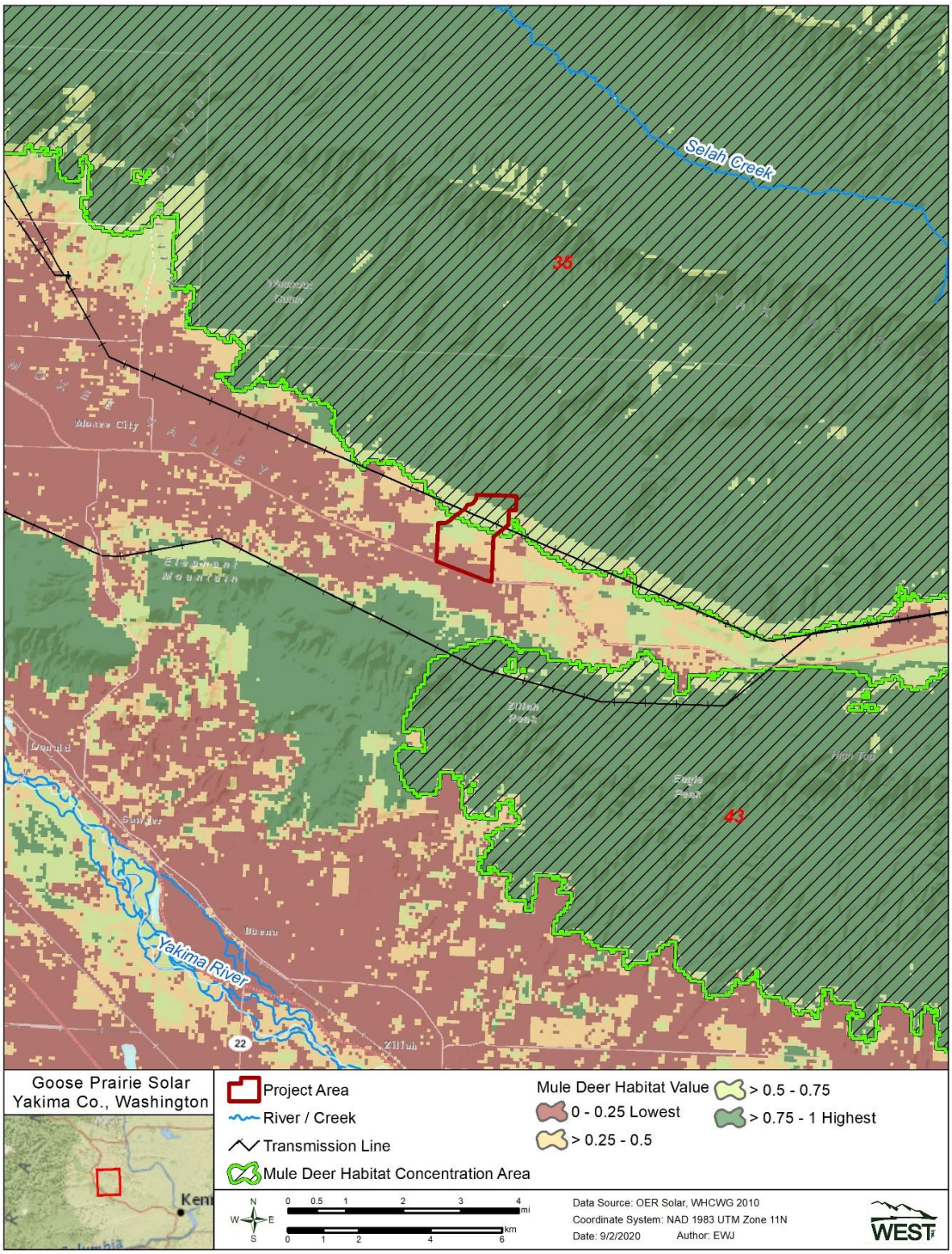

Figure 3. Mule deer habitat and Habitat Concentration Areas within and surrounding the Goose Prairie Solar and Storage Project, Yakima County, Washington.

