



550 NW Franklin Ave., Suite 408
Bend, OR 97702

June 13, 2022

VIA: ELECTRONIC MAIL

Crook County Planning Department
Attn: Brent Bybee, Planning Manager
300 NE 3rd Street, Room 12
Prineville, OR 97754

**RE: Application 217-21-000438-PLNG
Applicant's Response to ODFW Memorandum on Powell East Wildlife Mitigation**

Dear Crook County Planning Department:

NewSun Energy, on behalf of Powell East Solar Farm LLC ("Applicant"), respectfully submits this letter in relation to its application for conditional use permit 217-21-000438-PLNG (the "Application") to construct a photovoltaic solar power generation facility on up to 320 acres in Crook County (the "Project"). This letter provides Applicant's comments in response to the Oregon Department of Fish and Wildlife ("ODFW") Memorandum submitted to Crook County Planning Department on December 14, 2021 (the "Memorandum").

1. Introduction

In consideration of ODFW's comments, and in a good faith effort to eliminate disputes in the Crook County planning process, Applicant revised its Wildlife Mitigation Plan ("WMP") to implement the following changes:

- **Location:** Identify specific location requirements for mitigation siting under the WMP;
- **Durability:** State the minimum development restrictions in a real estate instrument to prevent development on the mitigation site;
- **Monitoring:** Provide the Applicant's monitoring plan for mitigation Option 1 (juniper uplift);
- **Inflation:** Add an inflation escalator in the formula for Option 2A (fee-in-lieu payment), with a cap;
- **Conservation Organization:** Require that fee-in-lieu payments made to Crook County under Option 2B be implemented by an organization with an MOU with Crook County;
- **Option 3:** Clarify the scope of mitigation Option 3 (alternative project) with mitigation project options and location requirements; and
- **Reporting:** Clarify the additional, limited details to be submitted to the County prior to Project construction.

Applicant provides individual responses to the issue-specific comments submitted by ODFW in the document attached to this letter as Exhibit A, which also provides a redline of Applicant's changes to the WMP. A clean copy of the revised WMP is attached as Exhibit B.

2. Approval Criteria

As a threshold matter, Applicant notes that the Application requests a permit to construct a solar facility on up to 320 acres and is not subject to compliance with ORS 215.446 (also known as House Bill 2329), the administrative rules adopted by the State Fish and Wildlife Commission in Oregon Administrative Rules Chapter 635, Division 415, nor case law on those statutes and regulations. Rather, Crook County Code (“CCC”) Sections 18.16 and 18.161 set forth the approval criteria related to wildlife and wildlife habitat for the Application, including mitigation requirements.¹

Because the Project site includes a Goal 5 resource mapped by ODFW (big game winter range), the approval criteria requires the Applicant to design the Project to avoid adverse effects to wildlife and, for unavoidable effects, to “**offset** the potential adverse effects of the facility” with a project-specific mitigation plan, which must include a wildlife impact and monitoring plan.² The term offset is not defined. However, the CCC defines “mitigation” to mean “the offsetting of impacts or reduction of conflicts by providing *on-site or off-site* improvements which have a *reasonable relationship* to the impact or conflict identified in the comprehensive plan” and to include the “construction of physical improvements, dedication or purchase of conservation easements, *buffering*, or similar measures designed to offset impacts or reduce conflicts.”³ The mitigation standard in the CCC provides a floor and, as discussed below, the WMP greatly exceeds the mitigation approval standard.

3. Applicant’s WMP

Applicant notes that the Memorandum proposes changes to the WMP based on ODFW’s habitat mitigation policy and implementing rules, which are not applicable approval criteria or standards.⁴ In addition, Applicant disagrees with ODFW’s assessment that the category of habitat existing on the Project site is habitat Category 2. According to Applicant’s professional biologist, who used ODFW’s guidance and methodology to perform its habitat assessment, the quality of habitat on the mitigation site is habitat Category 3.

Even though Applicant disagrees with ODFW’s determination, and even though the approval standard under the CCC is only to offset potential adverse effects with an impact and monitoring plan, Applicant has agreed to mitigate as if the quality of the habitat on the site was habitat Category 2 to achieve ODFW’s recommended mitigation goal of “no net loss” of habitat quantity and quality and a “net benefit” of habitat quantity and quality.⁵ Therefore, the WMP **provides additional mitigation detail and requirements that greatly exceed the requirements under the applicable approval criteria, including:**

- **Location:** location and habitat type requirements to meet ODFW’s recommended “in kind, in proximity” mitigation.

¹ See also OAR 660-033-0130(38)(j).

² CCC 18.16.060(3)(h)(vi).

³ CCC 18.08.130 (emphasis added).

⁴ See Exhibit B. Please note that that non-substantive organizational changes to the WMP are not captured in the redline for ease of review.

⁵ Memorandum, at 1.

- **Mitigation ratio:** for Option 1, a 1:1 mitigation ratio with a buffer, and for Option 2, a 2:1 mitigation ratio, to achieve ODFW's recommended "no net loss" and "a benefit".
- **Durability:** requirements to record a real estate instrument to protect the mitigations site from conflicting development.
- **Maintenance:** retreatment and extra buffering requirements.

Again, these actions are not required under the applicable approval criteria and, therefore, the WMP exceeds the standard of mitigation required for approving the Project.

4. Issue Specific Comments

Applicant provides the following responses to ODFW's general comments on the WMP in the Memorandum.

a. Mitigation Ratio

The approval criteria for this Project do not reference or contemplate mitigation ratios. Furthermore, Applicant is not aware of any statutes, regulations, policies, or guidelines that require, recommend, or establish applicable mitigation ratios. Therefore, Applicant notes that while a mitigation ratio might be used as evidence to demonstrate that a mitigation standard has been achieved, **other non-quantitative methods may also be used to achieve the mitigation standard.** Nevertheless, the WMP includes mitigation ratios pursuant to ODFW's recommendation.

b. Real Estate Instrument

Applicant revised the WMP to list the minimum requirements that must be contained in a real estate restriction executed to protect the mitigation site under Option 1 from conflicting development. Again, Applicant notes that real estate instrument is not required and therefore exceeds the approval standard. In addition, development restrictions are very likely to already exist on the mitigation site pursuant to zoning ordinance and other laws and regulations, which provides an additional backstop for mitigation site protection against development.

c. Formula to Calculate Fee-in-Lieu Payment

Based on ODFW's recommendation, Applicant revised the WMP to include a 2.5% inflation escalator in the formula used to calculate the fee-in-lieu of mitigation payment under Option 2A, with a cap.⁶ Applicant notes that the formula in the WMP is the formula previously recommended by ODFW and approved by Crook County for similar projects in similar locations.

d. Option 3 – Alternative Mitigation

Applicant continues to believe that mitigation Option 3 is an essential and legitimate tool to preserve Crook County's ability to implement the most effective and impactful mitigation to benefit local wildlife. It offers Crook County important flexibility to determine the best mitigation option to address the facility's impacts at the time the impact occurs, given that wildlife needs and land uses change over time. For example, Option 3 allows the Applicant to

⁶ Two and a half percent (2.5%) exceeds the long-term inflation expectation of the Federal Reserve of two percent (2%). Federal Reserve, *Statement on Longer-Run Goals and Monetary Policy Strategy* (reaffirmed effective Jan. 25, 2022), https://www.federalreserve.gov/monetarypolicy/files/fomc_longerrungoals.pdf.

contribute to a larger aggregated mitigation project to which multiple parties may contribute. It also allows Applicant to implement mitigation projects critical to Crook County to provide superior mitigation with broader benefits, like wildfire suppression, water supply improvements, Medusahead weed removal, or wildlife migration corridors or crossings. Applicant reiterates that Option 3 must be approved by ODFW, meaning that it is likely that any such mitigation project would be held to the higher standard of compliance with ODFW's rules and regulations. In addition, ***the Project cannot be constructed unless Applicant implements a mitigation project***, meaning that if Option 3 is not selected, Applicant must implement Option 1 or Option 2. Applicant has initiated further consultation with ODFW in regard to Option 3 and looks forward to further discussion with Crook County as necessary.

5. Conclusion

Applicant appreciates the County's review and consideration of these comments. As demonstrated in this letter and attached exhibits, Applicant has adopted meaningful and significant changes to the WMP in an effort to compromise with ODFW and reduce conflict in Crook County's permitting process. By agreeing to certain of ODFW's recommendations, Applicant has proposed a mitigation plan that clearly exceeds the approval criteria and standards. The Application materials, including the supplemental evidence submitted and the WMP as revised, demonstrate that Applicant has satisfied the approval criteria.

Applicant looks forward to working with the Crook County Planning Department to continue supporting solar energy development in Crook County.

Sincerely,



Max M. Yoklic
In-House Counsel
NewSun Energy
myoklic@newsunenergy.net
971-978-7501

cc: Jacob Stephens, NewSun Energy
Paul Stern, PLS Environmental
Merissa Moeller, Stoel Rives LLP

EXHIBIT A

Powell East Solar Farm LLC Wildlife Mitigation Plan

Submitted to

Crook County Planning Department

By

Powell East Solar Farm LLC

September 22, 2021

as revised June 13, 2022

I. INTRODUCTION

A. PLAN PURPOSE AND GOALS

The purpose of this Wildlife Mitigation Plan (WMP) is to provide clear methods to minimize impacts on wildlife and their habitats, to the extent required by law. The goals of the mitigation measures are to:

1. Avoid or minimize impacts on habitat and native wildlife during construction and operation of the Project;
2. Specifically avoid potential impacts on special-status plant and wildlife species from construction and operation of the Project; and
3. For unavoidable impacts, develop a comprehensive mitigation approach in coordination with the Oregon Department of Fish and Wildlife (ODFW) and the United States Fish and Wildlife Service (USFWS).

Powell East Solar Farm LLC (the Applicant) and its contractors will be responsible for implementing the measures described in this WMP.¹ This WMP is applicable to the preconstruction, construction, operations, and future decommissioning phases of the Project.

B. EXECUTIVE SUMMARY

The Applicant contracted with PBS Engineering and Environmental, Inc. (PBS), a professional wildlife biologist, to conduct a site-specific habitat assessment of the Project site which included site visits, desktop review, review of scientific literature, and analysis based on state and federal review methodologies. The Applicant has engaged in a lengthy consultation also consulted with ODFW and is proposing three mitigation options, and Crook County in the process of developing this WMP. This WMP includes a variety of mitigation measures. These mitigation options are based on recommendations by ODFW for this and other similar projects, and including general avoidance and minimization measures, construction management to avoid migratory birds, and additional compensatory mitigation. Applicant proposes 3 compensatory mitigation options:

- (1) A juniper removal uplift project;
- (2) A one-time fee-in-lieu payment to Deschutes Land Trust, Crook County/Crook County Soil and Water Conservation District (SWCD), or another established conservation organization; or
- (3) Another mitigation project such as wildfire suppression measures, weed treatment, invasive Medusahead weed removal, water supply improvements, or wildlife migration corridors or crossings if approved by ODFW in compliance with ODFW's habitat mitigation rules.

Compensatory mitigation options must comply with specific locational criteria as defined in this WMP. The mitigation options are well within the range of mitigation approaches that ODFW has

Commented [MY1]: Commented [JGS*01]:

1.ODFW has consulted with NewSun on multiple projects in Crook County and has engaged in lengthy consultations on those prior projects (West Prineville, Crook Flat and TSR North). Consultation on Powell East has been comprised of one web based discussion related to the multiple projects, an email discussion (March 11, 2021), and a follow up phone call.

Commented [MY2R1]: Response: See revisions.

¹ In the event a payment-to-provide option is chosen (Option 2 described below), the Crook County Soil and Water Conservation District (SWCD) or other organization will be responsible for implementing the mitigation.

historically recommended in the region and, specifically, in Crook County. Applicant will submit further, limited details to Crook County prior to project construction to inform the County of which compensatory mitigation option has been selected and implementation specifications.

C. OVERVIEW OF MITIGATION PROPOSAL

The Applicant has developed this mitigation proposal through extensive consultation with ODFW. Despite that consultation, professional differences of opinion remain regarding the quality of big game habitat at the site. The Applicant's wildlife biologist concluded that "Based on the conditions of the study area observed during the site visit and analysis following the Fish and Wildlife Habitat Mitigation Policy flowchart, PBS concludes that the study area would be classified as "Habitat Category 3" for big game. "Habitat Category 3" is defined as *important* (emphasis added) habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population (State of Oregon 2020)."

ODFW considers all of the site "Category 2" habitat, based on its location within an area mapped as big game winter range on ODFW's maps. Category 2 habitat is defined as *essential* (emphasis added) habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

Despite those remaining points of disagreement, the Applicant is proposing mitigation to achieve the mitigation standards that would apply recommended by ODFW, assuming that ODFW were correct in its assessment of the habitat quality at the site (which the Applicant does not concede). The Applicant proposes to mitigate for impacts to big game wildlife on the site that ODFW considers to be "Category 2" at a mitigation standard of "no net loss of habitat quantity and quality and ... a net benefit of habitat quantity and quality," even though that standard exceeds the approval criteria under the Crook County Code and Crook County Comprehensive Plan.

The Applicant proposes to implement measures to avoid and minimize impacts to habitat, as well as compensatory mitigation for habitat impacts resulting from the Project. Those measures are discussed in greater detail below. In summary, as compensatory mitigation, the Applicant is proposing three options designed to achieve the agreed-upon mitigation standards.

- **Option 1 (Conservation of Like Habitat with Juniper Removal Uplift)** will achieve the agreed-upon mitigation standards of "no net loss and a benefit" by applying conservation protections (described as "durability" requirements) to a number of off-Project mitigation acres equal to the number of habitat acres impacted by the disturbance or development area at the site (1:1 mitigation). This mitigation option will achieve an additional "benefit" or "uplift" to the quality of juniper-encroached habitat through juniper removal habitat enhancement to improve impacted big game habitat. The mitigation project site ultimately chosen will ensure that the mitigation benefits are "in-kind" and "in-proximity," because the mitigation project site will be in sagebrush and/or bitterbrush-dominant habitat in Crook County, Deschutes County, or Jefferson County within mapped big game winter range mapped, recognized, or considered by ODFW, and within the area associated with impacts from the facility (or an alternative site approved by ODFW), consistent with ODFW's consultation as to what would be an acceptable geographic range allowable for mitigation site location. The Applicant shall maintain the benefits of this mitigation option throughout the actual life of the Project and shall implement monitoring actions, including to visit the site after 12 years of treatment and contract to have any newly established

Commented [MY3]: Commented [JGS*02]: 2.Option 2 (Payment to Provide) is the only mitigation option that ODFW has recommended in the region.

Commented [MY4R3]: Response: Applicant has submitted a supplemental Exhibit identifying the range of mitigation options approved by counties in the region based on ODFW recommendations.

Commented [MY5]: Commented [JGS*04]: 4.See comment #1 above

Commented [MY6R5]: Response: Applicant is referring to both the prior consultation with ODFW on other projects in the vicinity, as stated in ODFW's first comment, and the consultation on this specific project.

Commented [MY7]: Commented [JGS*05]: Please refer to ODFW 2013 - Big Game winter habitat map rationale - white paper. This white paper explains rationale for why the Department considers winter range category 2 "essential" habitat.

