ATTACHMENT R

Habitat Mitigation Memo

January 19, 2021

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MEMO: SUMMARY OF AGENCY CONSULTATION FOR WILDLIFE AND HABITAT RESOURCES AND HABITAT MITIGATION CONSIDERATIONS AT THE PROPOSED GOOSE PRAIRIE SOLAR, YAKIMA COUNTY, WASHINGTON.

DEAR INTERESTED PARTIES,

OER WA Solar 1, LLC, a wholly owned subsidiary of OneEnergy Development, LLC (OneEnergy) has proposed the development of the 80-megawatt (MW) Goose Prairie Solar (Facility) in Yakima County, Washington (see Figure 2 and Figure 3 for a Regional Context Map and Site Map). OneEnergy is submitting an Application for Site Certificate (ASC) to the Energy Facility Site Evaluation Council (EFSEC) for the Facility. The power generated from the Facility will help fulfill the legislative mandate from Governor Inslee and the Washington Legislature to transition Washington's electrical generation systems to 100 percent clean energy by 2045 under the Clean Energy Transformation Act (CETA). OneEnergy is committed to environmentally conscientious renewable energy development that avoids and/or minimizes impacts to State trust resources by including stakeholder participation of state and federal agency resource experts.

Since 2017, OneEnergy has met with agency resource experts to discuss the Facility and solicit feedback on environmental studies. Information from these meetings was used to contract Western EcoSystems Technology, Inc, (WEST), an independent third-party consultant, to determine biological resources present at the proposed Facility site. This expert evaluation from WEST, a reputable and nationally recognized environmental consultant, will help facilitate discussions of mitigation measures associated with Facility development per Yakima County Code (YCC) 16C.11; EFSEC's rules, including as relevant here, Washington Administrative Code (WAC) 463-60-332 and WAC 463-62-040; and Department of Fish and Wildlife (WDFW) Policy M-5002, *to ensure no net loss of fish and wildlife habitat functions or values in the areas impacted by energy development*.

Memo Purpose

The purpose of this memo is to: 1) summarize the history of due diligence and stakeholder engagement initiated by OneEnergy in the development of the Facility; 2) outline the findings of

field surveys as it relates to habitat mapping; 3) discuss considerations related to compensatory habitat mitigation when evaluating impacts from the Facility; 4) describe mitigation actions taken to-date and additional habitat benefits of the Facility; and 5) propose next steps in the consultation process.

These next steps will occur in two parts. First, OneEnergy proposes to meet with WDFW and EFSEC with the goal of determining the appropriate compensatory mitigation required to demonstrate the Facility creates "no net loss of fish and wildlife habitat functions or values" as required by WAC 463-62-040. Ideally, the first meeting would be held within fifteen business days of the ASC submission and would conclude within 60 days of that first meeting. The agreed-upon compensatory mitigation would be formally submitted as supplemental information to the ASC for consideration in the State Environmental Policy Act (SEPA) determination and Site Certificate Agreement (SCA) issuance.

Second, and in accordance with WAC 463-60-332(3) and YCC 16C.11.060, OneEnergy will develop and implement a Habitat Restoration and Mitigation Plan, which will describe the implementation of wildlife and habitat mitigation measures for the Facility, including the compensatory mitigation. OneEnergy will consult with WDFW and EFSEC in development of this plan, which would be finalized following issuance of the SCA and submitted to EFSEC for approval at least sixty days prior to site preparation.

CONTENTS

1. Initial Site Selection and Agency Consultation History

1a. Initial Site Screening and Selection Process

OneEnergy used a tiered approach, similar to the US Fish and Wildlife Services *Land-Based Wind Energy Guidelines* (USFWS 2012), to evaluate the feasibility and constraints of several proposed solar facilities. Accordingly, the Facility development process included rigorous due diligence, including early stage desktop review and agency consultation to inform site selection and understand any potential risks or concerns. Due diligence screening used publicly available data from state and federal agencies to identify critical land use and environmental issues. Such desktop mapping platforms include the WDFW Priority Habitat and Species (PHS), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (iPaC) and the National Wetland Inventory.

1b. Agency Consultation and Survey Participation

Once a potential site was selected for the Facility, OneEnergy solicited preliminary feedback from WDFW in 2017, before field surveys were initiated, to understand any potential concerns regarding habitat and wildlife, and to review survey protocols and provide input. See Table 1 below for a history of the WDFW consultations and biological surveys. The official correspondence letters from WDFW are included as Attachment 1.

Table 1. History of wildlife agency consultation and chronology of biological surveys

Date and Topic	Participants	Purpose / Recommendation	Outcome
September 2017 Introductions	OER & WDFW	Email to request in-person meeting to review Facility materials	Meeting scheduled
October 2017 In-Person Initial Consultation	OER & WDFW	Review of land use and biological data at a site 12 miles east of current Facility location where OER had a long-term site control agreement and an interconnection queue position/ WDFW expressed sage grouse concerns and habitat fragmentation	OER abandoned site and redirected focus based on WDFW recommendations
July 2018 Consultation Letter	OER & WDFW	Provided summary desktop analysis and revised Facility location; requested WDFW feedback	WDFW provided letter response August 17, 2018
February 2019 WDFW/USFWS Site Visit	OER, WDFW & USFWS	Physical site walk/Habitat and survey protocol review of Facility / WDFW expressed shrub-steppe concerns	OER modified Facility design to exclude shrub-steppe draw; WDFW provided letter response March 19, 2019
May 2019 First Year TESS Surveys Completed	OER, WDFW & WEST	TESS Surveys completed per WDFW protocol recommendations; report drafted / second year surveys planned	Second year survey planned
March 2020 Consultation Continued	OER & WDFW	OER provided WDFW update with modified Facility Area Extent expanding the Facility north, excluding the shrub-steppe draw and boundary refinement	No change in survey protocols; deferred mitigation discussion until all surveys were completed
May 2020 Second Year TESS Surveys Completed	OER, WDFW & WEST	TESS Surveys completed per WDFW protocol recommendations; report drafted	Further modifications to Facility design based on occurrence of TESS in high-quality habitat

2. Field Surveys

During 2019 and 2020, OneEnergy contracted WEST to produce a Wildlife and Habitat Survey Report, which included 1) pedestrian surveys for wildlife species listed by federal and state agencies as threatened, endangered, and sensitive species (TESS), 2) habitat mapping as further discussed below and 3) a raptor nest survey. The report is included as Attachment F to the ASC.

In 2020, WEST completed a Rare Plant Occurrence and Big Game Assessment, which is included as Attachment G to the ASC. This memo summarizes the WEST's assessment of the occurrence of special status plant species and the potential for the Facility to obstruct big game movement or migration corridors.

In 2019 and 2020, OneEnergy also contracted Tetra Tech to complete a Wetland Delineation Report, which has been finalized and will be submitted to Department of Ecology in tandem with the ASC. The report is included as Attachment O to the ASC.

All field surveys were conducted on an area totaling 808 acres, known as the Survey Area.

2a. Habitat Mapping

In 2019 and 2020, biological field survey protocols were provided to WDFW by OneEnergy for review and comment prior to completion of any field work. A component of the biological field surveys was to map and characterize habitat types within the Survey Area to identify the extent and condition of habitat using classifications described in the *Washington Wind Power Guidelines* (Guidelines) developed by WDFW. This approach, although not tailored to *solar* development, was recommended by WDFW during survey protocol review. See Part 3a below for additional discussion on the Guidelines.