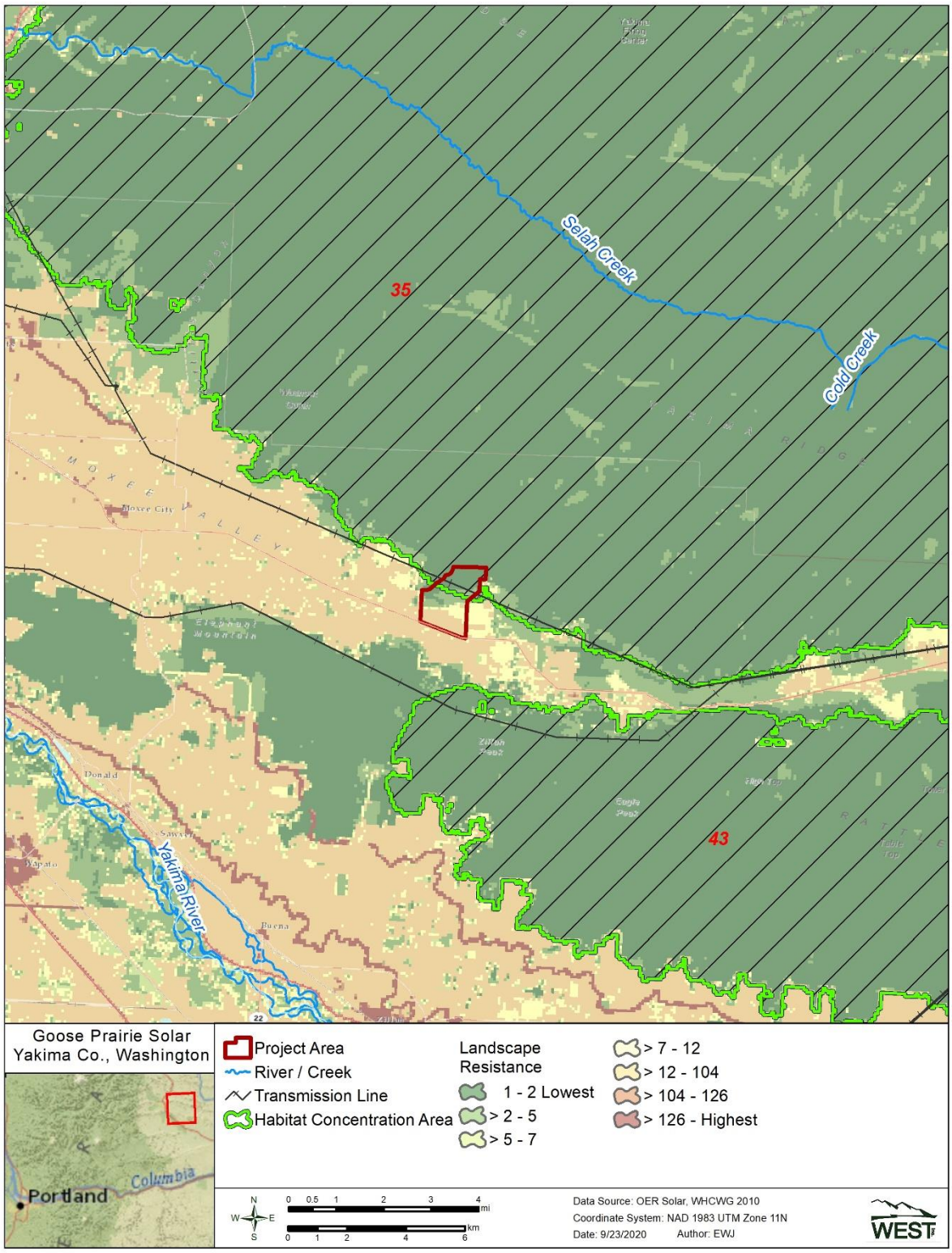

Figure 4. Landscape resistance and barriers to natural mule deer movement within and surrounding the Goose Prairie Solar and Storage Project, Yakima County, Washington.