Commented [MY8R7]: Response: Applicant's wildlife biologist used the same information and methodology following ODFW's policy and guidance documents when determining that the quality of the habitat is Category 3. Therefore, Applicant and ODFW disagree on the habitat quality. Even so, and despite the fact that the mitigation standard under Crook County Code Section 18.16.060 is to "offset" potential adverse effects on wildlife, Applicant has agreed to mitigate to achieve ODFW's recommended "not net loss and a benefit" standard.

Commented [MY9]: Commented [JGS*06]: Correct

Commented [MY10]: Commented [JGS*07]: The Habitat Category 2 - mitigation goal is is "No net loss of habitat quantity and quality and to provide a net benefit of habitat quantity and quality"

Commented [MY11R10]: Response: See revision.

Commented [MY12]: Commented [JGS*08]: See bullet above

Commented [MY13R12]: Response: See revision above.

Commented [PS14]: Commented [JGS*09]: 1:1 will not provide a net benefit in habitat quantity and quality.

Commented [PS15R14]: Response: As described in more detail on p.11, Applicant is proposing conserving extra mitigation project acreage of an ...

Commented [PS16]: Commented [JGS*010]: Through the life of the project - through reclamation.

Commented [PS17R16]: Response: As stated in the first section, Applicant is proposing that the ...

juniper in cut units removed. If the Applicant elects this option, before site clearing or grading, the Applicant shall submit documentation to Crook County Community Development that the mitigation project ~~ultimately satisfies these~~ complies with this WMP in satisfaction of applicable standards. At that time, the Applicant shall also provide the County with a fully executed instrument preventing development on the final mitigation site during the life of the Project.

- **Option 2 (One-Time Fee-in-Lieu Payment to Deschutes Land Trust, Crook County/Crook County Soil and Water Conservation District (SWCD) or Other Established Conservation Organization)** will achieve the agreed-upon mitigation standards through a mitigation payment calculated according to the formula recently recommended by ODFW for similar projects in Crook County. Per below, if the Applicant elects this option, before applying for building permits, the Applicant shall submit documentation to the County that the payment has been made. This will ensure that mitigation occurs prior to facility construction.
- **Option 3 (Alternative Mitigation Project Approved by ODFW)** requires in order to allow superior mitigation projects to occur, which may have broader benefits, such as a larger single mitigation projects that multiple parties contribute to (like the Aspen Valley Ranch project), this option allows applicant to conduct another mitigation project, including but not limited to wildfire suppression measures, weed treatment, invasive Medusahead weed removal, water supply improvements, and wildlife migration corridors or crossings with approval by ODFW and therefore will necessarily achieve the agreed-upon heightened mitigation standards under ODFW's habitat mitigation rules, absent which ODFW approval the Applicant and County and ODFW would presume such alternatives did not meet ODFW rules. If the Applicant and ODFW reach an agreement for other project-specific mitigation, which ODFW determines is consistent with ODFW's habitat mitigation rules at OAR 635-415, in accordance with current legal standards, the Applicant shall submit documentation of that final, fully executed agreement to Crook County Community Development before site clearing or grading at the Project site. For sake of clarity, implementation would require ODFW approval to confirm that approval criteria have been satisfied. If ODFW does not confirm and consent that the alternative mitigation project meets the applicable criteria and agree to such an alternative, Option 3 shall not be ~~allowed-permitted~~ to count as mitigation and *only* Option 1 or 2 would be permissible as mitigation in such case.²

Each of these mitigation options are discussed in greater detail later in this document.

II. BACKGROUND

A. PROJECT DESCRIPTION

The Applicant proposes to construct, develop and operate a solar photovoltaic (PV) facility to be called the Powell East Solar Farm (the Project) in Crook County, Oregon. The Project is located within

² Applicant consulted with ODFW on June 10, 2022 to discuss the merits of Option 3, including the opportunity to conduct mitigation that preserves a larger habitat footprint or is otherwise more beneficial due to increased scale or superior project design.

Commented [PS18]: Commented [JGS*011]: More specific on instrument that will prevent development as well as conflicting uses to wildlife habitat. - through reclamation.

Commented [PS19R18]: Response: As stated above, this will be provided to the County prior to site clearing and grading. Applicant believes that the County has the competence and experience to adequately evaluate such an executed instrument to prevent development and thereby provide durability for the mitigation site. A restrictive covenant would be sufficient to ensure that the land is available for mitigation and not developed or adversely impacted to prevent its use for that purpose. Applicant notes that there is no durability requirement under the applicable approval criteria and will take this action in excess of the approval standards.

Commented [MY20]: Commented [JGS*012]: Most current formula accounting for inflation.

Commented [MY21R20]: Response: Applicant proposes to use the formula provided by ODFW to Applicant that has been recommended and required for similar projects, but has also added an inflation escalator with a cap.

Commented [MY22]: Commented [JGS*013]: Not a viable mitigation option

Commented [MY23R22]: Response: Applicant continues to believe that Option 3 is a viable mitigation option for projects like this one, that are not subject to ORS 215.446, to preserves important County flexibility to balance land uses and retain optionality for the most beneficial mitigation projects at the time of implementation.

the Crook County Exclusive Farm Use-3 (EFU-3) zone on private land on tax lots 1615000000800 and 1615000001900 (the site).

The proposed facility will consist of a combination of photovoltaic panels, inverters, mounting infrastructure using fixed tilt or single axis tracker system, an electrical collection system, a substation, an energy storage system, operation and maintenance facility, private access roads, fencing, and/or associated transmission lines to connect to the utility facility. Electricity generated by the facility will be transmitted to a facility substation, where it will be increased to appropriate transmission line voltage levels per utility requirements. The Project will also include Associated Transmission Lines (ATL) to connect the facility to the power grid. The proposed connection would be either to BPA or Pacific Power interconnection facilities at the Ponderosa/Corral Substation complex. Preliminary estimates on the total permanent habitat disturbance for the longest alternative route show an area of 350 square feet (0.0011 acres). This area would be included in the total amount of land to be mitigated as assessed prior to construction.

The Project site consists of approximately 478 acres of private lands composed of low shrub/sagebrush and juniper trees. Various dirt roads are present throughout the site. A powerline corridor is present along the east border of the site, and an existing solar farm lies just east of the powerline. An inactive corral with associated water tank and two wells were observed on the northeast portion of the study area, and livestock watering troughs were observed on the northwest portion of the study area.

The Project site is composed primarily of Natural Resources Conservation Service (NRCS) Class 6 and Class 7 non-irrigated soils with less than 10 percent of soils classified as Class 4 along the southwestern border of the site. The table below shows the allocation of soil classes and types.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
075	Ayres very cobbly loam, dry, 0 to 8 percent slopes	7	7.7	1.6%
076	Ayresbulla Ayres complex, dry, 0 to 8 percent slopes	6	180.4	37.9%
121	Era ashy sandy loam, 0 to 3 percent slopes	6	52.5	11.0%
147	Ayresbulla Ayres complex, 3 to 8 percent slopes	6	155.2	32.6%
156	Crescent Hatcock complex, 12 to 30 percent north slopes	4	43.3	9.1%
262	Tordan extremely cobbly loam, 12 to 35 percent south slopes	7	36.1	7.6%
Subtotals for Soil Survey Area			475.3	99.9%
Totals for Area of Interest			475.9	100.0%

Commented [MY24]: Commented [JGS*014]: Must account for and mitigate for impacts on new access roads and transmission lines as well as temporary impacts related to these developments.

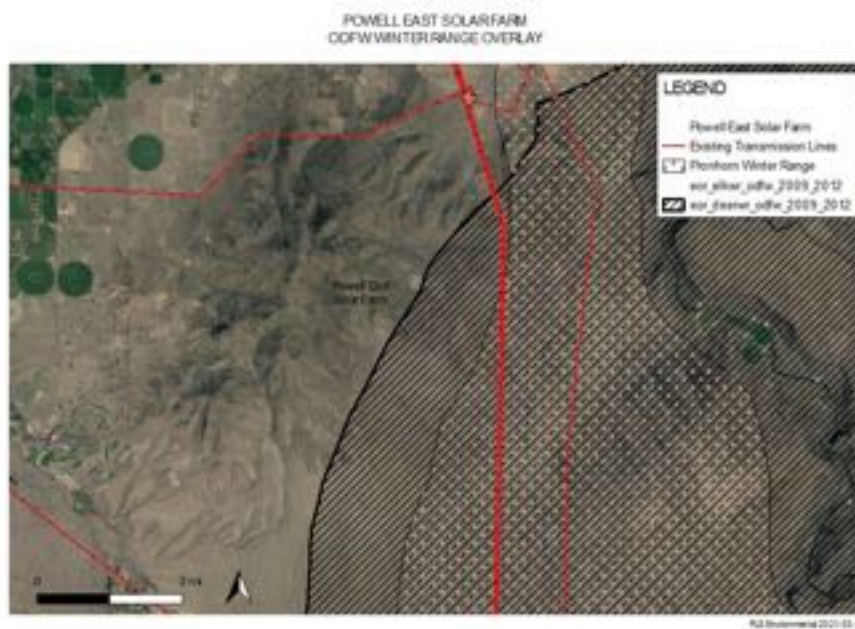
Commented [MY25R24]: Response: As explained in the application, Applicant proposes to use existing access roads to access the site from Millican Road. No new access roads are expected. The associated transmission line as described in the application to connect to the utility facility is adjacent to an existing transmission corridor, will not be fenced, and will not have a significant impact on wildlife.

B. SITE-SPECIFIC HABITAT ASSESSMENT

The Applicant contracted with PBS Engineering and Environmental, Inc. (PBS) to conduct a site-specific habitat assessment of the Project site. As part of that site-specific habitat assessment, PBS conducted site visits to the Project site on March 25 and June 24, 2020, contacted ODFW and other agency staff, and reviewed scientific literature. PBS summarized its findings and conclusions from the site-specific habitat assessment in the Wildlife and Federal Sensitive Plant Assessment (July 2020).

As part of the site-specific habitat assessment (study) conducted by the Applicant's wildlife biologist (PBS), the Centralized Oregon Mapping Products and Analysis Support System (COMPASS) geographic information system was used to search for winter range habitat for the big game species deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*) in eastern Oregon (ODFW 2016a). The entirety of the study area is within the ODFW elk mapped winter range, and the majority of the study area with the exception of the northwest portion is within the ODFW deer mapped winter range.

Additionally, Crook County maintains maps of the general ranges of the big game species deer, elk, and pronghorn (*Antilocapra americana*) within the county (Crook County 2019). The Crook County big game ranges were developed using the ODFW winter range data, then refined and updated by district biologists (ODFW 2012a). The study area is not within the Crook County elk general range. However, the southeast part of the study area is mapped to be within the Crook County pronghorn range, and the majority of the study area with the exception of the northwest portion is mapped within the Crook County deer range.



Despite the site being within mapped big game winter range, PBS noted Livestock grazing, as evident within the study area, that is known to reduce grass and forb cover, the preferred forage for pronghorn (USFWS 1994, Kindschy et al. 1982). Elk have also been shown to avoid areas where livestock are grazing (ODFW 2003). Additionally, SW Millican Road is approximately 0.75 miles east of the study area, and an existing solar farm is located east of the study area. Elk, deer, and pronghorn have a preference against habitat adjacent to roads and/or near areas of human disturbance (Rost and Bailey 1979, Kindschy et al. 1982, Innes 2011). Therefore, PBS does not consider the study area essential big game habitat.

PBS concluded that, based on the conditions of the study area observed during the site visit and analysis following the Fish and Wildlife Habitat Mitigation Policy flowchart, that the study area would be classified as "Habitat Category 3" for big game. "Habitat Category 3" is defined as important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population (State of Oregon 2020). In practice, this means that Habitat Category 3 habitat impacts that may occur as a result of the project can be mitigated according to ODFW's mitigation strategy as "In-kind, in-proximity mitigation." "In-kind habitat mitigation" are measures which recreate similar habitat structure and function to that existing prior to the development action, and "in-proximity habitat mitigation" are measures undertaken within or in proximity to areas affected by a development action (State of Oregon 2020).³

C. AGENCY CONSULTATION AND MITIGATION RECOMMENDATIONS

The Applicant consulted with ODFW regarding fish and wildlife habitat impacts on the site on March 19, 2020. ODFW indicated that mitigation would be required for any permanent impacts to wildlife at the site. They stated that a mitigation plan that included a payment-to-provide mitigation plan using the same formula and level of detail as the recently approved Millican Solar Project would be acceptable. ODFW offered to share this plan with the developer. During the March 19, 2020 discussion, Applicant and ODFW agreed, in concept, to discuss the following overall mitigation approaches and stated that the location of such mitigation would be acceptable if located within Crook County:

- 1) A juniper treatment mitigation project, if sited in sage/bitterbrush type habitat,
- 2) A one-time fee-in-lieu payment mitigation strategy, or
- 3) An alternative mitigation project agreeable to ODFW.

³ Because the County's map revisions were never adopted, ODFW's policy has been to treat areas within big game overlays appearing on ODFW's maps as Habitat Category 2. The rationale for ODFW's approach is described in the 2013 ODFW Oregon Big Game Winter Habitat (ODFW 2013) document. Page 3 of that document contains a flow chart that shows the decision-making that leads to the Category 2 designation. The Applicant notes that, under that framework, some flexibility appears to be warranted regarding the "Step 1. Is the Habitat 'Essential'?" and "Step 2: Is the Habitat 'Limited'?" components of the flow chart. Impacted habitats should carry less weight in this analysis, which would inform a reasonable mitigation strategy.

Commented [MY26]: Commented [JGS*015]: Exhibit L and this statement provide no comprehensive quantitative assessment of the project area. Site visits on March 25, 2020 and June 24, 2020 visually surveyed the study area by walking linear transects. Only photographs in appendix D are provided as evidence of range and vegetation on the site. Nearby solar developments have identified similar habitat's as category 2.

Commented [MY27R26]: Response: As demonstrated in Exhibit L and Appendix D, Applicant's wildlife biologist conducted desktop review and on-site surveys that precisely followed ODFW's mitigation guidance and policy to make this habitat determination as required by Crook County Code sections 18.16.060(3)(h) and 18.161.010(2).

Commented [MY28]: Commented [JGS*021]: whether the map revisions would have occurred or not is of no consequence (County mapped deer and pronghorn habitat was the same prior to ordinance 259 discussions). The negotiations ODFW was holding with the County was to recognize that this area is impacted yet still essential habitat (category 2). It allowed for developers to skip the avoidance test within our mitigation policy but never was intended to be a pass to not complete meaningful and prudent compensatory mitigation. I would refer everyone to the gala solar development record for evidence of this discussion which resulted in the gala site identified as category 2 and mitigated at 2:1.

Commented [MY29R28]: Response: The footnote is quoted from Applicant's wildlife biologist's report (Application Exhibit L).

Commented [MY30]: Commented [JGS*016]: March 19, 2020 was a phone conference call related to all of New Suns upcoming projects (Crook Flat, West Prineville, TSR North, and Powell East) - not on site.

Commented [MY31R30]: Response: The March 19, 2020 telephone conference included discussion of the "habitat impacts on the [Powell East] site".

Commented [MY32]: Commented [JGS*017]: No agreements "in concept" were made on March 19, 2020 - see ODFW appeal statements - Crook Flat, West Prineville, TSR North.

Commented [MY33R32]: Response: Applicant included this statement to note that ODFW previously recommended these mitigation options for similar sites. But see the revisions.