Table 2 below summarizes the habitat types found within the Survey Area and Figure 5 (pg. 19) shows their locations.

Table 2. Habitat types observed during combined surveys at the Goose Prairie Solar, Yakima County, Washington.

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

As described in section 4.3 of the Wildlife and Habitat Survey Report, the most prevalent habitat type was land enrolled in the Conservation Reserve Program (CRP). CRP land is clearly defined and located entirely within the area north of State Route 24 and south of Den Beste Rd and was composed primarily of non-native species including downy brome, crested wheat, Russian thistle, blue mustard, black mustard, western tansymustard, and yellow salsify. Non-native plant species

have been shown to degrade the value and function of CRP for wildlife by outcompeting more desirable native plant species (Vandever and Allen 2015). During its 2019 site visit, WDFW noted verbally that the CRP land appeared to be of relatively lower habitat value due to the extensive non-native species. The CRP contract for the site is set to expire on September 30, 2022. If not for construction of the Facility, the land currently subject to CRP management would likely return to agricultural use for either grazing or Cropland.

Shrub-steppe habitat was the second-most abundant habitat type. However, not all shrub-steppe habitat provided the same potential habitat function and value. To provide more accurate findings, based upon scientific criteria, WEST created two categories: *degraded* shrub-steppe and *intact* shrub-steppe. WEST evaluated the shrub-steppe habitat patches (a) against known stressors (NRCS 2004) and (b) relative to each other, to determine whether specific patches were degraded and intact.[1]

This mapping confirmed a clear distinction between the intact shrub-steppe habitat that WDFW initially identified as higher-quality habitat early in the consultation process and the less-valuable, degraded shrub-steppe habitat found immediately north of Den Beste Rd and south of the transmission line. Within the degraded area, active cattle grazing has reduced (or eliminated) the shrub height, degraded herbaceous cover and caused compacted soils. Evidence of supplementary cattle forage (e.g., hay) was evident throughout the degraded shrub-steppe habitat. Intact shrub-steppe comprised the remainder of the shrub-steppe habitat and included areas along the dry wash and paddocks where livestock grazing was less intense as evidenced by increased shrub height, shrub density, and understory vegetative cover. See Part 3b below for additional discussion on the potential causes and reduced function and value of degraded shrub-steppe habitat.

2b. Soil Types

Silt loam soils were the primary underlying soil type accounting for 95.2% of the soil types, with only Finley cobbly fine sandy loam as the non-silt soil type (Figure 6, Table 3). The primary soil type found in the CRP habitat was Willis silt loam, 2 to 5% slopes and is the same underlying soil type as that found in the intact shrub-steppe habitat differing only in the percent slope (Willis silt loam, 8 to 15% slopes). Silt loam soils are characterized by deep soil horizons that lack the basalt bedrock and shallow, rocky soil structure indicative of lithosols, an ecologically sensitive soil type.

[1] WEST did not measure vegetation or complete a botanical survey during the habitat mapping.

Table 3. National Resource Conservation Service soil types at Goose Prairie Solar, Yakima County, Washington. Map symbols reflect the soil series ID shown in Figure 6.

Map Symbol	Soil Description	Acres
36	Finley cobbly fine sandy loam, 0 to 5 percent slopes	38.6
65	Kiona stony silt loam, 15 to 45 percent slopes	2.1
68	Lickskillet very stony silt loam, 5 to 45 percent slope	6.6
83	Moxee slit loam, 2 to 15 percent slopes	168.6
93	Pits	5.6
101	Ritzville slit loam, 8 to 15 percent slopes	1.4
187	Willis slit loam, 2 to 5 percent slopes	399.5
188	Willis slit loam, 5 to 8 percent slopes	65.8
189	Willis slit loam, 8 to 15 percent slopes	121.0
Total		809[1]

[1] Minor difference in total acreage due to NRCS mapping service and rounding

3. Impact Calculations and Micrositing Considerations

In some permitting contexts, including this one, renewable energy developers need to calculate a project's impacts prior to having the final design. For wind energy developers, the turbine locations might be known but the turbine type unknown. For solar energy developers, the leased boundary might be known but the alignment of the photovoltaic (PV) panel array and extent of permanent impacts may be unknown. Thus, the developer must account for the uncertainty when estimating impacts but provide enough resolution to satisfy the permitting process.

In its ASC, OneEnergy is proposing a micrositing approach with a maximum acreage within a broader micrositing boundary. The Facility will have a maximum footprint of 625 acres (the Facility Area) that will be wholly located within the 789-acre Facility Area Extent (see Figure 1). (Note that the field survey was completed for an 808-acre area (the Survey Area) which wholly encompasses the Facility Area Extent.) The micrositing flexibility allows for the ability to refine the design including spacing of solar modules and the location of associated access roads, collector lines and staging areas.

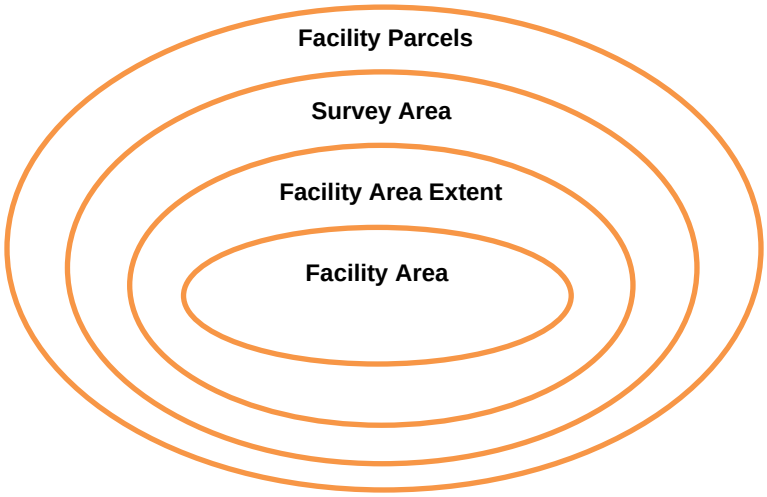

Figure 1: Area Definitions

A Preliminary Site Plan is provided as Attachment B to the ASC. While the final layout may change within the parameters described above, OneEnergy proposes to calculate the Facility's temporary and permanent impacts and their associated compensatory mitigation requirements based on this Preliminary Site Plan, and then replace the acreages used for the calculations based on the final design once it is complete.

3a. Wind Power Guidelines

At present, PV-specific solar power guidelines for solar energy developers to utilize in consideration of mitigation in the State of Washington are not available. In lieu of solar-specific guidelines, WDFW has recommended use of the 2009 Wind Power Guidelines, which were published following a multi-year stakeholder process targeted at the specific impacts unique to wind energy facilities, as the guiding document for compensatory mitigation for both wind and solar development, despite different impacts (WDFW 2009).

Under the Wind Power Guidelines, WDFW assigns a ratio of land needed for restoration or acquisition to land impacted (Table 4) for both permanent and temporary impacts.