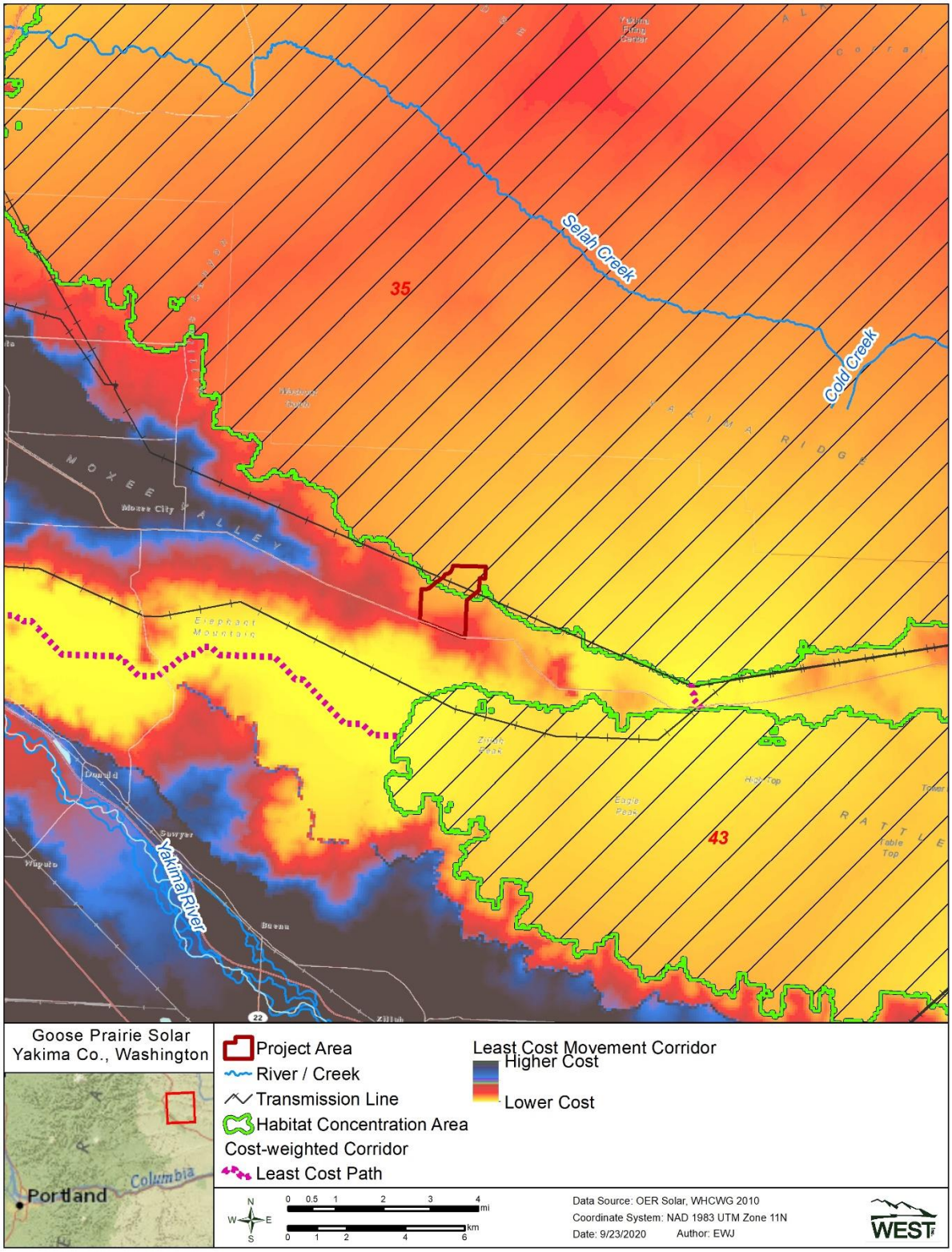

Figure 5. Habitat linkage network modeled for mule deer within and surrounding the Goose Prairie Solar and Storage Project, Yakima County, Washington.