ODFW previously agreed to these approaches in concept and stated that the location of such mitigation would be acceptable if located within Crook County. ODFW recommended that the Applicant implement the agency's preferred option, a one-time mitigation payment or juniper removal, which ODFW staff described as the "easiest" and "low hanging fruit," due to abundant siting options in Crook County. ODFW stated that the one-time mitigation payment could be coordinated through a third party, such as the Deschutes Land Trust (DLT), or coordinated by the Applicant, the approach that the agency had accepted at other nearby solar developments recently permitted in Crook County (the Gala, Tango, and Millican solar projects) and recommended they use the most recent payment formula used for the Millican project. ODFW stated that the agency is no longer accepting payments directly for mitigation.

During consultation, ODFW recommended that the Applicant mitigate for mapped big game winter range at a ratio of 2:1. Historically, ODFW has recommended a 2:1 mitigation ratio for Category 2 mitigation projects in Crook County⁴ in order to provide a "buffer" to account for a failure rate of any future habitat improvement treatments and still meet the agency's mitigation goals of "no net loss" plus "net benefit." However, ODFW has also endorsed alternative mitigation approaches for Crook County projects that ODFW viewed as "Category 2" projects, including a 1.5:1 mitigation ratio for impacts to mapped big game habitat at the Crook Flat Solar Project (consultation also discussed historical ranges for other permits ODFW approved of mitigation plans for, as discussed below.)

The Applicant subsequently reinitiated consultation with ODFW (Greg Jackle) again on June 18th, 2021 to discuss mitigation approaches and ODFW reiterated that they recommend compensatory mitigation be conducted such that their goal of "no net loss and a benefit" occur.

Notwithstanding professional differences of opinion between ODFW and the Applicant's wildlife biologist regarding the habitat quality at the site, the Applicant is proposing mitigation to achieve the mitigation standards that would apply, assuming that ODFW were correct in its assessment of the habitat quality at the site (which the Applicant does not concede)⁵. The Applicant is taking this approach to move this Project forward and to minimize any outstanding disputes during the Crook County planning process. The Applicant is proposing to mitigate to meet ODFW's goal of "no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality" within mapped big game winter range mapped, recognized, or proposed by ODFW.⁶ This mitigation approach is well within an appropriate range and is consistent with approaches recently approved by the Crook County Planning Commission for other solar facility applications, as well as approaches historically endorsed by ODFW in Crook County and throughout the state.

III. MITIGATION MEASURES

The goal of the mitigation measures in this WMP is to avoid or minimize impacts on plants and wildlife and their habitats, consistently with all applicable legal standards, and to mitigate for

⁴ In other counties, such as Lake County, ODFW has agreed that a lower mitigation ratio for juniper treatment projects would meet their mitigation standards.

⁵ Applicant is continuing to analyze whether the anticipated impact of the project on wildlife would be significant.

⁶ Applicant notes that the standard of "not net loss" and a "net benefit" can be achieved through various actions, not just a mitigation ratio.

Commented [MY34]: Commented [JGS*018]:
Correct

Commented [MY35]: Commented [JGS*019]:
Correct

Commented [MY36]: Commented [JGS*020]: 2:1 meets the mitigation goals of category 2 by providing no net loss of habitat quantity or quality and to provide a net benefit of habitat quantity and quality.

Commented [MY37R36]: Response: Applicant notes that there is no evidence in the record nor a legal requirement for a 2:1 mitigation ratio. While a 2:1 ratio would meet ODFW's mitigation standard, other mitigation ratios and other mitigation actions may also satisfy the standard. Please see the footnote added.

Commented [MY38]: Commented [JGS*022]: Prior to this phone call, there were e-mail correspondence on March 11, 2021 - it referenced meeting ODFW's goal of "no net loss and a benefit" with a 2:1 ratio.

Commented [PS39]: Commented [JGS*03]: 3. ODFW would like to see any current or recent information that the applicant would like to provide (2)

Commented [PS40R39]: Response: Based on the conditions of the study area observed during the site visit and analysis following the Fish and Wildlife Habitat Mitigation Policy flowchart, Applicants wildlife biologist, PBS, concludes that the study area would be classified as "Habitat Category 3" for big game. The detail for this conclusion is included in the Wildlife Study submitted as part of the application.

unavoidable impacts. The Applicant proposes the following mitigation measures, based on consultation with USFWS and ODFW, as described above.

A. COMPENSATORY MITIGATION

Mitigation Standard: Despite the site-specific habitat assessment concluding that the Project site contains Category 3 habitat, the Applicant, in the spirit of cooperation and a desire to mitigate any impacts from the Project to local wildlife, after consultation with ODFW, has agreed to mitigate impacts to big game habitat that will be permanently impacted by construction and operation of the Project according to ODFW's recommendations for Category 2 habitat ("no net loss and a benefit"). The Applicant proposes to achieve mitigation through one of three options, presented below.

Each of Applicant's proposed mitigation options are designed to achieve ODFW's habitat mitigation policy goal of "no net loss and a benefit" for areas permanently impacted by construction on the site. "No net loss and a benefit" is the standard that applies to higher-quality "Category 2" ("essential") habitat under ODFW's habitat mitigation rules, which are not binding approval standards for this Project. See OAR 635-415-0025(2). The approval standard under the Crook County Code is to "offset" the potential adverse effects of the facility, a term which is not defined. CCC 18.16.060(3)(h)(vi).

Thus, the Applicant is proposing to mitigate at a *higher* standard than the site-specific habitat assessment indicates is required and beyond what is required under the County's approval criteria.

Location Criteria: Any mitigation project(s) related to impacts from the Application including all mitigation options proposed below, will be implemented as follows.

Location: Mitigation will occur: (1) within ODFW's currently mapped big game winter range mapped, recognized, or proposed by ODFW; (2) within Crook County, Deschutes County, or Jefferson County; (3) by selecting a specific habitat mitigation area (HMA) therefrom to benefit wintering big game associated with the area of impact (unless otherwise approved by ODFW); and (4) will satisfy ODFW's request that the mitigation satisfy "proximity" criteria consistent with the ODFW habitat mitigation rules.

Habitat type: For juniper removal mitigation, the HMA site selected will be habitat which is (or was previously) sagebrush and/or bitterbrush dominant (or would be expected to be restored to such state after mitigation efforts) but suffering from juniper encroachment, such that juniper removal would improve habitat by facilitating the re-growth of vegetation that would provide forage for big game. For the sake of clarity, acceptable sites for juniper removal mitigation projects would not include different habitat types, such as removal of juniper from lodge pole pine stands, as this would not meet the "in kind" criteria pursuant to the ODFW's habitat mitigation rules.

Alternative locations: The Applicant will undertake commercially reasonable efforts to secure a mitigation location with the above-specified location and habitat characteristics in Crook County. If, despite such efforts, a suitable mitigation project cannot be realized in the County such location, a mitigation project in another location approved by ODFW shall be implemented.

Excess Eligible for Banking: If the Applicant conducts juniper removal mitigation, or provides fee-in-lieu payments, in excess of the scale required to mitigate the effects at this site and/or in advance of Project impacts, the Applicant reserves the right to propose that excess mitigation be applied as

Commented [MY41]: Commented [JGS*024]: The Habitat Category 2 - mitigation goal is is "No net loss of habitat quantity and quality and to provide a net benefit of habitat quantity and quality"

Commented [MY42R41]: RESPONSE: ODFW agrees that 2:1 is sufficient to accomplish no net loss and a benefit. Notwithstanding, there is not evidence that 2:1 is required to meet the no net loss and benefit standard, nor that another mitigation action cannot meet that standard.

Commented [MY43]: Applicant has revised the mitigation plan to clarify that specific, identified location requirements apply to the mitigation projects.

credit toward mitigation requirements at other sites that the Applicant may propose to develop in the future.

1. OPTION 1: CONSERVATION OF LIKE HABITAT WITH JUNIPER REMOVAL UPLIFT IN CROOK COUNTY

Backdrop for Juniper Removal as Habitat Improvement: Strong evidence indicates that western juniper has significantly expanded its range since the late 1800s by encroaching into landscapes once dominated by shrubs and herbaceous vegetation. Woodland expansion affects soil resources, plant community structure and composition, water, nutrient and fire cycles, forage production, wildlife habitat, and biodiversity. The habitat improvement goals of juniper management include restoring ecosystem function and a more balanced plant community that includes shrubs, grasses, and forbs, and increasing ecosystem resilience to disturbances.⁷

Juniper Treatment Habitat Improvement consists of treating areas of sagebrush/bitterbrush habitat next to juniper stands where the foraging habitat previously available for big game grazing is experiencing juniper encroachment. As noted, juniper encroachment reduces forage available to big game, such that a juniper removal program would improve big game grazing habitat by facilitating the re-growth of forage. Accordingly, juniper removal mitigation results in overall habitat improvement at mitigation sites, causing “uplift” to historically degraded habitat.

a. SCALE:

Per consultation with ODFW and, in keeping with ODFW’s habitat mitigation rules, ODFW’s direction for mitigation project scale is that there be “no net loss” or “no net loss and a net benefit” for big game habitat impacted by the Project site. Based on existing ODFW big game habitat maps, the maximum development impact to mapped big game winter range would be 320 acres. As noted, the full Project build-out may ultimately be less than the total permitted area for which the Applicant has applied. Therefore, the final Project design will define the actual scale of permanent impacts for which the Project must mitigate.

The Applicant will assess the total amount of land to be mitigated and notify the County prior to construction (or other disturbances), based on the proposed layout and associated impacted acres of that final facility design (and impact area). The Applicant will calculate the final habitat disturbance area based on the number of acres developed within mapped big game winter range on the site. This mitigation requirement would also apply to the extent that fencing or other disturbance of access to habitat by big game winter range was occurring (and materially adverse), even if prior to actual full facility construction, as applicable at the time of the impact, as well as taking into account the quality of the habitat lost (or otherwise adversely impacted) due to Project impacts.

This mitigation option (Option 1) will achieve “no net loss and a benefit” of habitat by applying conservation protections (described as “durability” requirements below) to a number of off-Project mitigation acres equal to the number of habitat acres impacted by the disturbance or development area at the site (1:1 mitigation). This mitigation option will achieve an additional “benefit” or “uplift”

⁷ Miller, R.F., Bates, J.D., Svejcar, T.J., Peirson, F.B., and Eddleman, L.E., 2007. Western Juniper Field Guide: Asking the Right Questions to Select Appropriate Management Actions: U.S. Geological Survey Circular 1321.

Commented [MY44]: Commented [JGS*026]: ODFW recommends 2:1 like the other neighboring solar developments.

Commented [MY45R44]: Response: As stated above, under Option 1, Applicant will include a buffer acreage ranging from 1-3% to 30%, which will achieve the “no net loss and a net benefit” standard, which exceeds the approval criteria.

to habitat quality through juniper removal habitat enhancement to improve historically impacted big game habitat.

For juniper removal habitat enhancement, a mitigation site acreage ratio of 1:1, plus a reasonable “failure” buffer would meet or exceed the standard of no net loss and a net benefit. The Applicant proposes to achieve buffering for juniper removal projects by conserving extra mitigation project acreage ranging from 1-3% for a mitigation project site with high-quality habitat and not to exceed 30% for a mitigation project site with low-quality habitat.⁸ For the sake of clarity and, as an example, if 320 acres of habitat were developed, 320 acres of juniper mitigation project (plus applicable buffer and subject to other criteria herein) would meet or exceed the required mitigation scale. (If lesser development occurred, this mitigation amount would scale down proportionally.) At other solar projects, ODFW has historically agreed with this calculation of scale to achieve no net loss and a benefit, consistent with the ODFW habitat mitigation rules.

b. DURABILITY:

Durability, or measures that function to facilitate and attempt to assure the survival of the beneficial aspects of the mitigation measures over the term of the facility developed, requires two aspects: (1) Protection of the mitigation action site (where applicable) for the term of the facility, to prevent subsequent destruction of the treatment site (*i.e.*, development); and (2) Maintenance, or actions such that (where applicable) revisit from time to time the treatment area to mitigate deterioration of the mitigation treatment or project;

(1) Site Protection: Prior to construction (or other disturbances to habitat or big game wildlife’s access) at the site by the Applicant, the Applicant or a third party will provide the County with durability “assurances,” demonstrating that the survival and beneficial impacts of the mitigation measures will be sustained throughout the expected operating life of the Project or disturbance.

The Applicant may demonstrate adequate “durability” by providing the County with evidence of an outright purchase of the mitigation area, a conservation easement, a working lands agreement, or other materially similar instrument to prevent development or other substantial adverse impacts to the site habitat by the landowner. Actions may include other durability measures approved by ODFW to implement the intent of this durability requirement. Facility life for the Project shall be presumed to be 40 years unless demonstrated otherwise by Applicant at the time that the Applicant presents evidence of durability to the County. Thus, the term for any durability restriction or agreement described above will be for a minimum of 40 years unless demonstrated otherwise by Applicant.

Before site clearing or grading at the Powell East site, the Applicant will provide Crook County Community Development with a fully executed instrument to prevent development on the final mitigation site during the life of the Project, including but not limited to a working lands agreement, a

⁸ This proposal is consistent with ODFW’s feedback to the Applicant on other similar projects that for a mitigation site with relatively high-quality habitat, 5-10 acres of additional ground would be sufficient buffering (on a 320-acre site). The Applicant’s proposed failure buffer is also consistent with ODFW’s historical perspective that juniper mitigation projects (which, by definition, often are not on high-quality habitat) have a failure rate on average on the order of 20%. ODFW has previously expressed to the Applicant that 30% additional project area would be a reasonable maximum buffer to assume for juniper removal projects of this kind.

Commented [MY46]: Commented [JGS*027]: Without a specific mitigation site identified, there is no way to assure this sentence is correct. site specific information is what ODFW needs to accurately assess and comment on if it will meet or exceed the standard. - This comment applies to the rest of the scale section, the location criteria as well as habitat type. To discuss buffering and low quality habitat versus high quality habitat, the mitigation site needs to be identified.

Commented [MY47R46]: Response: As stated in the Location Criteria section, the mitigation site must be located: (i) within big game winter range mapped, recognized, or proposed by ODFW; (ii) within Crook County, Deschutes County, or Jefferson County; (iii) within sagebrush and/or bitterbrush dominant habitat suffering from juniper encroachment; and (iv) within the same habitat type (to achieve “in kind” habitat mitigation), which provides sufficient specificity.

Commented [MY48]: Commented [JGS*028]: through decommissioning

Commented [MY49R48]: Response: As stated above, the WMP applies to all phases of the project, including decommissioning.

deed or outright purchase agreement, a restrictive covenant, or a conservation easement, which will protect the conserved habitat by preventing conflicting improvements on the property including structural improvements, the expansion of impervious roads and surfaces, new irrigated farming, mining, and land clearing activities.⁹

(2) Maintenance: The maintenance aspect of a mitigation project may be achieved by the following mechanisms:

- a) **Retreatment Actions:** Actions which examine the success and failures of the treatment and take reasonable remedial actions at such time, at one or more intervals during the target durability term. To maintain the effectiveness of mitigation, at 12-year intervals after the original mitigation treatment, the Applicant will contract to have any newly established juniper in the cut units removed to address regrowth of juniper seedlings; or
- b) **Extra Buffering:** Enlargement of the treatment project such that, over time, assuming a reasonable failure or degradation rate, the cumulative net criteria of "no net less and a benefit" (commensurate with applicable permit conditions and this plan) is reasonably expected to be met net of cumulative degradation of the Project over time; for juniper removal this could be met by adding extra acres (per elsewhere in Plan); or
- c) **Other measures:** Other measures reasonably likely to have comparable effects as approved by ODFW.