Permanent impacts to habitat are defined in the Guidelines as "those that are anticipated to persist and cannot be restored within the life of a project." The Guidelines include the following as permanent impacts: "new permanent roads, operations and maintenance facilities, turbine pads, impervious and/or areas devoid of native vegetation resulting from project operations." In lieu of turbine pads, solar facilities require mounting infrastructure. Thus, in the context of solar, OneEnergy proposes the following impacts be considered permanent: 1) the total area impacted by the steel support posts and 2) the concrete pads for electrical equipment. Areas under and between the solar arrays will be revegetated with a native seed mix selected in coordination with WDFW; because it will not be "devoid of native vegetation", OneEnergy does not include these areas in the calculation of permanent impacts. See section 4c below for discussion related to residual habitat benefits.

Temporary impacts to habitat are defined as "those that are anticipated to end when construction is complete and the impacts have been restored." The Guidelines state that the following are temporary impacts: "trenching for placement of underground cables, construction staging areas, lay-down areas, and temporary construction access." Temporary impacts also include "the portions of road corridors that are used during construction but that are re-vegetated at the end of construction, but do not include the portions of roads that continue to be used for project operations."

Table 4. Habitat classification and mitigation ratios (WDFW Wind Power Guidelines, 2009).

Habitat Classification	Habitat Type	Mitigation Ratio	
		Temporary Impact	Permanent Impact
Class II	Shrub-steppe	0.5:1 Mitigation/Restoration	2:1 Acquisition
Class III	Eastside (Interior) Grasslands, CRP Lands	0.1:1 Mitigation/ Restoration	1:1 Acquisition
Class IV	Croplands, Pasture Mixed Environs	No Mitigation Required	No Mitigation Required

3b. Habitat Function and Values

In the Guidelines, WDFW discusses how existing habitat functions and values could affect the level of compensatory mitigation necessary to fully offset impacts from development. However, WDFW does not define how functions and values are quantified in the field nor does it make the coarse distinctions for how habitat could be qualified between degraded habitat and intact habitat. Land use practices such as livestock grazing or agricultural conversion can result in degraded habitat that no longer provides the similar function and value to wildlife or native plants that undisturbed habitats provide. With ongoing agricultural practices, the degraded habitats will not provide such values in the future.

Shrub-steppe habitat can transition to a degraded state through several mechanisms including drought, poor grazing practices, or poor shrub management. The resulting habitat could have an appropriate shrub component but be dominated by cheatgrass, medusahead and other exotic annual grasses and forbs. Alternatively, the removal of grass and forb component could result in an excessive shrub understory (NRCS 2004).

Within the Facility's Survey Area, the degraded shrub-steppe habitat has a demonstrably lower function due to reduced shrub height, herbaceous cover and compacted soils. Based on these physical characteristics, reduced function and value was evidenced by a lack of sensitive species observed during biological surveys in the degraded area relative to the surrounding landscape as demonstrated in the Wildlife and Habitat Survey Report. Absent Facility construction, restoration of this particular degraded shrub-steppe habitat would be unlikely given continued management under private-enterprise agricultural practices. In the event restoration to be attempted, it would take a prohibitively long time and face clear limitations considering the substantial degradation and extent to which this area has transitioned away from intact shrub-steppe.

EFSEC requires that "[m]itigation credits and debits shall be based on *a scientifically valid measure of habitat function, value, and area*." WAC 463-62-040(2)(c). The scientifically valid methods employed in WEST's Wildlife and Habitat Survey Report, See Att. F to ASC at 6, measured material differences in the function and value of the intact and degraded shrub-steppe habitats within the Survey Area. For purposes of habitat classification and assigning mitigation ratios, because the degraded shrub-steppe habitat represents a materially distinct habitat function

and value that more closely resembles Class III habitat, it should not be considered Class II habitat. OneEnergy proposes that the degraded shrub-steppe be considered a Class III habitat for assigning mitigation ratios.

3c. Calculating Impacts and Compensatory Mitigation for Goose Prairie Solar

Applying the calculation as described above and further in the Wind Power Guidelines, OneEnergy has determined the preliminary permanent and temporary impacts by habitat type based on the Preliminary Site Plan. The impacted acreages by habitat type are shown in Table 5 and the resulting calculated number of "mitigated" acres are shown in Table 6. Based on the Preliminary Site Plan, the Facility requires 0.76 acres of mitigation or restoration and 32.25 acres of acquisition for mitigation of the habitat impacts.

As discussed in the Guidelines, options for developers to mitigate habitat impacts can include the restoration of temporarily impacted areas and acquisition of in-kind habitat types and quality. Acquisition of replacement habitat will be selected in consultation with WDFW and EFSEC and with the considerations provided in Section 5.2B of the Wind Power Guidelines. If suitable replacement habitat of in-kind type and quality cannot be identified, mitigation "By Fee" may be considered as an alternative to acquisition of habitat pursuant to Section 5.4 of the Guidelines.

Table 5. Impacted acres by habitat type at Goose Prairie Solar, Yakima County, Washington.

		Acres Impacted	
Classification	**Habitat Type**	**Temporary Impact**	**Permanent Impact**
Class II	Shrub-steppe -Intact	0.37	3.25
Class II	Shrub-steppe - Degraded[2]	0.12	2.81
Class III	Eastside (Interior) Grasslands, CRP Lands	5.58	22.96
Class IV	Croplands, Pasture Mixed Environs	0.00	0.51
Total		6.07	29.53

Table 6. Mitigated acres by habitat type at Goose Prairie Solar, Yakima County, Washington.

		Acres Mitigated	
Classification	**Habitat Type**	**Temporary Impact**	**Permanent Impact**
Class II	Shrub-steppe -Intact (0.5:1, 2:1)	0.19	6.5
Class II	Shrub-steppe – Degraded (0.1:1, 1:1)[3]	0.01	2.81
Class III	Eastside (Interior) Grasslands, CRP Lands (0.1:1, 1:1)	0.56	22.94
Class IV	Croplands, Pasture Mixed Environs (0:1, 0:1)	0.00	0.00
Total		0.76 ac of mitigation/restoration	32.25 ac of acquisition

[2] See discussion at Part 3b regarding appropriate degraded shrub-steppe classification.

4. Mitigation and Additional Benefits Unaccounted for in the Calculation

This approach for calculating the compensatory mitigation requirement does not take into account certain additional steps OneEnergy has taken to-date to (1) avoid and (2) minimize impacts, (3) provide residual habitat function, and (4) serve climate benefits that improve cumulative habitat function. These avoidance and minimization measures and additional benefits are described as follows. See Table 7 for a summary of the mitigation tactics taken by OneEnergy for the Facility.

4a. Avoidance

The first action of avoidance mitigation that OneEnergy undertook was to move the entire Facility from its original site to a new site twelve miles away, following feedback provided by WDFW in 2017. OneEnergy abandoned the preliminary site after capital had already been invested in site control acquisition and an interconnection queue position had been filed with BPA. OneEnergy relocated the Facility to a less ecologically sensitive area, securing new site control and a new interconnection position. Land use surrounding the current Facility location consists of active agricultural practices and livestock grazing. The Facility Area Extent is bisected by the BPA Midway-to-Moxee 115-kilovolt transmission line and adjacent to State Route 24 to the south. In response to WDFW feedback, the Facility is strategically located in a modified landscape to avoid sensitive environmental resources, reduce new road construction, overhead transmission lines and habitat fragmentation.