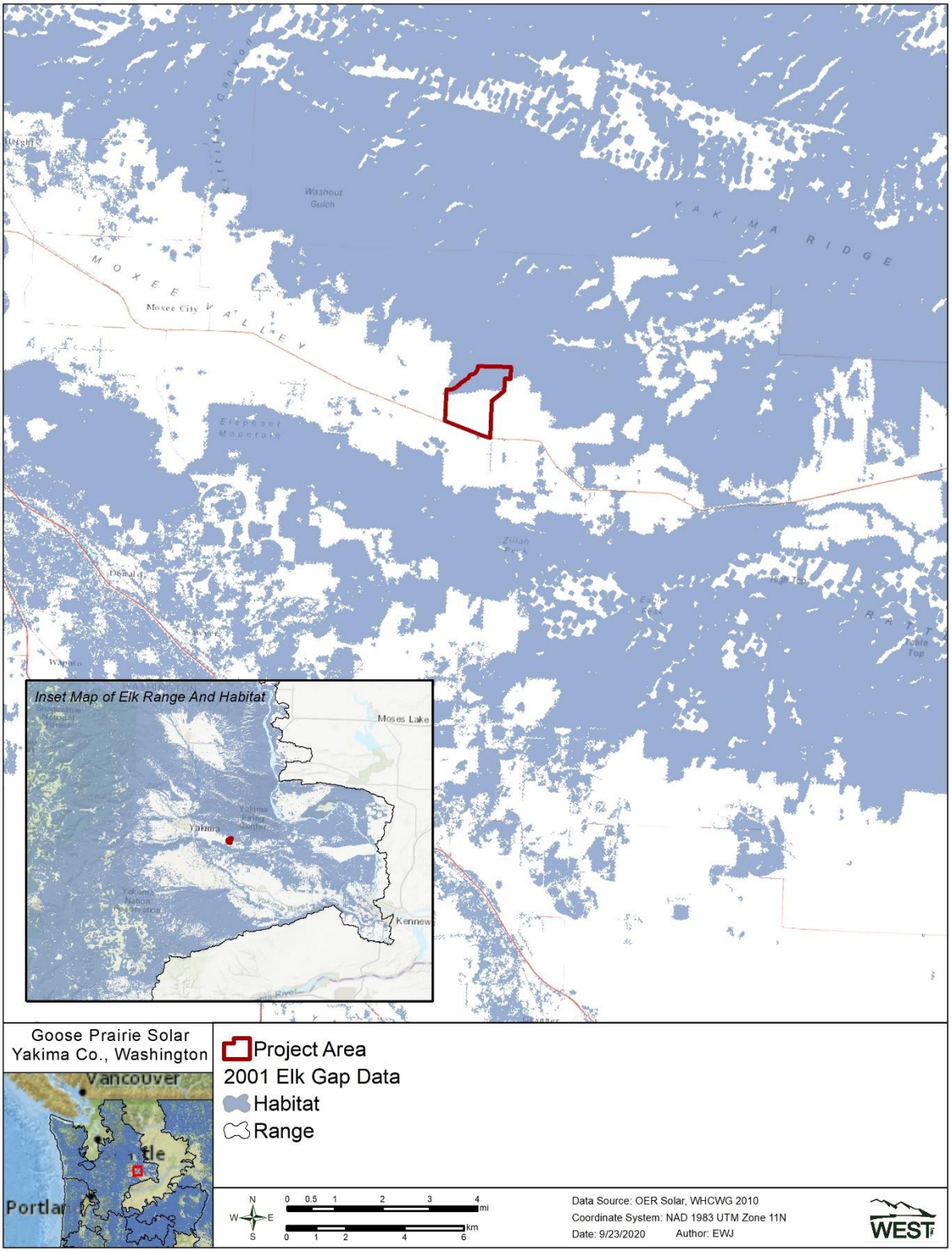

Figure 6. Elk habitat within and surrounding the Goose Prairie Solar and Storage Project, Yakima County, Washington.