(An example of such degradation to be maintained against would be juniper encroachment slowly invading back into the treatment area.)

(3) Monitoring: No monitoring will be required beyond revisiting. Applicant will conduct baseline photographic monitoring prior to treatment and immediately post treatment. Applicant will periodically contact the landowner to check on juniper regrowth and encroachment. Applicant will revisit the treatment area after 12 years, as necessary. Given the nature of the conservation and treatment actions, which are primarily "one time" actions (conservation), and require only minor updates once every twelve years, given the slow rate of juniper growth, juniper mitigation requires only minor updates.

For juniper removal mitigation, by way of example not limitation, the durability requirements for the Application could be met as follows: The treatment area is subject to a working lands agreement preventing future development, the mitigation is performed and documented, and the treatment is either revisited and refreshed after 12 years ~~(or suitably enlarged to offset future juniper encroachment back into the treatment area)~~ with extra acres (for a high quality site) of 10 acres.

c. **SPECIFIC TREATMENT ACTIONS:**

Juniper cutting under this mitigation plan will occur within a larger HMA mitigation project site in which juniper encroachment has occurred, and ideally occur in and target Phase 1 and 2 stands to reduce competition with shrubs, grasses and forbs in order to improve grazing habitat by facilitating the re-growth of sagebrush/bitterbrush and/or other vegetation that would improve forage for big

⁹ Applicant has clarified the details of the instrument to prevent development on the mitigation site pursuant to ODFW's request.

Commented [MY50]: Commented [JGS*029]:

Including provisions that restrict conflicting uses on this site. These include (i) increased grazing above levels approved under existing grazing management plans unless approved in writing by ODFW; (ii) all nonagricultural uses unless agreed to by ODFW; (iii) grading, mowing, blading, or expansion of impervious surfaces or access road networks, and (iv) divisions of the mitigation site.

Commented [MY51R50]: Response: Applicant revised the WMP to clarify the minimum restrictions in a real estate instrument necessary to ensure durability of the mitigation action. In response to ODFW's comments: (i) typically, there are no approved grazing management plans on private land; (ii) some nonagricultural uses like recreation may not conflict with habitat mitigation actions; (iii) grading or mowing is sometimes necessary for land management and habitat protection - for example, fire breaks for fire management; and (iv) Applicant is unclear what ODFW means by "divisions" of the mitigation site, but notes that fencing is sometimes used as a mitigation action, for example to protect mesic habitat from cattle grazing, and the Crook County Code includes "physical improvements" as an example of mitigation. CCC 18.08.130. If ODFW means legal subdivisions, Applicant is unclear as to how that would be relevant or how it would affect mitigation. In addition, development restrictions are very likely to already exist on the mitigation site under zoning ordinances and other laws and regulations, which provides a backstop to development.

Commented [PS52]: Commented [JGS*030]: A Monitoring plan is needed to assure the HMP will achieve the mitigation goals and standards.

Commented [PS53R52]: Response: As evidenced in the record, because the mitigation action is juniper treatment, and because juniper grow back at a known, slow rate, the monitoring plan is to establish a baseline through photographic evidence and contact the landowner to determine whether juniper encroachment has occurred. If so, Applicant will revisit the treatment area after 12 years to remove any encroaching juniper.

game, including through use of qualified contractors, or other previously experienced or appropriately instructed and supervised parties (including by parties previously utilized by Applicant affiliates, such as Wildlife Consultant or the Crook County Soil and Water Conservation District). Areas where juniper to be cut will be identified and divided into cut units.

Some Phase 2 and all Phase 3 stands will be retained for their cover value. All pre-settlement aged juniper will be preserved.

Cut units will be established to improve habitat for wintering big game. A mitigation site acreage ratio of 1:1, plus a reasonable failure buffer (as described elsewhere in this plan), as compared to impacted acreage will be treated, to achieve the mitigation goal of no net loss plus net benefit. To act as a contingency for a failure rate of the juniper treatment over the duration of the treatment project, the amount of buffer will be determined by the condition of the mitigation site. For example, older Phase 3 juniper has been known to have higher failure rates than Phase 2 juniper and may require more of a buffer to allow for the higher failure rate. Buffering may be achieved by extra treatment acreage ranging from 1-3% for a mitigation project site with high-quality habitat (3.2-9.6 acres per 320 acres of mitigation project site) and not to exceed 30% for a mitigation project site with low-quality habitat.

Treatment would comply with other criteria listed above and per Application permit conditions.

For clarity, required treatment related to the Application shall not exceed the total acres ultimately disturbed by the Powell East Project plus a buffer. The maximum mitigation acreage requirement shall be proportionally reduced if the Applicant ultimately develops or disturbs a smaller footprint at the Project site. The Applicant intends that, if such a juniper treatment project were to be implemented through Deschutes Land Trust (DLT) on the Aspen Valley Ranch (or some other comparable project) on up to the total number of acres ultimately disturbed by the Powell East Project, that mitigation project would satisfy the requirements of this mitigation Option.

2. ~~OPTION 2: ONE-TIME FEE-IN-LIEU PAYMENT~~

a. ~~ONE-TIME FEE-IN-LIEU PAYMENT TO ESTABLISHED CONSERVATION ORGANIZATION~~

This mitigation approach has been the option used and approved (and recommended) by ODFW and the Crook County Planning Commission at other recently developed similar solar PV facilities in the area including the Gala, Tango, and Millican, Solar projects. It would involve making a one-time contribution to the Deschutes Land Trust (DLT) or other established conservation organization for wildlife enhancement on the Aspen Valley Ranch (or some other comparable project)¹⁰.

The contribution amount will be determined by the following ODFW-approved formula utilized for other similar solar energy projects within the surrounding area:

$$\text{Payment per Acre} = M * (R + L + V + P + S)$$

¹⁰ The County previously accepted a fee-in-lieu payment for the ODFW supported and funded Aspen Valley Ranch location that was then administered to a subsequently created mitigation project.

Commented [PS54]: Commented [JGS*032]: No certainty that this hypothetical mitigation site will offset the impacts to the impacted solar development site. Providing a no net loss off habitat quantity and quality and to provide a net benefit of habitat quantity and quality.

Commented [PS55R54]: Response: The definition of mitigation under the approval criteria is to provide "on- or off-site improvements which have a reasonable relationship to the impact or conflict identified in the comprehensive plan." CCC 18.08.130. As stated under the Location Criteria, the mitigation site will be located within in-kind, in-proximity big game winter range, and therefore will have a reasonable relationship to the impact. Furthermore, because juniper treatment is a simple, well established mitigation action that benefits big game, and a buffer between 1-3% and 30% will be provided, no net loss of habitat quantity and quality and a net benefit of habitat quantity and quality will be achieved.

Commented [MY56]: Commented [JGS*033]: ODFW continues to support option 2 whether that be with Deschutes Land Trust or the Crook SWCD. ODFW would like to assure that the current formula is adequate enough for these entities to be able to satisfy the mitigation requirements with the Payment to Provide option. ODFW recommends the County build in inflation protections in this formula in case the project is delayed in construction.

Commented [MY57R56]: Response: Applicant's mitigation plan is based on the formula to calculate a fee-in-lieu payment previously provided to Applicant by ODFW and accepted by the County for similar projects. However, Applicant has revised the mitigation plan to include an inflation escalator with a cap.

where

- **'M'** is the mitigation ratio to use as a multiplier on cost per acre. Historically ODFW has used a 2:1 ratio (in Crook County) for mitigation projects on Category 2 land. Despite Applicant's professional wildlife consultant's site assessment that the site is Category 3 habitat, the Applicant agrees to a mitigation ratio of 2:1 for areas permanently impacted by construction within the ODFW mapped big game winter range portion of the site (approximately 320 acres).¹¹ This ratio will meet ODFW's mitigation goal of "no net loss and a benefit.
- **'R'** is the cost of restoring habitat including the administrative costs of design, contracting, implementation, and monitoring. Based on recent ODFW and DLT input, R is \$120.00.
- **'L'** is the cost of long-term maintenance of the habitat restoration investment, (i.e. regular re-entry intervals for juniper thinning, regular invasive weed treatments). Based on recent ODFW and DLT input, L is \$90.00.
- **'V'** is the land value per acre where habitat improvements may be taken. Based on a recent appraisal received by DLT for the Aspen Valley Ranch, V is \$194.24.
- **'P'** is the project development and transaction cost of processing the easement transaction. Based on DLT input, P is \$15.77.
- **'S'** is the stewardship endowment cost. Based on DLT input, S is \$22.33.

Values R, L, V, P, and S will be adjusted by 2.5% per year after permit approval, not to exceed an aggregate total of \$500.

An example of how this formula would be applied to the Project in Crook County is as follows:

$$\mathbf{M = 2:1}$$

$$\mathbf{R = \$120/acre}$$

$$\mathbf{L = \$90/acre}$$

$$\mathbf{V = \$194.24/acre}$$

$$\mathbf{P = \$15.77/acre}$$

$$\mathbf{S = \$22.33/acre}$$

$$\mathbf{(120+90+194.24+15.77+22.33) = \$442.34/acre * M}$$

This example utilizes values that have been used recently on other solar projects (Tango and Millican) in the area on a mitigation site managed by DLT. The Applicant will make this one-time payment to DLT or other land conservation organization.

The Applicant will submit to Crook County Community Development documentation that such payment has been made before the County issues building permits, which may be issued subject to

¹¹ This ratio is consistent with the ratio the County has previously applied, with ODFW agreement, to similar habitat sites (the Tango, Millican, and Crook Flat Solar Projects) located nearby.

documentation or demonstration of required mitigation action before physical improvements are constructed.

b. ONE-TIME FEE-IN-LIEU PAYMENT TO CROOK COUNTY

In November of 2020 Crook County and Crook County SWCD entered into a Memorandum of Understanding (MOU)¹² to define the respective roles and working relationship between them with the goal of working collaboratively to support wildlife habitat mitigation within the county. One goal of the MOU is to facilitate payment in lieu of on-site mitigation options in order to streamline approval of mitigation projects. As described in the MOU, the County will act as a Fiscal Agent on all mitigation projects while SWCD will (amongst other things) work with ODFW to develop a mitigation formula and assist in the implementation of projects and monitoring.

Under this option, Applicant will make a one-time formula-based payment to Crook County for a mitigation project to be implemented by SWCD, ~~or other qualified organization~~, prior to applying for building permits, which may be issued subject to documentation or demonstration of required mitigation action before physical improvements are constructed. As recommended by ODFW, the County may expand the MOU, or may enter another MOU, to add other qualified organizations to implement the mitigation project.

The Applicant has been working with SWCD to identify a site and develop a site-specific plan for mitigation under this option. This plan is attached as Appendix B.

3. OPTION 3: ALTERNATIVE MITIGATION PROJECT APPROVED BY ODFW OR COOPERATIVE MITIGATION AGREEMENT WITH ODFW

As an alternative to the two options described above, other mitigation measures shall be permitted by Applicant to mitigate habitat impacts, so long as they will meet the criteria provided herein, including the locational criteria, and satisfy related permit conditions. Such alternative may be developed in consultation with ODFW.

In combination with conservation components of alternative mitigation projects (*i.e.*, protecting like/in-kind, in proximity habitat, juniper treatment, fencing upgrades), examples of other potentially acceptable alternative mitigation uplift measures (*i.e.*, to create “net benefit”) could be wildfire suppression measures, weed treatment, Medusahead weed removal, water supply improvements, wildlife migration corridors or crossings, etc. Those approaches are consistent with the Applicant’s discussions with ODFW during consultations on prior solar projects and could provide adequate mitigation if approved by ODFW at the time such are proposed.

For the sake of clarity, if any alternative mitigation measures, other than Options 1 and 2 stated above, are proposed in the future to satisfy habitat mitigation criteria, those alternative measures shall be subject to the same criteria as applicable to a permit application and subject to ODFW’s (*not the County’s*) consent to the proposal, to confirm that the proposal complies with ODFW habitat mitigation requirements and achieves the “no net loss and a net benefit” and in-kind mitigation standards. If no such alternative mitigation proposal meeting these criteria is identified by the Applicant, approved by ODFW, and implemented by the Applicant, then the Applicant shall

Commented [MY58]: Commented [JGS*034]: MOU option with Crook County should just go to Crook SWCD or amend the MOU to include other entities (ex) watershed councils, etc....

Commented [MY59R58]: Response: Applicant has revised the mitigation plan accordingly.

Commented [MY60]: Commented [JGS*035]: Not a viable mitigation option

Commented [MY61R60]: Response: Applicant supports including Option 3 to provide the County and developers with important flexibility to undertake mitigation actions that most benefit the County and local wildlife, and to avoid unnecessarily preventing those options. For example, this option allows Applicant to aggregate mitigation funds to implement a larger, more impactful mitigation project, or to take advantage of new mitigation projects that ODFW supports. As stated in the mitigation plan, any mitigation project under Option 3 would require ODFW’s consent, which likely would mean a project that meets an even higher mitigation standard than proposed under Option 1 or Option 2. In addition, if Option 3 is not agreed to by ODFW, then Applicant would be required to implement Option 1 or Option 2.

¹² See MOU attached as Appendix A to this plan.

implement mitigation in the form of either juniper removal or a one-time payment, as described above.

If the Applicant and ODFW reach an agreement for other project-specific mitigation, which ODFW determines is consistent with ODFW's habitat mitigation rules at OAR 635-415, in accordance with current legal standards, the Applicant shall submit documentation of that final, fully executed agreement to Crook County Community Development before site clearing or grading at the site.

4. DETAILED MITIGATION ~~PLAN~~ IMPLEMENTATION ~~REPORT~~

Prior to construction of the proposed facilities (or other applicable habitat disturbance), a detailed mitigation implementation ~~plan~~ report will be prepared, ~~defining/identifying~~ the specific mitigation project(s) being implemented for the applicable habitat disturbance, ~~including documenting how such detailed mitigation implementation plan addresses the criteria herein and applicable permit conditions, such as~~ the specific land/site where the mitigation project will occur (including a map), quantitative and qualitative success criteria, ~~project timeline (including evaluation of applicable goals and standards, along with monitoring and evaluation methods and frequency)~~, durability measures being implemented, and reporting schedule (including a reasonable timeline after the execution of the mitigation agreements, such as with the landowner) by which time the mitigation measures will initially be completed. To the extent that Applicant implements a mitigation project under Option 3, the report will document detailed mitigation implementation that addresses the criteria herein and applicable permit conditions.

Applicant will provide a copy of the detailed mitigation implementation ~~plan~~ report and related documentation to the Crook County Planning Department at such time. To the extent variations from the above criteria (and as otherwise noted above) are part of the detailed implementation plan at the time of implementation (and not later than timing criteria above), Applicant shall seek ODFW's recommendations regarding such deviations, and document the status of the same to the Crook County Planning Department.

B. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

Applicant will implement the following avoidance and minimization measures related to Project pre-construction, construction, operation, and decommissioning.

1. GENERAL MEASURES

- Access Roads: The Applicant will use existing public and private roads where reasonably possible to access the construction and staging areas. In the event that new access roads are required, roads will be decommissioned after construction is completed, unless the road is required for safe access during long-term operations and maintenance of the Project, or at the request of the landowner.
- Waste Management: To avoid attracting predators to bird nests and other wildlife resources, the Applicant will instruct the contractor to store waste that would attract such wildlife in closed containers at all times.
- Speed Limit: To help avoid injury to wildlife that may be present in the Project area, the Applicant will require a 15 miles-per-hour speed limit during construction and restoration activities.