The second action is OneEnergy's commitment to avoid, and leave unfenced, the shrub-steppe sage draw located in between the northern and southern portions of the Facility (Figure 4). The only Facility components in this area will be the collector electrical infrastructure and civil road infrastructure necessary to connect the Facility. Avoidance of PV and fencing infrastructure in this approximately 62-acre area maintains higher-value habitat and leaves the corridor open for terrestrial movement and wildlife connectivity function.

4b. Minimization

OneEnergy has also taken multiple steps to minimize impacts in the design of the Facility. Using proper siting and facility design, PV solar energy facilities can be constructed to minimize vegetation removal by leaving habitat in place that could provide value to wildlife by facilitating movement, retaining plant pollinator species, and benefiting ground nesting birds (Sinha et al. 2018, Walston et al. 2018).

To minimize impacts to meso-carnivores and small mammals, the Facility has committed to raising the bottom of the fence by four inches above grade. To minimize impacts to birds and animals that attempt to jump the fence, razor wire will not be used with the fence. These fence specifications are in direct response to WDFW request. To minimize impacts to intact shrub-steppe, the proposed facilities north of the sage draw are intentionally located on areas of lower quality shrub-steppe habitat while avoiding other areas of intact shrub-steppe habitat to the extent practical.

Additionally, construction and operation best management practices will be employed. Some of these BMPs include stormwater and erosion control measures to minimize impacts to waterways and native vegetation, emergency and spill plans to reduce the risk and impact of hazardous spills.

Others include noxious weed control, downward-directed security lighting, and above-ground power lines designed according to guidelines in the Avian Power Line Interaction Committee standards.

As detailed above, OneEnergy will develop a Habitat Restoration and Mitigation Plan, in consultation with WDFW and EFSEC, which will include details for revegetation of temporarily disturbed areas, including identification of an appropriate seed mix, the timing for restoration and a plan for monitoring the success of revegetation.

4c. Residual Habitat Value

By implementing low impact principles, The Nature Conservancy and other environmental organizations have noted the residual benefits to wildlife and habitat from solar energy development[3]. OneEnergy is employing these low impact principles, including allowing for wildlife connectivity, preferentially using degraded land, protecting water quality and avoiding erosion, revegetating with native plants and avoiding on-site habitat.

Studies conducted by the National Renewable Energy Laboratory (NREL) and universities find residual benefits to soil physical and chemical properties when combined with thoughtful revegetation practices (Choi et al. 2020). Portions of the Facility that are temporarily disturbed during construction (e.g. the areas underneath and between panel rows) will be revegetated with a native plant seed mix selected in coordination with WDFW.

Finally, scientific data suggests residual habitat function in areas impacted by solar development. A study conducted at the Topaz Solar Farms in San Luis Obispo County, California documented higher vegetation productivity on site than in surrounding reference sites (Sinha et al. 2018). Numerous wildlife species were recorded using habitat within that project site, including 27 bird species, eight mammal species, and four reptile species (Sinha et al. 2018).

4d. Positive Climate Impacts

Furthermore, in light of the increasing threat to wildlife and habitat due to the cumulative impacts of climate change, renewable energy is serving a public benefit as a carbon-free energy generation source, which is credited for facilitating the decarbonization of the electrical grid. To combat the effects of climate change, the State of Washington enacted legislation in 2019, the Washington Clean Energy Transformation Act, which will transition the State to 100 percent clean electricity by 2045.

The National Audubon Society has promoted the development of solar energy to reduce emissions associated with climate change, which Audubon as identified as the number one threat to birds[4]. However, with regard to wildlife and habitat impacts in the State of Washington, negative site impacts trigger compensatory mitigation, yet the *positive impacts* are not accounted for as a credit

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[3] https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/Documents/ED_TNCNCPrinciplesofSolarSitingandDesignJan2019.pdf

[4] https://www.audubon.org/climate/survivalbydegrees *as cited in*: https://www.audubon.org/news/audubon-study-confirms-solar-major-economic-driver-south-carolina

to cumulative habitat improvement that occurs when a carbon-free generation facility is constructed in lieu of a fossil fuel plant in serving public energy needs. OneEnergy looks forward to further discussing the positive impacts to wildlife and associated ecosystems derived from the Facility's contribution to reducing greenhouse gas emissions from the electricity sector.

Table 7. Summary of Considerations Pertinent to Compensatory Mitigation

Mitigation Tactic	Detail
Avoidance	Facility location moved 12 miles to a less ecologically sensitive area, per WDFW feedback
Avoidance	Approximately 62-acre intact shrub-steppe draw area excluded from PV placement and fencing infrastructure in Facility design, intentionally left unfenced to facilitate terrestrial movement and wildlife connectivity function
Avoidance & Minimization	OneEnergy largely avoided higher-quality, intact shrub-steppe areas in favor of CRP and low-quality, degraded shrub-steppe in facility design
Minimization	Fence bottom raised four inches to facilitate terrestrial wildlife movement
Minimization	Construction and Operations Best Management Practices as outlined in the ASC, including but not limited to: • turning off unnecessary lighting at night and directing light downward to minimize horizontal or skyward illumination • designing above-ground power lines to guidelines outlined in the Avian Power Line Interaction Committee (APLIC) standards • Implementation of noxious weed control and stormwater pollution prevention plans
Minimization & Improvement	Habitat restoration with native plant seed mixture; potential for improvement of Eastside Grassland habitat within the CRP area, which are currently dominated by non-native species
Coordination	OneEnergy will develop a Habitat Restoration and Mitigation Plan in coordination with WDFW as described above
Other	Residual habitat benefits not considered in the mitigation framework
Other	Consideration of alignment between the State's renewable energy goals and habitat mitigation policy: in the context of climate change, renewable energy is yielding a cumulative benefit for habitat and wildlife yet the habitat mitigation framework only looks at site-specific impacts in a negative light.

5. Conclusion and Next Steps

In sum, to determine the value of compensatory mitigation, OneEnergy has calculated the acreages of temporary and permanent impacts to habitat based on the Wind Power Guidelines, as recommended by WDFW specifically for this Facility. This acreage reflects the expected calculation of the compensatory mitigation required by WDFW, but does not take into account other important considerations noted above, including the presence of degraded shrub-steppe habitat, the mitigation actions already taken by OneEnergy in the siting and design of the Facility, and other additional benefits not encompassed within the mitigation framework.

As a next step, OneEnergy proposes to meet with WDFW and EFSEC to discuss Facility benefits and creative mitigation solutions that incorporate 'customized or alternative' mitigation packages,' per Section 5 of the Wind Power Guidelines, with the ultimate goal of determining the appropriate compensatory mitigation required to demonstrate the Facility creates "no net loss of fish and wildlife habitat functions or values" as required by WAC 463-62-040. Ideally, the first meeting would be held within fifteen business days of the ASC submission and would conclude within 60 days of that first meeting. The agreed-upon compensatory mitigation would be formally submitted as supplemental information to the ASC for consideration in the SEPA determination and Site Certificate Agreement issuance.