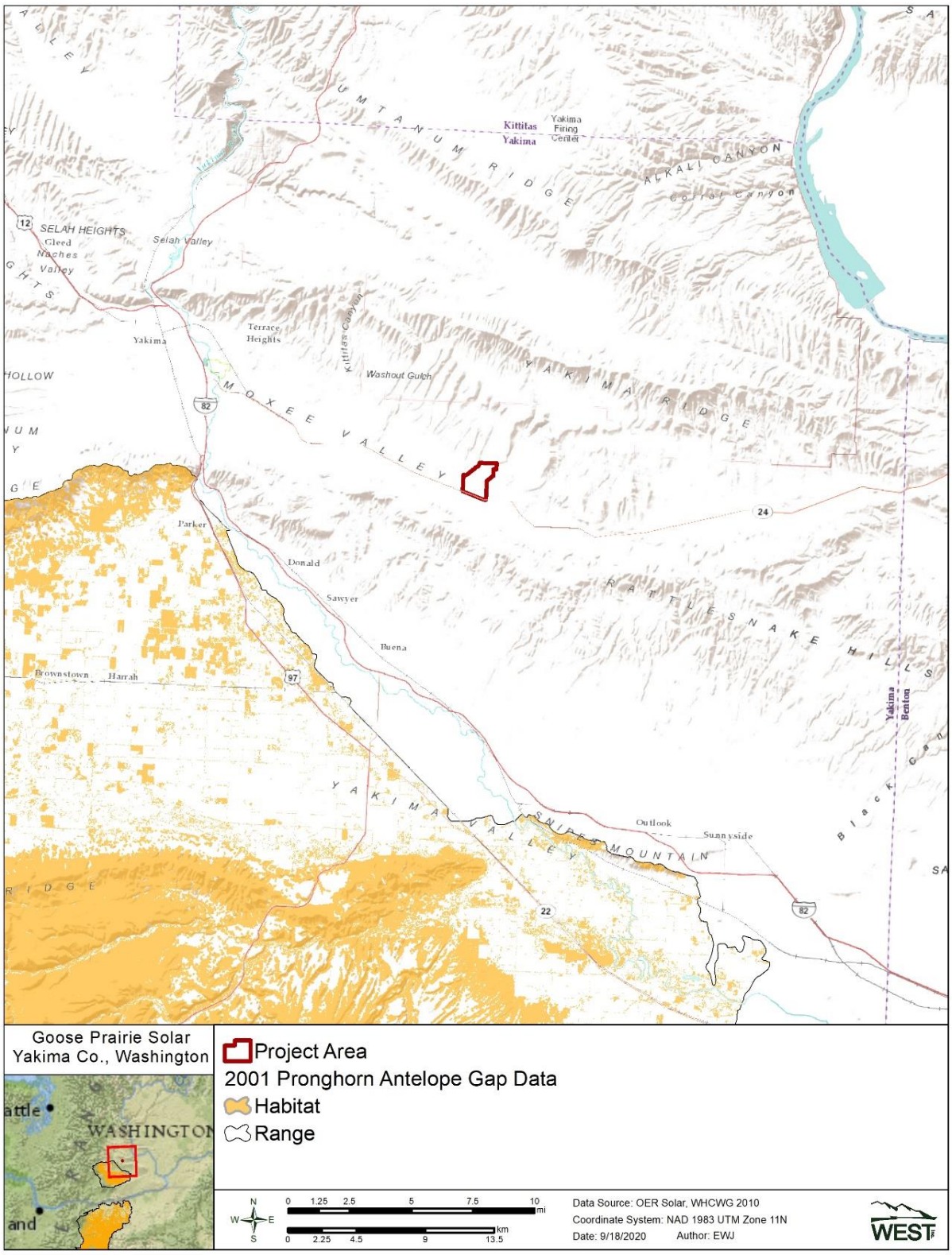

Figure 7. Pronghorn antelope habitat within and surrounding the Goose Prairie Solar and Storage Project, Yakima County, Washington.

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Appendix A. Special plant species listed in Yakima County and determined as unlikely or had no potential to occur at the Goose Prairie Solar and Storage Project.