Commented [PS62]: Commented [JGS*031]:

Saving all this for later means there is a lack of evidence in the record (at the time of County approval) that the mitigation goal will be achieved.

Commented [PS63R62]: Response: The mitigation plan as presented provides sufficient evidence in the record that if implemented, mitigation will be achieved. The County is capable of reviewing a site specific implementation report that addresses the the criteria stated in this WMP prior to construction of the facility to confirm compliance. Furthermore, because the approval would be conditioned upon this plan being implemented, the project could not be built without mitigation being completed in accordance with the plan. Applicant has revised this section to clarify that only limited and site-specific information is necessary for further reporting.

Commented [MY64]: Commented [JGS*023]:

Mitigation for temporary impacts of new roads that will be decommissioned needs to be identified as well as permanent impacts of roads that are not decommissioned.

Commented [MY65R64]: Response: See response to access roads comment above.

2. MIGRATORY BIRD CONSERVATION MEASURES

The site-specific habitat assessment found that no ground nests or raptor nests were observed onsite during the site visit. The site does provide some suitable nesting habitat for non-ground nesting birds, as a few larger trees are present, which are also suitable for perching. However, this type of habitat is not limited in the area surrounding the Project site. The site has a history of cattle grazing which may negatively impact ground nesting birds.

If possible, the Applicant will aim to conduct vegetation removal and construction outside the nesting season to avoid impacts to any active nest sites (March 1 to August 1). If clearing and/or construction does take place during the nesting season, a pre-construction survey will be conducted between late spring through summer by a qualified observer to confirm that no active nests will likely be impacted within the Project area. If such active nests are located within the Project area, and are otherwise unavoidable, such nests shall be left undisturbed and monitored until a qualified biologist determines that the nest is no longer occupied.

3. BIG GAME AVOIDANCE AND MINIMIZATION MEASURES

Mitigation measures developed for the Project in response to permanent impacts to mapped big game winter range include the following:

- Construction Impact Reductions.
- Wildlife Impact Avoidance Measures (*e.g.*, exclusionary fencing).
- Compensatory Mitigation, as discussed ~~below~~^{above}.
- Exclusionary Fencing: The Applicant will install exclusionary fencing around the Project site. Fencing will be 8 feet tall at a minimum (mule deer are able to clear lower heights).
- Gates will be installed in or near the corners of the fenced perimeter of the facility where reasonably practical to allow removal of any large game that inadvertently enter the fenced area.
- Restoration: To reduce Project impacts on wildlife habitat, the Applicant will restore and revegetate temporary disturbance areas. Revegetation efforts will include re-seeding with native and desired species as approved by the county weed master and in compliance with the county approved weed plan.

C. HISTORIC RANGE OF MITIGATION MEASURES

The Applicant notes that, historically, ODFW has recommended a wide range of mitigation for solar projects with habitat comparable to habitat at the Project site, including projects that the Applicant's affiliates have successfully permitted, with ODFW concurrence and participation in a half-dozen Harney and Lake Counties' related permitting processes (as well as completed implementation of for multiple sites). Approved mitigation approaches at those projects for disturbance of comparable habitat (sage dominant and/or big game winter range) included no mitigation, mitigation with no durability obligations, invasive weed treatments with no other mitigation obligations, and mitigation ratios ranging from 1.1:1 to 3:1 (in addition to zero mitigation). As part of the Webster Road Solar

Farm CUP, for example, approved in Lake County in January 2020, ODFW agreed that an alternative option to be approved by ODFW in the future that satisfies the agency's habitat mitigation policy would be acceptable. ODFW also recommended to the Applicant that the Applicant rely on the wildlife mitigation plan for the Millican Solar Project CUP amendment, approved in Crook County in 2020 after HB 2329 went into effect, as an example. ODFW stated that the level of detail included in that mitigation plan would be sufficient for an acceptable compensatory mitigation proposal for this Project. As such, the approaches that the Applicant is proposing in this plan are well within the ranges of mitigation approaches historically recommended and/or endorsed by ODFW, and in particular those ODFW recommended and approved for Crook County solar CUPs, including substantially identical habitats and impacts in the immediate (even adjoining) vicinity.¹³

IV. CONCLUSION

By implementing either, (1) a juniper treatment program on lands in Crook County mapped as big game winter range, or (2) the one-time fee-in-lieu payment plan outlined above, or (3) an alternative mitigation project approved by ODFW as provided herein and subject to the mitigation project criteria outlined in this WMP, the Applicant will achieve mitigation consistent with the requirements of ODFW's habitat mitigation rules at OAR Chapter 635, Division 415, which exceeds the standard of habitat mitigation for this Project.

¹³ Harney County: Starvation Ridge Solar Farm*; Riley Solar Farm Best Lane*, Riley Solar Farm Suintex, South Burns Solar Farm. Lake County: Fort Rock South Solar Farm; Fort Rock North Solar Farm; Fort Rock East Solar Farm; Webster Road Solar Farm.

APPENDIX A
MOU BETWEEN CROOK COUNTY AND SWCD

APPENDIX B
SWCD HABITAT RESTORATION PROJECT PROPOSAL

EXHIBIT B

Powell East Solar Farm LLC Wildlife Mitigation Plan

Submitted to

Crook County Planning Department

By

Powell East Solar Farm LLC

September 22, 2021
as revised June 13, 2022

I. INTRODUCTION

A. PLAN PURPOSE AND GOALS

The purpose of this Wildlife Mitigation Plan (WMP) is to provide clear methods to minimize impacts on wildlife and their habitats, to the extent required by law. The goals of the mitigation measures are to:

1. Avoid or minimize impacts on habitat and native wildlife during construction and operation of the Project;
2. Specifically avoid potential impacts on special-status plant and wildlife species from construction and operation of the Project; and
3. For unavoidable impacts, develop a comprehensive mitigation approach in coordination with the Oregon Department of Fish and Wildlife (ODFW) and the United States Fish and Wildlife Service (USFWS).

Powell East Solar Farm LLC (the Applicant) and its contractors will be responsible for implementing the measures described in this WMP.¹ This WMP is applicable to the preconstruction, construction, operations, and future decommissioning phases of the Project.

B. EXECUTIVE SUMMARY

The Applicant contracted with PBS Engineering and Environmental, Inc. (PBS), a professional wildlife biologist, to conduct a site-specific habitat assessment of the Project site which included site visits, desktop review, review of scientific literature, and analysis based on state and federal review methodologies. The Applicant also consulted with ODFW and Crook County in the process of developing this WMP. This WMP includes a variety of mitigation measures based on recommendations by ODFW for this and other similar projects, including general avoidance and minimization measures, construction management to avoid migratory birds, and additional compensatory mitigation. Applicant proposes 3 compensatory mitigation options:

- (1) A juniper removal uplift project;
- (2) A one-time fee-in-lieu payment to Deschutes Land Trust, Crook County/Crook County Soil and Water Conservation District (SWCD), or another established conservation organization; or
- (3) Another mitigation project such as wildfire suppression measures, weed treatment, invasive Medusahead weed removal, water supply improvements, or wildlife migration corridors or crossings if approved by ODFW in compliance with ODFW's habitat mitigation rules.

Compensatory mitigation options must comply with specific locational criteria as defined in this WMP. The mitigation options are well within the range of mitigation approaches that ODFW has

¹ In the event a payment-to-provide option is chosen (Option 2 described below), the Crook County Soil and Water Conservation District (SWCD) or other organization will be responsible for implementing the mitigation.

historically recommended in the region and, specifically, in Crook County. Applicant will submit further, limited details to Crook County prior to project construction to inform the County of which compensatory mitigation option has been selected and implementation specifications.

C. OVERVIEW OF MITIGATION PROPOSAL

The Applicant has developed this mitigation proposal through extensive consultation with ODFW. Despite that consultation, professional differences of opinion remain regarding the quality of big game habitat at the site. The Applicant's wildlife biologist concluded that "Based on the conditions of the study area observed during the site visit and analysis following the Fish and Wildlife Habitat Mitigation Policy flowchart, PBS concludes that the study area would be classified as "Habitat Category 3" for big game. "Habitat Category 3" is defined as *important* (emphasis added) habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population (State of Oregon 2020)."

ODFW considers all of the site "Category 2" habitat, based on its location within an area mapped as big game winter range on ODFW's maps. Category 2 habitat is defined as *essential* (emphasis added) habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

Despite those remaining points of disagreement, the Applicant is proposing mitigation to achieve the mitigation standards recommended by ODFW, assuming that ODFW were correct in its assessment of the habitat quality at the site (which the Applicant does not concede). The Applicant proposes to mitigate for impacts to big game wildlife on the site that ODFW considers to be "Category 2" at a mitigation standard of "no net loss of habitat quantity and quality and . . . a net benefit of habitat quantity and quality" even though that standard exceeds the approval criteria under the Crook County Code and Crook County Comprehensive Plan.

The Applicant proposes to implement measures to avoid and minimize impacts to habitat, as well as compensatory mitigation for habitat impacts resulting from the Project. Those measures are discussed in greater detail below. In summary, as compensatory mitigation, the Applicant is proposing three options designed to achieve the agreed-upon mitigation standards.

- **Option 1 (Conservation of Like Habitat with Juniper Removal Uplift)** will achieve the agreed-upon mitigation standards of "no net loss and a benefit" by applying conservation protections (described as "durability" requirements) to a number of off-Project mitigation acres equal to the number of habitat acres impacted by the disturbance or development area at the site (1:1 mitigation). This mitigation option will achieve an additional "benefit" or "uplift" to the quality of juniper-encroached habitat through juniper removal habitat enhancement to improve impacted big game habitat. The mitigation project site ultimately chosen will ensure that the mitigation benefits are "in-kind" and "in-proximity," because the mitigation project site will be in sagebrush and/or bitterbrush-dominant habitat in Crook County, Deschutes County, or Jefferson County within big game winter range mapped, recognized, or considered by ODFW, and within the area associated with impacts from the facility (or an alternative site approved by ODFW), consistent with ODFW's consultation as to what would be an acceptable geographic range allowable for mitigation site location. The Applicant shall maintain the benefits of this mitigation option throughout

the actual life of the Project and shall implement monitoring actions, including to visit the site after 12 years of treatment and contract to have any newly established juniper in cut units removed. If the Applicant elects this option, before site clearing or grading, the Applicant shall submit documentation to Crook County Community Development that the mitigation project complies with this WMP in satisfaction of applicable standards. At that time, the Applicant shall also provide the County with a fully executed instrument preventing development on the final mitigation site during the life of the Project.

- **Option 2 (One-Time Fee-in-Lieu Payment to Deschutes Land Trust, Crook County/Crook County Soil and Water Conservation District (SWCD) or Other Established Conservation Organization)** will achieve the agreed-upon mitigation standards through a mitigation payment calculated according to the formula recently recommended by ODFW for similar projects in Crook County. Per below, if the Applicant elects this option, before applying for building permits, the Applicant shall submit documentation to the County that the payment has been made. This will ensure that mitigation occurs prior to facility construction.
- **Option 3 (Alternative Mitigation Project Approved by ODFW)** In order to allow superior mitigation projects to occur, which may have broader benefits, such as a larger single mitigation projects that multiple parties contribute to (like the Aspen Valley Ranch project), this option allows applicant to conduct another mitigation project, including but not limited to wildfire suppression measures, weed treatment, invasive Medusahead weed removal, water supply improvements, and wildlife migration corridors or crossings with approval by ODFW and therefore will necessarily achieve the agreed-upon heightened mitigation standards under ODFW's habitat mitigation rules, absent which ODFW approval the Applicant and County and ODFW would presume such alternatives did not meet ODFW rules. If the Applicant and ODFW reach an agreement for other project-specific mitigation, which ODFW determines is consistent with ODFW's habitat mitigation rules at OAR 635-415, in accordance with current legal standards, the Applicant shall submit documentation of that final, fully executed agreement to Crook County Community Development before site clearing or grading at the Project site. For sake of clarity, implementation would require ODFW approval to confirm that approval criteria have been satisfied. If ODFW does not confirm and consent that the alternative mitigation project meets the applicable criteria and agree to such an alternative, Option 3 shall not be permitted to count as mitigation and *only* Option 1 or 2 would be permissible as mitigation in such case.²

Each of these mitigation options are discussed in greater detail later in this document.

² Applicant consulted with ODFW on June 10, 2022 to discuss the merits of Option 3, including the opportunity to conduct mitigation that preserves a larger habitat footprint or is otherwise more beneficial due to increased scale or superior project design.

II. BACKGROUND

A. PROJECT DESCRIPTION

The Applicant proposes to construct, develop and operate a solar photovoltaic (PV) facility to be called the Powell East Solar Farm (the Project) in Crook County, Oregon. The Project is located within the Crook County Exclusive Farm Use-3 (EFU-3) zone on private land on tax lots 1615000000800 and 1615000001900 (the site).

The proposed facility will consist of a combination of photovoltaic panels, inverters, mounting infrastructure using fixed tilt or single axis tracker system, an electrical collection system, a substation, an energy storage system, operation and maintenance facility, private access roads, fencing, and/or associated transmission lines to connect to the utility facility. Electricity generated by the facility will be transmitted to a facility substation, where it will be increased to appropriate transmission line voltage levels per utility requirements. The Project will also include Associated Transmission Lines (ATL) to connect the facility to the power grid. The proposed connection would be either to BPA or Pacific Power interconnection facilities at the Ponderosa/Corral Substation complex. Preliminary estimates on the total permanent habitat disturbance for the longest alternative route show an area of 350 square feet (0.0011 acres). This area would be included in the total amount of land to be mitigated as assessed prior to construction.