In accordance with WAC 463-60-332(3) and YCC 16C.11.060, OneEnergy will develop and implement a Habitat Restoration and Mitigation Plan, which will describe the implementation of wildlife and habitat mitigation measures for the Facility, including the compensatory mitigation. OneEnergy will consult with WDFW and EFSEC in development of this plan, which would be finalized following issuance of the SCA and submitted to EFSEC for approval at least sixty days prior to site preparation.

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Figures

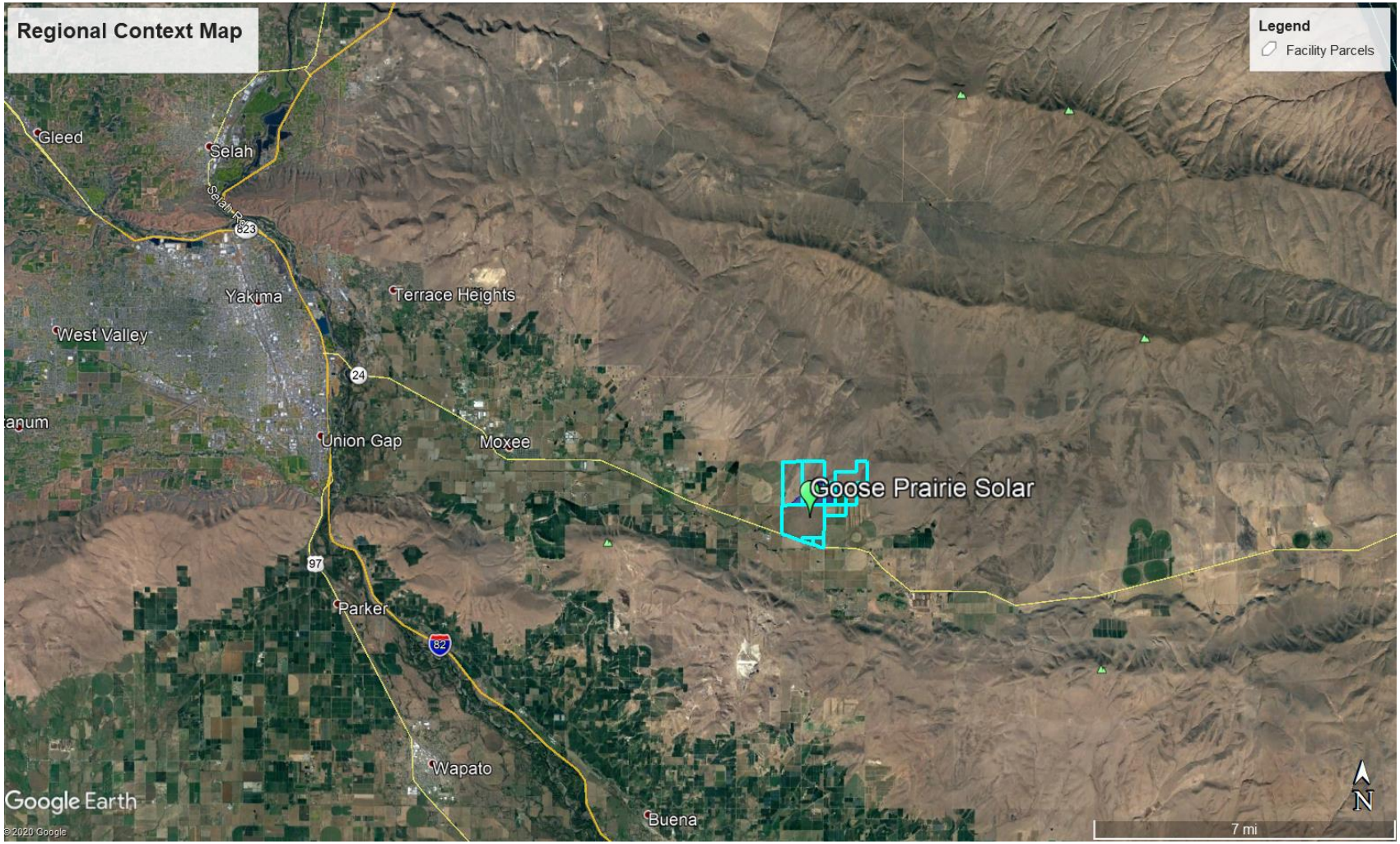

Figure 2. Regional Context Map

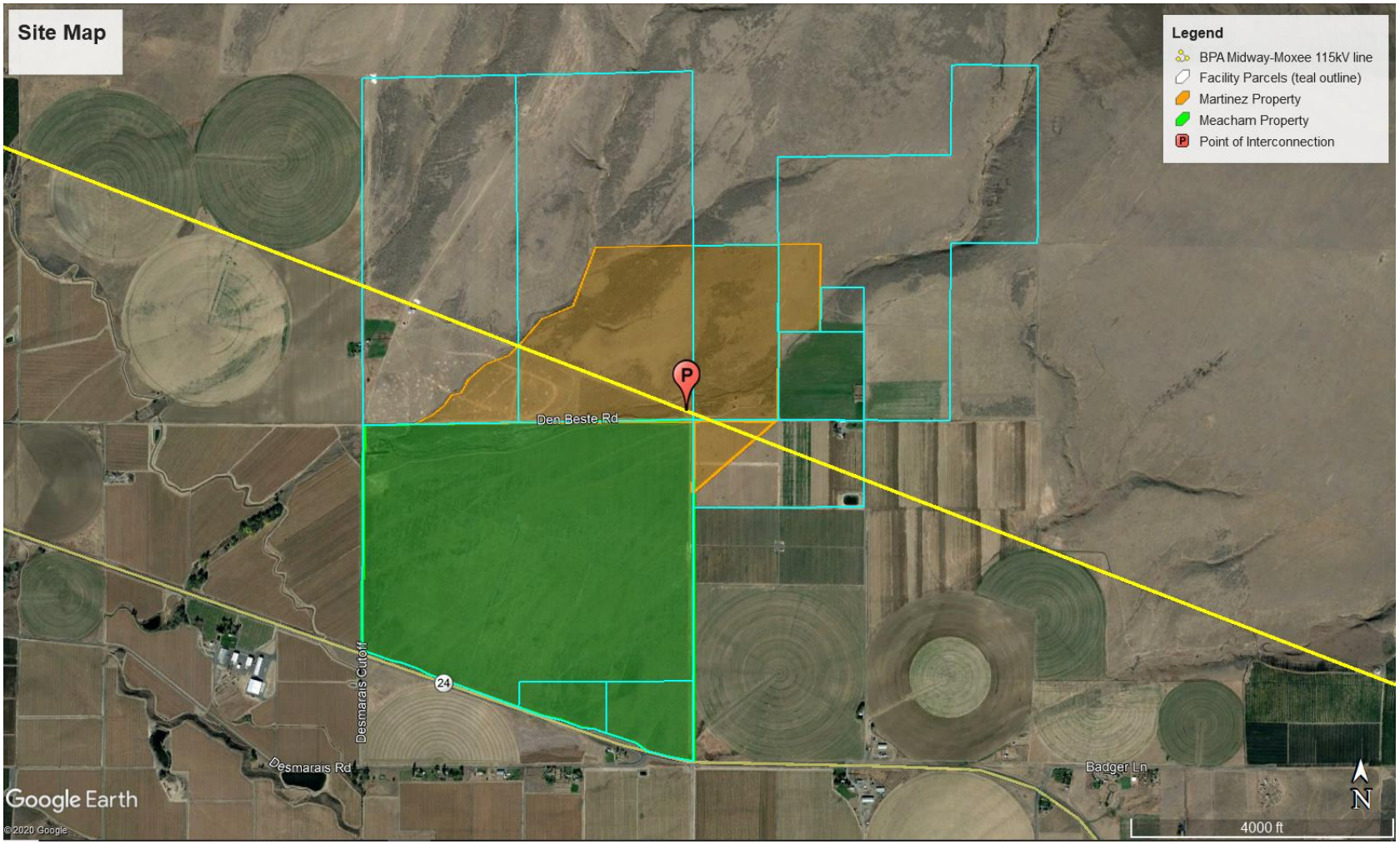

Figure 3. Site Location and Land Ownership

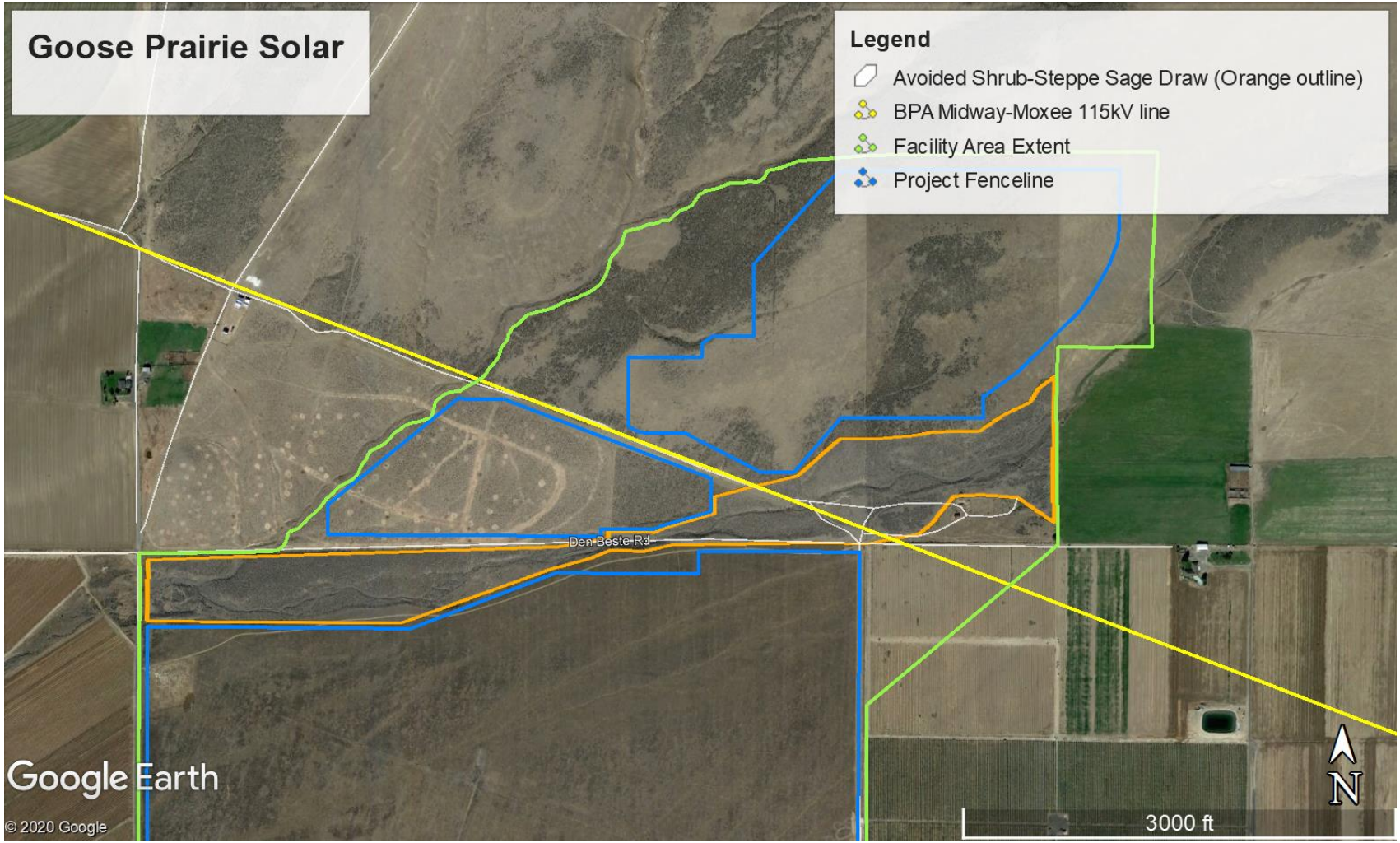

Figure 4. Location of Avoided Shrub-Steppe Sage Draw

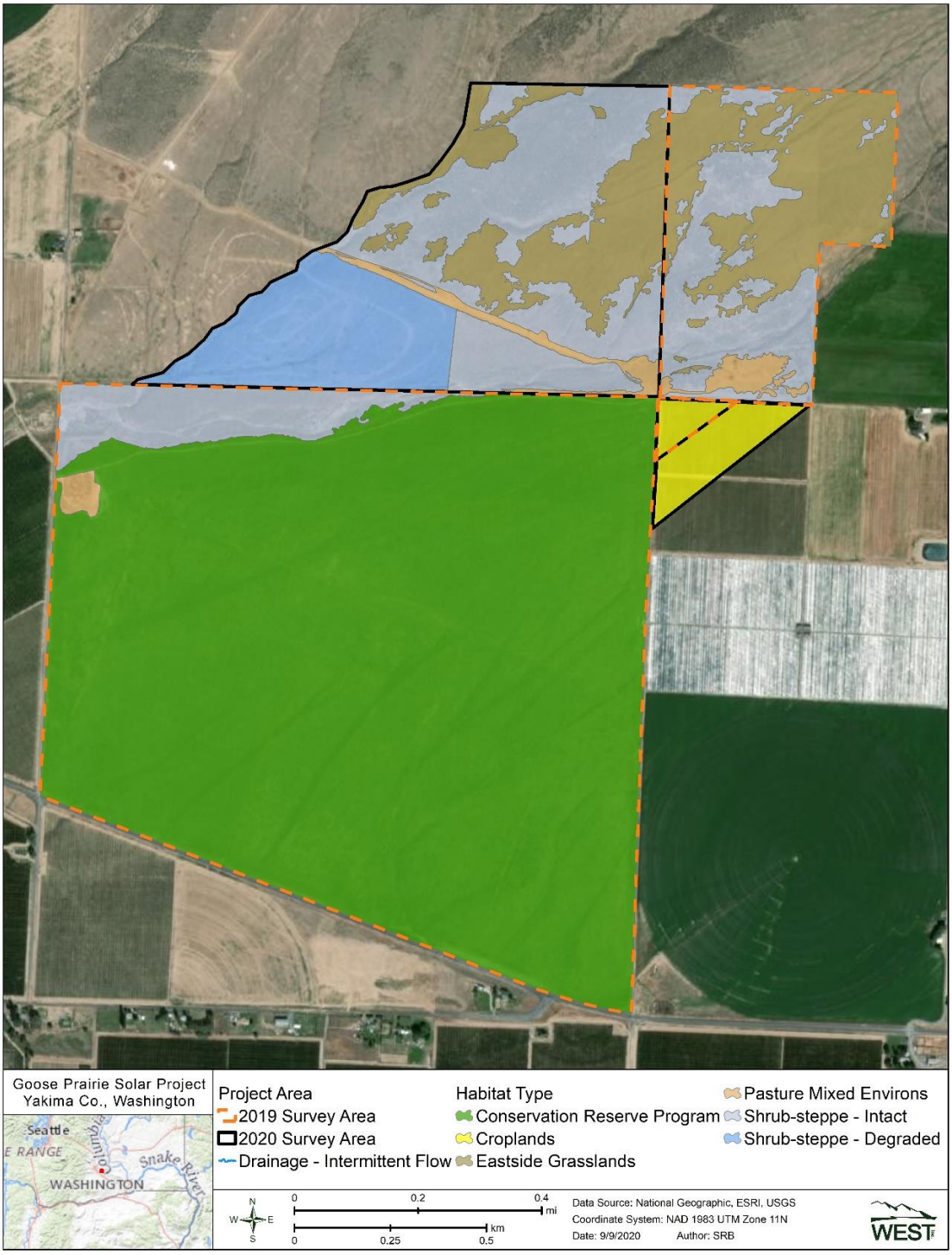

Figure 5. WDFW (2009) habitat types within the Goose Prairie Solar Survey Area for 2019 and 2020, Yakima County, Washington.

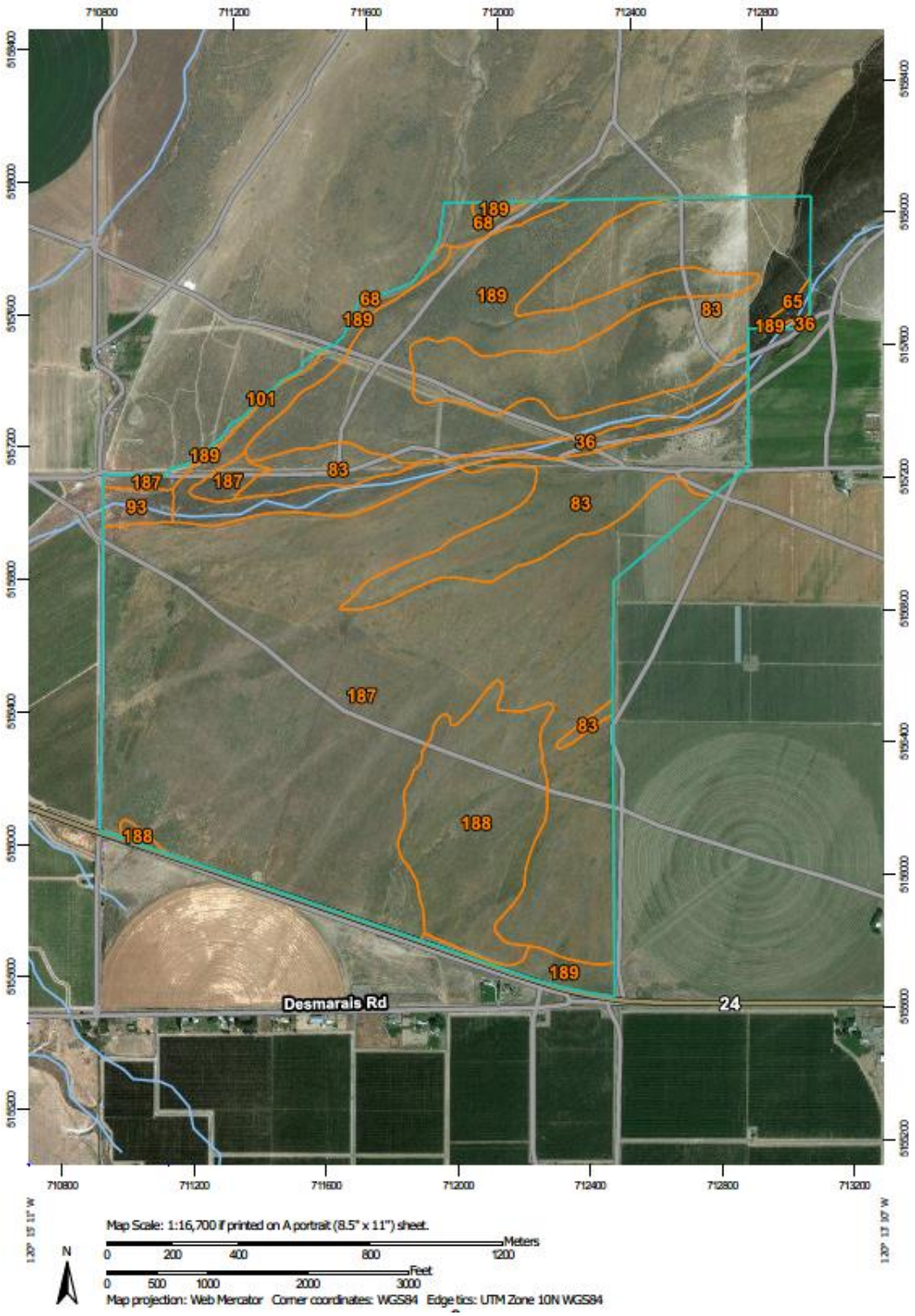