Common Name	Species	Reason for Exclusion	State Status[1]
Tall agoseris	*Agoseris elata*	Limited range, habitat	S
Sierra onion	*Allium campanulatum*	Elevation	T
Gray's broomrape	*Aphyllon californicum ssp. grayanum*	Habitat	E
Long-bearded sego lily	*Calochortus longebarbatus var. longebarbatus*	Habitat	S
Davy's sedge	*Carex davyi*	Extirpated	X
Dense sedge	*Carex densa*	Habitat	S
Smooth-fruit sedge	*Carex heteroneura*	Habitat	S
Large-awn sedge	*Carex macrochaeta*	Unsubstantiated report	T
Obscure paintbrush	*Castilleja cryptantha*	Elevation, habitat	S
Pacific fringed thistle	*Cirsium remotifolium*	Historic records only	S
Idaho hawksbeard	*Crepis bakeri ssp. idahoensis*	Historic records of questionable source	E
Gray cryptantha	*Cryptantha leucophaea*	Habitat	T
Beaked cryptantha	*Cryptantha rostellata*	Limited range, habitat	T
Walking spike-rush	*Eleocharis rostellata*	Habitat	S
Smallflower mooncup	*Eremothera minor*	Elevation, habitat	S
Basalt daisy	*Erigeron basalticus*	Habitat	T
Spotted buckwheat	*Eriogonum maculatum*	Extirpated	X
Candelabrum monkeyflower	*Erythranthe pulsiferae*	Habitat	S
Suksdorf's monkeyflower	*Erythranthe suksdorfii*	Habitat	S
Diffuse stickseed	*Hackelia diffusa var. diffusa*	Habitat	T
Oregon goldenweed	*Heterotheca oregona*	Habitat	S
Dwarf rush	*Juncus hemiendytus var. hemiendytus*	Habitat	T
Kellogg's rush	*Juncus kelloggii*	Habitat	E
Awned halfchaff sedge	*Lipocarpha aristulata*	Habitat	T

Appendix A. Special plant species listed in Yakima County and determined as unlikely or had no potential to occur at the Goose Prairie Solar and Storage Project.

Common Name	Species	Reason for Exclusion	State Status[1]
Kalm's lobelia	*Lobelia kalmii*	Habitat	E
Basalt biscuitroot	*Lomatium laevigatum*	Unsubstantiated report	T
Snake River biscuitroot	*Lomatium serpentinum*	Unsubstantiated report	S
Leiberg's umbrellawort	*Lomatium tenuissimum*	Extirpated	X
Tuberous biscuitroot	*Lomatium tuberosum*	Habitat	S
Curved woodrush	*Luzula arcuata ssp. unalaschcensis*	Elevation, habitat	T
Tiny povertyweed	*Micromonolepis pusilla*	Historic records only	T
Downy false-monkeyflower	*Mimetanthe pilosa*	Habitat	S
Long-tubed evening-primrose	*Oenothera flava ssp. flava*	Extirpated	X
Rosy owl-clover	*Orthocarpus bracteosus*	Habitat	T
Mt. Rainier lousewort	*Pedicularis rainierensis*	Elevation, habitat	S
Dark-spine ball cactus	*Pediocactus nigrispinus*	Habitat	S
Brewer's cinquefoil	*Potentilla breweri*	Habitat	T
Scouler's catchfly	*Silene scouleri ssp. scouleri*	Elevation, habitat	S
Pale blue-eyed grass	*Sisyrinchium sarmentosum*	Falsely reported	T
Howell's thelypody	*Thelypodium howellii ssp. howellii*	Extirpated	X
Narrow-leaf mule's-ears	*Wyethia angustifolia*	Falsely reported	S

[1] E = Endangered, S = Sensitive, T = Threatened, X = Extirpated

Appendix B. Elk Winter Range (purple) within the Goose Prairie Solar and Storage Project, Yakima County, Washington.

9/1/2020 PHS Report

Priority Habitats and Species on the Web

Report Date: 09/01/2020

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Generalized Location
Elk	N/A	N/A	No

Appendix B (con't). Elk Winter Range Report Within the Goose Prairie Solar and Storage Project, Yakima County, Washington.

9/1/2020 PHS Report

Elk	
Scientific Name	*Cervus elaphus*
Priority Area	Regular Concentration
Site Name	RATTLESNAKE
Accuracy	1/4 mile (Quarter Section)
Notes	ELK WINTERING AREA, 130 ANIMALS ARID LANDS ECOLOGY RESERVE
Source Record	901605
Source Dataset	PHSREGION
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00614
Geometry Type	Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necesssary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.