The Project site consists of approximately 478 acres of private lands composed of low shrub/sagebrush and juniper trees. Various dirt roads are present throughout the site. A powerline corridor is present along the east border of the site, and an existing solar farm lies just east of the powerline. An inactive corral with associated water tank and two wells were observed on the northeast portion of the study area, and livestock watering troughs were observed on the northwest portion of the study area.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
075	Ayres very cobbly loam, dry, 0 to 8 percent slopes	7	7.7	1.6%
076	Ayresbutte-Ayres complex, dry, 0 to 8 percent slopes	6	180.4	37.9%
121	Era ashy sandy loam, 0 to 3 percent slopes	6	52.5	11.0%
147	Ayresbutte-Ayres complex, 3 to 8 percent slopes	6	155.2	32.6%
156	Ginserly-Hatrock complex, 12 to 30 percent north slopes	4	43.3	9.1%
262	Tristan extremely cobbly loam, 12 to 35 percent south slopes	7	36.1	7.6%
Subtotals for Soil Survey Area			475.3	99.9%
Totals for Area of Interest			475.9	100.0%

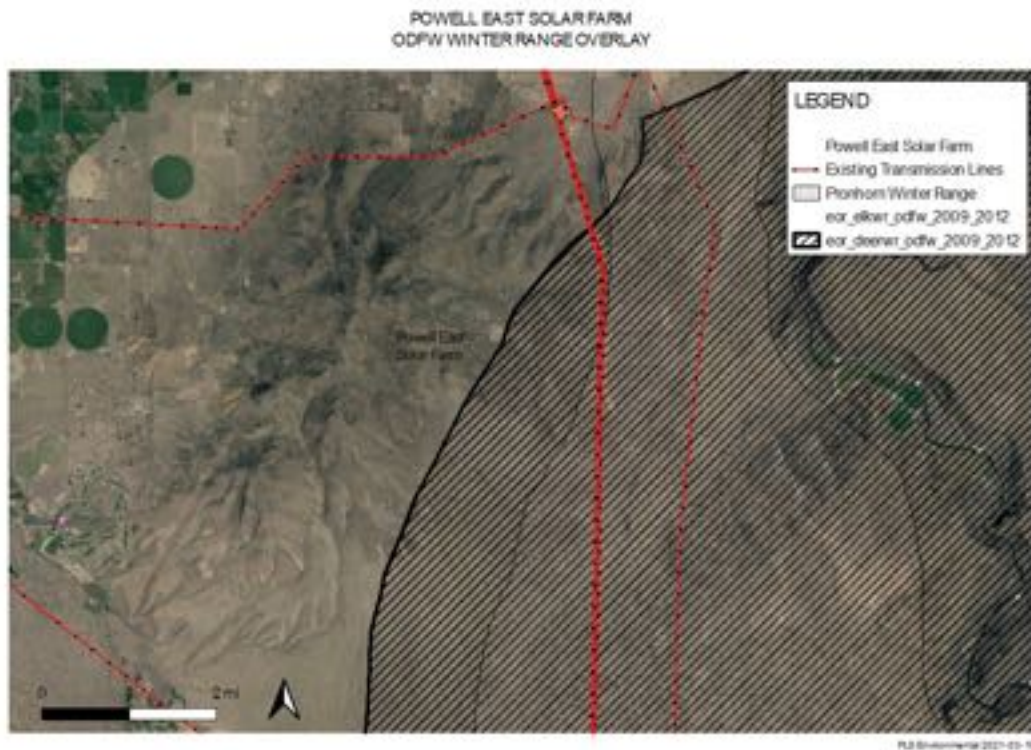
The Project site is composed primarily of Natural Resources Conservation Service (NRCS) Class 6 and Class 7 non-irrigated soils with less than 10 percent of soils classified as Class 4 along the southwestern border of the site. The table below shows the allocation of soil classes and types.

B. SITE-SPECIFIC HABITAT ASSESSMENT

The Applicant contracted with PBS Engineering and Environmental, Inc. (PBS) to conduct a site-specific habitat assessment of the Project site. As part of that site-specific habitat assessment, PBS conducted site visits to the Project site on March 25 and June 24, 2020, contacted ODFW and other agency staff, and reviewed scientific literature. PBS summarized its findings and conclusions from the site-specific habitat assessment in the Wildlife and Federal Sensitive Plant Assessment (July 2020).

As part of the site-specific habitat assessment (study) conducted by the Applicant's wildlife biologist (PBS), the Centralized Oregon Mapping Products and Analysis Support System (COMPASS) geographic information system was used to search for winter range habitat for the big game species deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*) in eastern Oregon (ODFW 2016a). The entirety of the study area is within the ODFW elk mapped winter range, and the majority of the study area with the exception of the northwest portion is within the ODFW deer mapped winter range.

Additionally, Crook County maintains maps of the general ranges of the big game species deer, elk, and pronghorn (*Antilocapra americana*) within the county (Crook County 2019). The Crook County big game ranges were developed using the ODFW winter range data, then refined and updated by district biologists (ODFW 2012a). The study area is not within the Crook County elk general range. However, the southeast part of the study area is mapped to be within the Crook County pronghorn range, and the majority of the study area with the exception of the northwest portion is mapped within the Crook County deer range.



Despite the site being within mapped big game winter range, PBS noted Livestock grazing, as evident within the study area, that is known to reduce grass and forb cover, the preferred forage for pronghorn (USFWS 1994, Kindschy et al. 1982). Elk have also been shown to avoid areas where livestock are grazing (ODFW 2003). Additionally, SW Millican Road is approximately 0.75 miles east of the study area, and an existing solar farm is located east of the study area. Elk, deer, and pronghorn have a preference against habitat adjacent to roads and/or near areas of human disturbance (Rost and Bailey 1979, Kindschy et al. 1982, Innes 2011). Therefore, PBS does not consider the study area essential big game habitat.

PBS concluded that, based on the conditions of the study area observed during the site visit and analysis following the Fish and Wildlife Habitat Mitigation Policy flowchart, that the study area would be classified as “Habitat Category 3” for big game. “Habitat Category 3” is defined as important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population (State of Oregon 2020). In practice, this means that Habitat Category 3 habitat impacts that may occur as a result of the project can be mitigated according to ODFW’s mitigation strategy as “In-kind, in-proximity mitigation.” “In-kind habitat mitigation” are measures which recreate similar habitat structure and function to that existing prior to the development action, and “in-proximity habitat mitigation” are measures undertaken within or in proximity to areas affected by a development action (State of Oregon 2020).³

C. AGENCY CONSULTATION AND MITIGATION RECOMMENDATIONS

The Applicant consulted with ODFW regarding fish and wildlife habitat impacts on the site on March 19, 2020. ODFW indicated that mitigation would be required for any permanent impacts to wildlife at the site. They stated that a mitigation plan that included a payment-to-provide mitigation plan using the same formula and level of detail as the recently approved Millican Solar Project would be acceptable. ODFW offered to share this plan with the developer. During the March 19, 2020 discussion, Applicant and ODFW discussed the following overall mitigation approaches:

- 1) A juniper treatment mitigation project, if sited in sage/bitterbrush type habitat,
- 2) A one-time fee-in-lieu payment mitigation strategy, or
- 3) An alternative mitigation project agreeable to ODFW.

ODFW previously agreed to these approaches in concept and stated that the location of such mitigation would be acceptable if located within Crook County. ODFW recommended that the Applicant implement the agency’s preferred option, a one-time mitigation payment or juniper

³ Because the County’s map revisions were never adopted, ODFW’s policy has been to treat areas within big game overlays appearing on ODFW’s maps as Habitat Category 2. The rationale for ODFW’s approach is described in the 2013 ODFW Oregon Big Game Winter Habitat (ODFW 2013) document. Page 3 of that document contains a flow chart that shows the decision-making that leads to the Category 2 designation. The Applicant notes that, under that framework, some flexibility appears to be warranted regarding the “Step 1. Is the Habitat ‘Essential?’” and “Step 2: Is the Habitat ‘Limited?’” components of the flow chart. Impacted habitats should carry less weight in this analysis, which would inform a reasonable mitigation strategy.

removal, which ODFW staff described as the “easiest” and “low hanging fruit,” due to abundant siting options in Crook County. ODFW stated that the one-time mitigation payment could be coordinated through a third party, such as the Deschutes Land Trust (DLT), or coordinated by the Applicant, the approach that the agency had accepted at other nearby solar developments recently permitted in Crook County (the Gala, Tango, and Millican solar projects) and recommended they use the most recent payment formula used for the Millican project. ODFW stated that the agency is no longer accepting payments directly for mitigation.

During consultation, ODFW recommended that the Applicant mitigate for mapped big game winter range at a ratio of 2:1. Historically, ODFW has recommended a 2:1 mitigation ratio for Category 2 mitigation projects in Crook County⁴ in order to provide a “buffer” to account for a failure rate of any future habitat improvement treatments and still meet the agency’s mitigation goals of “no net loss” plus “net benefit.” However, ODFW has also endorsed alternative mitigation approaches for Crook County projects that ODFW viewed as “Category 2” projects, including a 1.5:1 mitigation ratio for impacts to mapped big game habitat at the Crook Flat Solar Project (consultation also discussed historical ranges for other permits ODFW approved of mitigation plans for, as discussed below.)

The Applicant subsequently reinitiated consultation with ODFW (Greg Jackle) again on June 18th, 2021 to discuss mitigation approaches and ODFW reiterated that they recommend compensatory mitigation be conducted such that their goal of “no net loss and a benefit” occur.

Notwithstanding professional differences of opinion between ODFW and the Applicant's wildlife biologist regarding the habitat quality at the site, the Applicant is proposing mitigation to achieve the mitigation standards that would apply, assuming that ODFW were correct in its assessment of the habitat quality at the site (which the Applicant does not concede)⁵. The Applicant is taking this approach to move this Project forward and to minimize any outstanding disputes during the Crook County planning process. The Applicant is proposing to mitigate to meet ODFW’s goal of “no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality” within big game winter range mapped, recognized, or proposed by ODFW.⁶ This mitigation approach is well within an appropriate range and is consistent with approaches recently approved by the Crook County Planning Commission for other solar facility applications, as well as approaches historically endorsed by ODFW in Crook County and throughout the state.

III. MITIGATION MEASURES

The goal of the mitigation measures in this WMP is to avoid or minimize impacts on plants and wildlife and their habitats, consistently with all applicable legal standards, and to mitigate for

⁴ In other counties, such as Lake County, ODFW has agreed that a lower mitigation ratio for juniper treatment projects would meet their mitigation standards.

⁵ Applicant is continuing to analyze whether the anticipated impact of the project on wildlife would be significant.

⁶ Applicant notes that the standard of “not net loss” and a “net benefit” can be achieved through various actions, not just a mitigation ratio.

unavoidable impacts. The Applicant proposes the following mitigation measures, based on consultation with ODFW.

A. COMPENSATORY MITIGATION

Mitigation Standard: Despite the site-specific habitat assessment concluding that the Project site contains Category 3 habitat, the Applicant, in the spirit of cooperation and a desire to mitigate any impacts from the Project to local wildlife, after consultation with ODFW, has agreed to mitigate impacts to big game habitat that will be permanently impacted by construction and operation of the Project according to ODFW's recommendations for Category 2 habitat ("no net loss and a benefit"). The Applicant proposes to achieve mitigation through one of three options, presented below.

Each of Applicant's proposed mitigation options are designed to achieve ODFW's habitat mitigation policy goal of "no net loss and a benefit" for areas permanently impacted by construction on the site. "No net loss and a benefit" is the standard that applies to higher-quality "Category 2" ("essential") habitat under ODFW's habitat mitigation rules, which are not binding approval standards for this Project. See OAR 635-415-0025(2). The approval standard under the Crook County Code is to "offset" the potential adverse effects of the facility, a term which is not defined. CCC 18.16.060(3)(h)(vi). Thus, the Applicant is proposing to mitigate at a *higher* standard than the site-specific habitat assessment indicates is required and beyond what is required under the County's approval criteria.

Location Criteria: Any mitigation project(s) related to impacts from the Application, including all mitigation options proposed below, will be implemented as follows.

Location: Mitigation will occur: (1) within big game winter range mapped, recognized, or proposed by ODFW; (2) within Crook County, Deschutes County, or Jefferson County; (3) by selecting a specific habitat mitigation area (HMA) therefrom to benefit wintering big game associated with the area of impact (unless otherwise approved by ODFW); and (4) will satisfy ODFW's request that the mitigation satisfy "proximity" criteria consistent with the ODFW habitat mitigation rules.

Habitat type: For juniper removal mitigation, the HMA site selected will be habitat which is (or was previously) sagebrush and/or bitterbrush dominant (or would be expected to restored to such state after mitigation efforts) but suffering from juniper encroachment, such that juniper removal would improve habitat by facilitating the re-growth of vegetation that would provide forage for big game. For the sake of clarity, acceptable sites for juniper removal mitigation projects would not include different habitat types, such as removal of juniper from lodge pole pine stands, as this would not meet the "in kind" criteria pursuant to the ODFW's habitat mitigation rules.

Alternative locations: The Applicant will undertake commercially reasonable efforts to secure a mitigation location with the above-specified location and habitat characteristics. If, despite such efforts, a suitable mitigation project cannot be realized such location, a mitigation project in another location approved by ODFW shall be implemented.

Excess Eligible for Banking: If the Applicant conducts mitigation, or provides fee-in-lieu payments, in excess of the scale required to mitigate the effects at this site and/or in advance of Project impacts, the Applicant reserves the right to propose that excess mitigation be applied as credit toward mitigation requirements at other sites that the Applicant may propose to develop in the future.

1. OPTION 1: CONSERVATION OF LIKE HABITAT WITH JUNIPER REMOVAL UPLIFT IN CROOK COUNTY

Backdrop for Juniper Removal as Habitat Improvement: Strong evidence indicates that western juniper has significantly expanded its range since the late 1800s by encroaching into landscapes once dominated by shrubs and herbaceous vegetation. Woodland expansion affects soil resources, plant community structure and composition, water, nutrient and fire cycles, forage production, wildlife habitat, and biodiversity. The habitat improvement goals of juniper management include restoring ecosystem function and a more balanced plant community that includes shrubs, grasses, and forbs, and increasing ecosystem resilience to disturbances.⁷

Juniper Treatment Habitat Improvement consists of treating areas of sagebrush/bitterbrush habitat next to juniper stands where the foraging habitat previously available for big game grazing is experiencing juniper encroachment. As noted, juniper encroachment reduces forage available to big game, such that a juniper removal program would improve big game grazing habitat by facilitating the re-growth of forage. Accordingly, juniper removal mitigation results in overall habitat improvement at mitigation sites, causing “uplift” to historically degraded habitat.

a. SCALE:

Per consultation with ODFW and, in keeping with ODFW’s habitat mitigation rules, ODFW’s direction for mitigation project scale is that there be “no net loss” or “no net loss and a net benefit” for big game habitat impacted by the Project site. Based on existing ODFW big game habitat maps, the maximum development impact to mapped big game winter range would be 320 acres. As noted, the full Project build-out may ultimately be less than the total permitted area for which the Applicant has applied. Therefore, the final Project design will define the actual scale of permanent impacts for which the Project must mitigate.

The Applicant will assess the total amount of land to be mitigated and notify the County prior to construction (or other disturbances), based on the proposed layout and associated impacted acres of that final facility design (and impact area). The Applicant will calculate the final habitat disturbance area based on the number of acres developed within mapped big game winter range on the site. This mitigation requirement would also apply to the extent that fencing or other disturbance of access to habitat by big game winter range was occurring (and materially adverse), even if prior to actual full facility construction, as applicable at the time of the impact, as well as taking into account the quality of the habitat lost (or otherwise adversely impacted) due to Project impacts.

This mitigation option (Option 1) will achieve “no net loss and a benefit” of habitat by applying conservation protections (described as “durability” requirements below) to a number of off-Project mitigation acres equal to the number of habitat acres impacted by the disturbance or development area at the site (1:1 mitigation). This mitigation option will achieve an additional “benefit” or “uplift” to habitat quality through juniper removal habitat enhancement to improve historically impacted big game habitat.

⁷ Miller, R.F., Bates, J.D., Svejcar, T.J., Peirson, F.B., and Eddleman, L.E., 2007. Western Juniper Field Guide: Asking the Right Questions to Select Appropriate Management Actions: U.S. Geological Survey Circular 1321.