Figure 6. NRCS soil types for the Goose Prairie Solar Survey Area, Yakima County, Washington. The blue line represents the Survey Area; soil types are identified in Table 3.

Attachment 1: WDFW Consultation Letters

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
South Central Region • Region 3 • 1701 South 24th Avenue, Yakima, WA 98902-5720
Telephone: (509) 575-2740 • Fax: (509) 575-2474

August 17, 2018

OneEnergy Renewables, Inc.
Attn: Ann Siqveland
2003 Western Avenue
Suite 225
Seattle, WA 98121

Subject: **Review of two potential solar power development sites**

Dear Ann

I received your e-mail request to provide comments on the possible OneEnergy Renewables solar development sites on July 25, 2018. Thank you for the early opportunity to provide our ideas on the "County Line" and "Goose Prairie" potential sites. Their characteristics reflect much of WDFW's input as provided during our first meeting. Our Habitat and Wildlife staff team has identified merit in both of these locations. The following information should be considered somewhat cursory and not final.

County Line Solar Project site-

Pros/Cons:
This potential site is at the developing edge of irrigated agriculture. Thus, it would already be subject to elevated levels of activity disturbances from both Ag and residential sources. It is recently burned and probably grazed, so site development is unlikely to have much impact to any existing vegetation of high habitat value. Historic soil profiles are likely to be intact. So the land retains its likelihood of returning to a high-quality shrub/bunchgrass land cover in the absence of fire and heavy grazing.

A sizeable ephemeral stream runs through the NW quarter of Section 13 and lesser expressions of both channelized and sheet flow traverse the remainder of the site. Channelized features can be associated with increased forage and wildlife cover. Some level of protection for those are usually prescribed by the local jurisdictions, which could result in additional needs for mitigation.