For juniper removal habitat enhancement, a mitigation site acreage ratio of 1:1, plus a reasonable “failure” buffer would meet or exceed the standard of no net loss and a net benefit. The Applicant proposes to achieve buffering for juniper removal projects by conserving extra mitigation project acreage ranging from 1-3% for a mitigation project site with high-quality habitat and not to exceed 30% for a mitigation project site with low-quality habitat.⁸ For the sake of clarity and, as an example, if 320 acres of habitat were developed, 320 acres of juniper mitigation project (plus applicable buffer and subject to other criteria herein) would meet or exceed the required mitigation *scale*. (If lesser development occurred, this mitigation amount would scale down proportionally.) At other solar projects, ODFW has historically agreed with this calculation of scale to achieve no net loss and a benefit, consistent with the ODFW habitat mitigation rules.

b. DURABILITY:

Durability, or measures that function to facilitate and attempt to assure the survival of the beneficial aspects of the mitigation measures over the term of the facility developed, requires two aspects: (1) Protection of the mitigation action site (where applicable) for the term of the facility, to prevent subsequent destruction of the treatment site (*i.e.*, development); and (2) Maintenance, or actions such that (where applicable) revisit from time to time the treatment area to mitigate deterioration of the mitigation treatment or project;

(1) Site Protection: Prior to construction (or other disturbances to habitat or big game wildlife’s access) at the site by the Applicant, the Applicant or a third party will provide the County with durability “assurances,” demonstrating that the survival and beneficial impacts of the mitigation measures will be sustained throughout the expected life of the Project or disturbance.

The Applicant may demonstrate adequate “durability” by providing the County with evidence of an outright purchase of the mitigation area, a conservation easement, a working lands agreement, or other materially similar instrument to prevent development or other substantial adverse impacts to the site habitat by the landowner. Actions may include other durability measures approved by ODFW to implement the intent of this durability requirement. Facility life for the Project shall be presumed to be 40 years unless demonstrated otherwise by Applicant at the time that the Applicant presents evidence of durability to the County. Thus, the term for any durability restriction or agreement described above will be for a minimum of 40 years unless demonstrated otherwise by Applicant.

Before site clearing or grading at the Powell East site, the Applicant will provide Crook County Community Development with a fully executed instrument to prevent development on the final mitigation site during the life of the Project, including but not limited to a working lands agreement, a deed or outright purchase agreement, a restrictive covenant, or a conservation easement, which will protect the conserved habitat by preventing conflicting improvements on the property including

⁸ This proposal is consistent with ODFW’s feedback to the Applicant on other similar projects that for a mitigation site with relatively high-quality habitat, 5-10 acres of additional ground would be sufficient buffering (on a 320-acre site). The Applicant’s proposed failure buffer is also consistent with ODFW’s historical perspective that juniper mitigation projects (which, by definition, often are not on high-quality habitat) have a failure rate on average on the order of 20%. ODFW has previously expressed to the Applicant that 30% additional project area would be a reasonable maximum buffer to assume for juniper removal projects of this kind.

structural improvements, the expansion of impervious roads and surfaces, new irrigated farming, mining, and land clearing activities.⁹

(2) Maintenance: The maintenance aspect of a mitigation project may be achieved by the following mechanisms:

a) Retreatment Actions: Actions which examine the success and failures of the treatment and take reasonable remedial actions at such time, at one or more intervals during the target durability term. To maintain the effectiveness of mitigation, at 12-year intervals after the original mitigation treatment, the Applicant will contract to have any newly established juniper in the cut units removed to address regrowth of juniper seedlings; or

b) Extra Buffering: Enlargement of the treatment project such that, over time, assuming a reasonable failure or degradation rate, the cumulative net criteria of “no net less and a benefit” (commensurate with applicable permit conditions and this plan) is reasonably expected to be met net of cumulative degradation of the Project over time; for juniper removal this could be met by adding extra acres (per elsewhere in Plan); or

c) Other measures: Other measures reasonably likely to have comparable effects as approved by ODFW.

(An example of such degradation to be maintained against would be juniper encroachment slowly invading back into the treatment area.)

(3) Monitoring: Applicant will conduct baseline photographic monitoring prior to treatment and immediately post treatment. Applicant will periodically contact the landowner to check on juniper regrowth and encroachment. Applicant will revisit the treatment area after 12 years, as necessary. Given the nature of the conservation and treatment actions, which are primarily “one time” actions (conservation), and the slow rate of juniper growth, juniper mitigation requires only minor updates. *For juniper removal mitigation*, by way of example not limitation, the durability requirements for the Application could be met as follows: The treatment area is subject to a working lands agreement preventing future development, the mitigation is performed and documented, and the treatment is either revisited and refreshed after 12 years or suitably enlarged to offset future juniper encroachment back into the treatment area with extra acres (for a high quality site) of 10 acres.

c. SPECIFIC TREATMENT ACTIONS:

Juniper cutting under this mitigation plan will occur within a larger HMA mitigation project site in which juniper encroachment has occurred, and ideally occur in and target Phase 1 and 2 stands to reduce competition with shrubs, grasses and forbs in order to improve grazing habitat by facilitating the re-growth of sagebrush/bitterbrush and/or other vegetation that would improve forage for big game, including through use of qualified contractors, or other previously experienced or appropriately instructed and supervised parties (including by parties previously utilized by

⁹ Applicant has clarified the details of the instrument to prevent development on the mitigation site pursuant to ODFW’s request.

Applicant affiliates, such as Wildlife Consultant or the Crook County Soil and Water Conservation District). Areas where juniper to be cut will be identified and divided into cut units.

Some Phase 2 and all Phase 3 stands will be retained for their cover value. All pre-settlement aged juniper will be preserved.

Cut units will be established to improve habitat for wintering big game. A mitigation site acreage ratio of 1:1, plus a reasonable failure buffer (as described elsewhere in this plan), as compared to impacted acreage will be treated, to achieve the mitigation goal of no net loss plus net benefit. To act as a contingency for a failure rate of the juniper treatment over the duration of the treatment project, the amount of buffer will be determined by the condition of the mitigation site. For example, older Phase 3 juniper has been known to have higher failure rates than Phase 2 juniper and may require more of a buffer to allow for the higher failure rate. Buffering may be achieved by extra treatment acreage ranging from 1-3% for a mitigation project site with high-quality habitat (3.2-9.6 acres per 320 acres of mitigation project site) and not to exceed 30% for a mitigation project site with low-quality habitat.

Treatment would comply with other criteria listed above and per Application permit conditions.

For clarity, required treatment related to the Application shall not exceed the total acres ultimately disturbed by the Powell East Project plus a buffer. The maximum mitigation acreage requirement shall be proportionally reduced if the Applicant ultimately develops or disturbs a smaller footprint at the Project site. The Applicant intends that, if such a juniper treatment project were to be implemented through Deschutes Land Trust (DLT) on the Aspen Valley Ranch (or some other comparable project) on up to the total number of acres ultimately disturbed by the Powell East Project, that mitigation project would satisfy the requirements of this mitigation Option.

2. OPTION 2: ONE-TIME FEE-IN-LIEU PAYMENT

a. ONE-TIME FEE-IN-LIEU PAYMENT TO ESTABLISHED CONSERVATION ORGANIZATION

This mitigation approach has been the option used and approved (and recommended) by ODFW and the Crook County Planning Commission at other recently developed similar solar PV facilities in the area including the Gala, Tango, and Millican, Solar projects. It would involve making a one-time contribution to the Deschutes Land Trust (DLT) or other established conservation organization for wildlife enhancement on the Aspen Valley Ranch (or some other comparable project)¹⁰.

The contribution amount will be determined by the following ODFW-approved formula utilized for other similar solar energy projects within the surrounding area:

¹⁰ The County previously accepted a fee-in-lieu payment for the ODFW supported and funded Aspen Valley Ranch location that was then administered to a subsequently created mitigation project.

$$\text{Payment per Acre} = M * (R + L + V + P + S)$$

where

- **'M'** is the mitigation ratio to use as a multiplier on cost per acre. Historically ODFW has used a 2:1 ratio (in Crook County) for mitigation projects on Category 2 land. Despite Applicant's professional wildlife consultant's site assessment that the site is Category 3 habitat, the Applicant agrees to a mitigation ratio of 2:1 for areas permanently impacted by construction within the ODFW mapped big game winter range portion of the site (approximately 320 acres).¹¹ This ratio will meet ODFW's mitigation goal of "no net loss and a benefit.
- **'R'** is the cost of restoring habitat including the administrative costs of design, contracting, implementation, and monitoring. Based on recent ODFW and DLT input, R is \$120.00.
- **'L'** is the cost of long-term maintenance of the habitat restoration investment, (i.e. regular re-entry intervals for juniper thinning, regular invasive weed treatments). Based on recent ODFW and DLT input, L is \$90.00.
- **'V'** is the land value per acre where habitat improvements may be taken. Based on a recent appraisal received by DLT for the Aspen Valley Ranch, V is \$194.24.
- **'P'** is the project development and transaction cost of processing the easement transaction. Based on DLT input, P is \$15.77.
- **'S'** is the stewardship endowment cost. Based on DLT input, S is \$22.33.

Values R, L, V, P, and S will be adjusted by 2.5% per year after permit approval, not to exceed an aggregate total of \$500.

An example of how this formula would be applied to the Project in Crook County is as follows:

$$M = 2:1$$

$$R = \$120/\text{acre}$$

$$L = \$90/\text{acre}$$

$$V = \$194.24/\text{acre}$$

$$P = \$15.77/\text{acre}$$

$$S = \$22.33/\text{acre}$$

$$(120+90+194.24+15.77+22.33) = \$442.34/\text{acre} * M$$

This example utilizes values that have been used recently on other solar projects (Tango and Millican) in the area on a mitigation site managed by DLT. The Applicant will make this one-time payment to DLT or other land conservation organization.

¹¹ This ratio is consistent with the ratio the County has previously applied, with ODFW agreement, to similar habitat sites (the Tango, Millican, and Crook Flat Solar Projects) located nearby.

The Applicant will submit to Crook County Community Development documentation that such payment has been made before the County issues building permits, which may be issued subject to documentation or demonstration of required mitigation action before physical improvements are constructed.

b. ONE-TIME FEE-IN-LIEU PAYMENT TO CROOK COUNTY

In November of 2020 Crook County and Crook County SWCD entered into a Memorandum of Understanding (MOU)¹² to define the respective roles and working relationship between them with the goal of working collaboratively to support wildlife habitat mitigation within the county. One goal of the MOU is to facilitate payment in lieu of on-site mitigation options in order to streamline approval of mitigation projects. As described in the MOU, the County will act as a Fiscal Agent on all mitigation projects while SWCD will (amongst other things) work with ODFW to develop a mitigation formula and assist in the implementation of projects and monitoring.

Under this option, Applicant will make a one-time formula-based payment to Crook County for a mitigation project to be implemented by SWCD, prior to applying for building permits, which may be issued subject to documentation or demonstration of required mitigation action before physical improvements are constructed. As recommended by ODFW, the County may expand the MOU, or may enter another MOU, to add other qualified organizations to implement the mitigation project.

The Applicant has been working with SWCD to identify a site and develop a site-specific plan for mitigation under this option. This plan is attached as Appendix B.

3. OPTION 3: ALTERNATIVE MITIGATION PROJECT APPROVED BY ODFW OR COOPERATIVE MITIGATION AGREEMENT WITH ODFW

As an alternative to the two options described above, other mitigation measures shall be permitted by Applicant to mitigate habitat impacts, so long as they will meet the criteria provided herein, including the locational criteria, and satisfy related permit conditions. Such alternative may be developed in consultation with ODFW.

In combination with conservation components of alternative mitigation projects (*i.e.*, protecting like/in-kind, in proximity habitat, juniper treatment, fencing upgrades), examples of other potentially acceptable alternative mitigation uplift measures (*i.e.*, to create “net benefit”) could be wildfire suppression measures, weed treatment, Medusahead weed removal, water supply improvements, wildlife migration corridors or crossings, etc. Those approaches are consistent with the Applicant’s discussions with ODFW during consultations on prior solar projects and could provide adequate mitigation if approved by ODFW at the time such are proposed.

For the sake of clarity, if any alternative mitigation measures, other than Options 1 and 2 stated above, are proposed in the future to satisfy habitat mitigation criteria, those alternative measures shall be subject to the same criteria as applicable to a permit application and subject to ODFW’s (*not*

¹² See MOU attached as Appendix A to this plan.

the County's) consent to the proposal, to confirm that the proposal complies with ODFW habitat mitigation requirements and achieves the “no net loss and a net benefit” and in-kind mitigation standards. If no such alternative mitigation proposal meeting these criteria is identified by the Applicant, approved by ODFW, and implemented by the Applicant, then the Applicant shall implement mitigation in the form of either juniper removal or a one-time payment, as described above.

If the Applicant and ODFW reach an agreement for other project-specific mitigation, which ODFW determines is consistent with ODFW's habitat mitigation rules at OAR 635-415, in accordance with current legal standards, the Applicant shall submit documentation of that final, fully executed agreement to Crook County Community Development before site clearing or grading at the site.

4. DETAILED MITIGATION IMPLEMENTATION REPORT

Prior to construction of the proposed facilities (or other applicable habitat disturbance), a detailed mitigation implementation report will be prepared, identifying the specific mitigation project(s) being implemented for the applicable habitat disturbance, the specific land/site where the mitigation project will occur (including a map), quantitative and qualitative success criteria,], durability measures being implemented, and reporting schedule (including a reasonable timeline after the execution of the mitigation agreements, such as with the landowner) by which time the mitigation measures will initially be completed. To the extent that Applicant implements a mitigation project under Option 3, the report will document detailed mitigation implementation that addresses the criteria herein and applicable permit conditions.

Applicant will provide a copy of the detailed mitigation implementation report and related documentation to the Crook County Planning Department at such time. To the extent variations from the above criteria (and as otherwise noted above) are part of the detailed implementation plan at the time of implementation (and not later than timing criteria above), Applicant shall seek ODFW's recommendations regarding such deviations, and document the status of the same to the Crook County Planning Department.

B. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

Applicant will implement the following avoidance and minimization measures related to Project pre-construction, construction, operation, and decommissioning.

1. GENERAL MEASURES

- **Access Roads:** The Applicant will use existing public and private roads where reasonably possible to access the construction and staging areas. In the event that new access roads are required, roads will be decommissioned after construction is completed, unless the road is required for safe access during long-term operations and maintenance of the Project, or at the request of the landowner.
- **Waste Management:** To avoid attracting predators to bird nests and other wildlife resources, the Applicant will instruct the contractor to store waste that would attract such wildlife in closed containers at all times.

- **Speed Limit:** To help avoid injury to wildlife that may be present in the Project area, the Applicant will require a 15 miles-per-hour speed limit during construction and restoration activities.

2. MIGRATORY BIRD CONSERVATION MEASURES

The site-specific habitat assessment found that no ground nests or raptor nests were observed onsite during the site visit. The site does provide some suitable nesting habitat for non-ground nesting birds, as a few larger trees are present, which are also suitable for perching. However, this type of habitat is not limited in the area surrounding the Project site. The site has a history of cattle grazing which may negatively impact ground nesting birds.

If possible, the Applicant will aim to conduct vegetation removal and construction outside the nesting season to avoid impacts to any active nest sites (March 1 to August 1). If clearing and/or construction does take place during the nesting season, a pre-construction survey will be conducted between late spring through summer by a qualified observer to confirm that no active nests will likely be impacted within the Project area. If such active nests are located within the Project area, and are otherwise unavoidable, such nests shall be left undisturbed and monitored until a qualified biologist determines that the nest is no longer occupied.

3. BIG GAME AVOIDANCE AND MINIMIZATION MEASURES

Mitigation measures developed for the Project in response to permanent impacts to mapped big game winter range include the following:

- **Construction Impact Reductions.**
- **Wildlife Impact Avoidance Measures** (*e.g.*, exclusionary fencing).
- **Compensatory Mitigation**, as discussed above.
- **Exclusionary Fencing:** The Applicant will install exclusionary fencing around the Project site. Fencing will be 8 feet tall at a minimum (mule deer are able to clear lower heights).
- **Gates** will be installed in or near the corners of the fenced perimeter of the facility where reasonably practical to allow removal of any large game that inadvertently enter the fenced area.
- **Restoration:** To reduce Project impacts on wildlife habitat, the Applicant will restore and revegetate temporary disturbance areas. Revegetation efforts will include re-seeding with native and desired species as approved by the county weed master and in compliance with the county approved weed plan.