Habitat Status & known species use:
Portions of the property in both counties are Priority Shrub Steppe Habitat. While the Yakima County portion is designated by the jurisdiction as in the Upland Wildlife Habitat Conservation

Area – Critical Area, the Benton County portion will be part of a Fish and Wildlife Conservation Area – Critical Area. Considerable habitat potential exists for the proposed site as a whole. Priority functions of the property are Wintering Habitat for the Rattlesnake Ridge Elk Herd and inclusion in the Rattlesnake Hills Sage Grouse Management Unit area. There is a lack of relevant records in our sensitive species databases, which is likely due to a long-term lack of presence and effort. Properly viewing the property has not been possible without first securing the appropriate permission from private owners. That may never have happened.

Surveys & site review needed:
Habitat and soil types across the entire property should be mapped. Ground surveys for wildlife presence and usage will also be needed, and might be done concurrent with habitat mapping. April is the suggested time to start the wildlife surveys.

Mitigation scenarios:
Construction of the initial solar power development can be focused within the portions of lower quality habitat. While some grasses and shrubs possibly occupied by ground squirrels can grow between panels, caution towards any unknown harmful effects to raptors that might prey on the squirrels is an issue. Wind power development in shrub-steppe is often mitigated at the ratio of 2:1. However, our experience with solar power development is that it results in a larger amount of non-mitigatable impacts compared to those of wind turbines. Therefore, 2:1 should be taken as a minimum standard for offsetting, with well-functioning shrub-steppe, the installation of solar panels in lesser-functioning habitat areas.

I remain interested in creative compensatory mitigation solutions that contribute to a reduction in habitat losses resulting from frequent fires. We can discuss those after a project location is better determined.

Goose Prairie Solar Project site-

Pros/Cons:
This site avoids impacts to migratory connectivity versus an alternative siting “out in the sage”. It is mostly a grassland within the developed edge of cultivated agriculture. State Highway 24 borders its southern edge. An elevated level of activity disturbance is associated with the location. Habitat and design shouldn’t be affected by drainage features. Historic soil profiles may be mostly intact. So the land retains the possibility of returning to a shrub/bunchgrass land cover of decent quality while in the absence of fire, cultivation, or heavy grazing.

Habitat status & known species use:
The existing habitat is functioning at a moderate-to-low level. Townsend’s ground squirrel and Long-billed curlews have regularly used this field- and raptors regularly hunt the ground squirrels. Ferruginous hawks have been observed doing this there. There are historical records in our database of Burrowing owl near the site. Badgers are also associated with it. The Rattlesnake Hills Sage Grouse Management Unit includes this property.

Surveys & site review needed:
Same as for the County Line site. Soil mapping should capture where the subsoils are disturbed.

Mitigation scenarios:
This property is proposed for a complete build-out including setbacks. Mitigation would need to occur mostly offsite. Otherwise, the considerations are the same as for the County Line site.

Thanks again for the opportunity to provide these comments. Please feel free to contact me with any questions or clarifications you may require. My phone number is 457-9310.

Sincerely,

Eric Bartrand

Department of Fish and Wildlife
Area Habitat Biologist
1701 S 24th Avenue
Yakima, WA 98902

EB:eb

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DEPARTMENT OF FISH AND WILDLIFE
South Central Region • Region 3 • 1701 South 24th Avenue, Yakima, WA 98902-5720
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March 19, 2019

Ann Siqveland
Blake Bjornson
Directors / Project Development
OneEnergy Renewables
2003 Western Ave #225
Seattle, WA 98121

Subject: **Guidance for and Preliminary Attributes of the "Goose Prairie" Potential Solar Site in Yakima County, Washington**

Dear Ann and Blake:

Thanks again for providing us the chance on 2/07/2018 to put our eyes on the Goose Prairie property, which OneEnergy is now committing to further study for possible facility implementation. This letter follows-up our conversations and observations from the visit, per request. We are quite familiar with the general habitat settings of most areas in the County, naturally. Yet, the visit reinforced the precise setting and environmental contexts of it. Scott Downes and I put together the following recommendations that reflect our on-site discussions. You will also find a matrix that describes site attributes as we understand them and the comparative challenges and opportunities for protecting sensitive wildlife species within a possible implementation.

Recommendations:

- Facility fences should be at least 8 feet in height and if any barbed wire is put on top, it should be single strand barbed wire. Creative minimization/mitigation options include providing for some passage of small animals through lower area of the fence (larger fence opening, say 6" x 6", i.e. hog fencing panels).
- Grass mixes: WDFW can supply suggestions on mixes that will do well in the area when development gets to that stage. If possible, forbs (pollinator species) should be incorporated into the mix. Mitigation ratios should be consistent with ratios in wind power guidelines. Some flexibility is allowed for good siting, choosing less intact habitats (positive) though the guidelines also allow for somewhat higher ratios if the habitat is found to rate highly for priority species. Any burrow areas located are best avoided, especially if burrowing owl. Additional discussion of mitigation ratios should be done once surveys are conducted.
- Once surveys are conducted in spring, DFW is happy to sit down with OneEnergy again to discuss micro-siting and layout of the sites to better minimize wildlife disturbance and maximize mitigation options.
- All big sage should be avoided and left in the draw as possible. In fact, in places a buffer strip extending "landward" from the existing big sage habitat, which would allow future recruitment of big sage (or planting of big sage), is desirable. This would be recommended even if the project needs to spill to the north side of the draw (area between existing power line to the north and intact big sage habitat to the south). A potential buffer line could be everything north of the existing two-track road, to be discussed further once constraints are known.
- Expanding the buffer of the intact big sage area and locating the project to the north and south of the project also has merit as potential mitigation.
- If avoidance of sage or wildlife connectivity functions is not possible, WDFW and OneEnergy will discuss mitigation options.
- Focus wildlife surveys on these primary species—Townsend's Ground Squirrel, Burrowing Owl, Long-billed Curlew and White and Black-tailed Jackrabbit.

PHS GROUND SURVEYS:

- The entirety of proposed disturbed facility footprints should be surveyed.
- Any trees within ¼ mile of the project footprint should be surveyed for raptor nests during year of construction and if found to be active during year of construction, measures to reduce or eliminate noise to at or below background noise levels should be in place from March 1-July 15.
- Vegetation surveys to assess habitat types. Surveys should map habitat types in accordance with WDFW Wind Power Guidelines habitat types.
- Wildlife surveys should be conducted in April and May (one in each month). Surveys should be conducted walking transects of ~60 meters apart during good weather conditions (low-moderate wind and little-no rain).
- A comprehensive wildlife list should be kept of all species seen.
- All PHS species locations should be recorded (GPS) for discussions on possible avoidance later. If species are identifiable via scat or tracks, they should also be noted.
- If species avoidance is not possible, WDFW and OneEnergy will discuss necessary mitigation options.

I am optimistic of the compatibility with wildlife the described solar facilities will ultimately demonstrate. We greatly appreciate the early engagement you've provided us so far. Please feel free to contact me with any questions or clarifications related to this information you may require. My phone number is 457-9310.

Sincerely,

Eric Bartrand

Eric Bartrand

Department of Fish and Wildlife
Area Habitat Biologist
1701 S 24th Avenue
Yakima, WA 98902

SD,EB:eb

Attachment: Feb2019-Evaluations_table.pdf

Sent E-mail to ann@oneenergyrenewables.com