C. HISTORIC RANGE OF MITIGATION MEASURES

The Applicant notes that, historically, ODFW has recommended a wide range of mitigation for solar projects with habitat comparable to habitat at the Project site, including projects that the Applicant's affiliates have successfully permitted, with ODFW concurrence and participation in a half-dozen Harney and Lake Counties' related permitting processes (as well as completed implementation of for

multiple sites). Approved mitigation approaches at those projects for disturbance of comparable habitat (sage dominant and/or big game winter range) included no mitigation, mitigation with no durability obligations, invasive weed treatments with no other mitigation obligations, and mitigation ratios ranging from 1.1:1 to 3:1 (in addition to zero mitigation). As part of the Webster Road Solar Farm CUP, for example, approved in Lake County in January 2020, ODFW agreed that an alternative option to be approved by ODFW in the future that satisfies the agency's habitat mitigation policy would be acceptable. ODFW also recommended to the Applicant that the Applicant rely on the wildlife mitigation plan for the Millican Solar Project CUP amendment, approved in Crook County in 2020 after HB 2329 went into effect, as an example. ODFW stated that the level of detail included in that mitigation plan would be sufficient for an acceptable compensatory mitigation proposal for this Project. As such, the approaches that the Applicant is proposing in this plan are well within the ranges of mitigation approaches historically recommended and/or endorsed by ODFW, and in particular those ODFW recommended and approved for Crook County solar CUPs, including substantially identical habitats and impacts in the immediate (even adjoining) vicinity.¹³

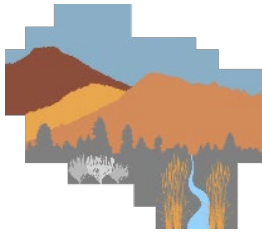
IV. CONCLUSION

By implementing either, (1) a juniper treatment program on lands in Crook County mapped as big game winter range, or (2) the one-time fee-in-lieu payment plan outlined above, or (3) an alternative mitigation project approved by ODFW as provided herein and subject to the mitigation project criteria outlined in this WMP, the Applicant will achieve mitigation consistent with the requirements of ODFW's habitat mitigation rules at OAR Chapter 635, Division 415, which exceeds the standard of habitat mitigation for this Project.

¹³ Harney County: Starvation Ridge Solar Farm*; Riley Solar Farm Best Lane*, Riley Solar Farm Suntex, South Burns Solar Farm. Lake County: Fort Rock South Solar Farm; Fort Rock North Solar Farm; Fort Rock East Solar Farm; Webster Road Solar Farm.

APPENDIX A
MOU BETWEEN CROOK COUNTY AND SWCD

APPENDIX B
SWCD HABITAT RESTORATION PROJECT PROPOSAL



Crook County Soil & Water Conservation District
498 SE Lynn Blvd.
Prineville, Oregon 97754

Phone: (541) 447-3548 Fax: (541) 416-2115

Rachael.Davee@oregonstate.edu

April 22, 2022

Paul Stern
New Sun Energy
2033 E Speedway Blvd, Suite 200
Tucson, Arizona

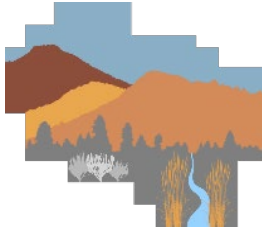
In response to the information you requested I am providing details about the potential for juniper based restoration projects as a tool for mitigating the impacts of solar developments in Crook County.

Juniper canopy cover has increased significantly across the state of Oregon in the past century as a result of changing fire regimes and climate conditions. In Crook County approximately 627,000 acres of juniper expansion have been documented since 1936. Natural resource experts agree that this expansion is degrading wildlife habitat for several species of concern including sage grouse, mule deer, prong horn antelope and many other sagebrush obligate species. Juniper trees use massive amounts of water and alter hydrology by preventing precipitation from replenishing groundwater and contributing to streamflow. Research from Oregon State University demonstrates that these trees consume approximately 64,480 gallons of water per acre each year based on multiple assumptions, including the presence of 13 trees with a minimum 12in DBH per acre.

Crook SWCD specializes in ecological restoration projects that improve habitat and water quality. Based on a preliminary spatial analysis of aerial imagery we estimate that there is approximately 350,000 acres of private land that is suitable for juniper based restoration projects. The acreage calculation is based on a five year average (2015-2019) of remotely sensed data with 30 m pixel resolution. The data was processed by The Institute for Natural Resources Landscape Planning Tool and then further refined to the area of interest. Within this area I extracted a mask of Crook County private acres and removed the acres that were treated in the last ten years and then deleted the acres where the pixels that were showing up as juniper were likely a majority pine forest in higher elevations around the Ochoco National Forest. This acreage total is based solely on presence of detectable trees and is not a measure of landowner's willingness to cut those trees.

Best,

Rachael Davee
Project Manager, Crook SWCD



Crook County Soil & Water Conservation District
498 SE Lynn Blvd.
Prineville, Oregon 97754

Phone: (541) 447-3548 Fax: (541) 416-2115

Rachael.Davee@oregonstate.edu

June 9th, 2022

Paul Stern
New Sun Energy
2033 E Speedway Blvd, Suite 200
Tucson, Arizona

Crook SWCD specializes in wildlife habitat restoration projects on private land in Crook County, including juniper based projects that improve ecosystem health. In Crook County there are hundreds of thousands of acres that would benefit from this type of treatment, the extent of which is described in a letter that I wrote to you on April 22nd 2022.

Through an existing MOU between Crook County and Crook County SWCD, Crook County would be able to receive payment from New Sun Energy and Crook SWCD would bill the county for the service of developing and implementing a wildlife habitat mitigation project in the county. Any funds that the county received from NewSun would be put directly to the initial mitigation projects, mitigation project maintenance and stewardship, monitoring, maintenance and habitat durability.

Best,

Rachael Davee
Project Manager, Crook SWCD



May 18, 2022

Mr. Paul Stern
NewSun Energy LLC
2033 East Speedway Boulevard, Suite 200
Tucson, Arizona 85719

Via email: pstern@newsunenergy.net

Regarding: Big Game Habitat Mitigation Via Western Juniper (*Juniperus occidentalis*) Woodland Control:
Effects on Soil Moisture
Powell East Solar Farm LLC
Powell Butte, Crook County, Oregon 97753
PBS Project 80812.018, Phase 0001

Dear Mr. Stern:

In July 2020, PBS Engineering and Environmental (PBS) completed a *Wildlife and Federal Sensitive Plant Review* (report)¹ for the Powell East Solar Farm LLC project located in Powell Butte, Crook County, Oregon. The report contained a section on the categorization of big game habitat pursuant to the Oregon Department of Fish and Wildlife's (ODFW) Mitigation Policy habitat categories². PBS' analysis, based on ODFW's big game winter habitat categorization formula and guidance³, resulted in a designation of Category 3 which requires "in-kind, in-proximity mitigation"⁴. The project proponent, Powell East Solar Farm LLC, completed a mitigation plan that meets ODFW requirements by proposing a mitigation option to remove western juniper (*Juniperus occidentalis*) woodlands within Crook County. This letter focuses on the soil moisture benefits associated with juniper control.

Western Juniper Woodland Control Beneficial Effects on Soil Moisture

Western juniper woodland control has been practiced in Oregon for several decades⁵. Control efforts were often targeted at opening juniper stands to increase habitat for big game or to increase livestock forage lost as a result

¹ PBS. 2020. Wildlife and Federal Sensitive Plant Review. PBS Engineering and Environmental, Inc. Bend, Oregon. Completed for Powell East Solar Farm LLC under project number 80812.018 phase 1. July 2020.

² State of Oregon. 2022. Oregon Department of Fish and Wildlife Administrative Rules. OAR 635-415-0025 Implementation of Department Habitat Mitigation Recommendations. Salem, Oregon. Available at: https://oregon.public.law/rules/oar_635-415-0025. Accessed May 18, 2022.

³ ODFW. 2013. ODFW Oregon Big Game Winter Habitat. Oregon Department of Fish and Wildlife. Salem, Oregon. Available at: <https://www.dfw.state.or.us/lands/docs/ODFW%20Guidelines%20BGWR%20Eastern%20Oregon.pdf>. Accessed May 18, 2022.

⁴ ODFW. 2022. Oregon Department of Fish and Wildlife Mitigation Policy. Oregon Department of Fish and Wildlife. Salem, Oregon. Available at: https://www.dfw.state.or.us/lands/mitigation_policy.asp. Accessed May 18, 2022.

⁵ Barret, H. 2009. Contrasting Juniper Management Projects of the Past with an Ecologically based, Landscape-scale Approach. CSR Natural Resources Consulting, Inc. Long Beach, Washington. January 21, 2009. Available at: <https://www.oregon.gov/oweb/Documents/Crooked-River-Contrasting-Juniper-Management-2009.pdf>. Accessed May 18, 2022.

of juniper encroachment. More recently, Barrett⁶, Ochoa et. al.⁷, Ray et. al.⁸, and Abdallah et. al.⁹, among others, have studied the positive effects of juniper control on soil moisture. Specifically:

- Barrett⁴ anticipates less interception of precipitation leading to higher soil infiltration and lower transpiration resulting in re-occupation of native forage, increased native plant cover, and reduced bare soil.
- Ochoa⁵ states "Results from this study show that juniper woodlands intercepted up to 46% of total precipitation, altering soil moisture distribution under the canopy and in the interspace. Results indicate that precipitation reaching the ground can rapidly percolate through the soil profile and into the shallow aquifer, and that strong hydrologic connections between surface and groundwater components exist during winter precipitation and snowmelt runoff seasons. Greater streamflow and springflow rates were observed in the treated watershed when compared to the untreated."
- Ray⁶ states "We found greater perennial grass, annual grass, and shrub cover in the treated watershed...Results also show that on average, topsoil water content was 1% to 3% greater in the treated watershed...Overall, even though average soil water content differences between watersheds were not starkly different, the fact that more herbaceous vegetation and shrub cover were found in the treated watershed led us to conclude that the long-term effects of juniper removal on soil water content redistribution throughout the landscape may be beneficial towards restoring important ecohydrologic connections in these semiarid ecosystems of central Oregon."
- Abdallah⁷ concludes "Juniper control represents benefits such as habitat restoration for native wildlife, increased forage for livestock, and restoration of hydrological functions."

Additionally, PBS personnel obtained first-hand knowledge from a local landowner during fieldwork for the *Wetland Determination Report for West Prineville Solar Farm LLC*¹⁰ project located about 4.5 miles north of the Powell East project. Over the past approximately 5 years, the *West Prineville* landowners have been removing much of the western juniper from their property. They stated that after the trees were removed, a spring that had been dry for years began to flow again.

Based on the above literature review and first-hand reports from the field, PBS agrees that Powell East Solar Farm LLC's mitigation plan would result in "in-kind, in-proximity" mitigation of big game habitat. The additional surface water and greater variety of forage associated with juniper control provides valuable resources to big game in the semi-arid environment, among other benefits related to water availability for livestock and/or agricultural use.

⁶ Barrett, H. 2007. Western Juniper Management: A Field Guide. CSR Natural Resources Consulting, Inc. Long Beach, Washington. Completed for The Oregon Watershed Enhancement Board. 2007. Available at:

<https://www.oregon.gov/oweb/Documents/Western-Juniper-Management-Field-Guide-2007.pdf>. Accessed May 18, 2022.

⁷ Ochoa, C.G.; Caruso, P.; Ray, G.; Deboodt, T.; Jarvis, W.T.; Guldán, S.J. Ecohydrologic Connections in Semiarid Watershed Systems of Central Oregon USA. *Water* 2018, 10, 181. Available at: <https://doi.org/10.3390/w10020181>. Accessed May 18, 2022.

⁸ Ray, G.; Ochoa, C.G.; Deboodt, T.; Mata-Gonzalez, R. Overstory–Understory Vegetation Cover and Soil Water Content Observations in Western Juniper Woodlands: A Paired Watershed Study in Central Oregon, USA. *Forests* 2019, 10, 151. Available at: <https://doi.org/10.3390/f10020151>. Accessed May 18, 2022.

⁹ Abdallah, M.A.B.; Mata-Gonzalez, R.; Noller, J.S., Ochoa, C.G.. Ecosystem carbon in relation to woody plant encroachment and control: Juniper systems in Oregon, USA. Elsevier – Agriculture, Ecosystems and Environment. 2019. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0167880919303780?via%3Dihub>. Accessed May 18, 2022.

¹⁰ PBS. 2021. *Wetland Determination Report for West Prineville Solar Farm LLC*. Bend, Oregon. Completed for West Prineville Solar Farm LLC under project number 80812.016. January 18, 2021.

Thank you for the opportunity to support your juniper control mitigation plan. Please feel free to contact me at 503.935.5492 or greg.swenson@pbsusa.com with any questions or comments.

Sincerely,

Greg Swenson
Senior Project Manager

**Mitigation Completion Report for Fort Rock North and South Solar
Development
Lake County, Oregon**

Prepared For:

**NewSun Energy Holdings Oregon LLC
3500 S DuPont Highway Dover, DE 19901.
(520) 981-7303**

Prepared By:

**Fosters Natural Resource Contracting
16981 Highway 395, Lakeview, OR, 97630.
541-219-0252**

fostersnrc@gmail.com

NewSun Energy Holdings Oregon LLC (NewSun) developed two solar facilities in the Fort Rock Valley, Oregon. Fort Rock North is a 200 acre facility developed under Lake County Conditional Use Permit 17-062 CUP. Fort Rock South is a 212 acre facility developed under conditional use permit 18-020 CUP. The purpose of this document is to report on the completion of required wildlife mitigation actions.

The mitigation area totaled 1099 acres which exceeded the 812 acres required by the conditional use permits. All mitigation actions were completed as proposed in the mitigation plan (Appendix 1).

Project Administration

Based on estimates in the mitigation plan (Appendix 1) Newsun set up a mitigation account with the Fort Rock/Silver Lake Soil and Water Conservation District (FR/SL SWCD) which agreed to act as funds manager. Foster's Natural Resource Contracting (FNRC) was hired to administer the various aspects of the project. Mitigation implementation agreements were developed between the FR/SL SWCD and the landowners (Appendix 2). A condition of those agreements was the landowners would accept an incentive payment and agree to maintain the mitigation areas in their post treatment condition for a period of 10 years. Rather than hire contractors to

complete juniper treatments the landowners chose to do their own treatments. A price for juniper treatments of \$230/acre and \$260/acre was negotiated on Bridge Creek Ranch and the Stratton Place respectively. Table 1 presents cost by activity for the mitigation project.

Mitigation Actions

On the Bridge Creek Ranch mitigation site cutting and piling in the 309 acre treatment area was started in December 2019 and completed in March 2020. Juniper trees less than 8 inches diameter breast height (DBH) were pulled and piled using a skid steer and juniper over 8 inch DBH were cut using a chain saw. Small juniper with basal diameters of less than 2 inches were cut with hand lopping shears. All slash piling was completed using an excavator with a thumb attachment on the bucket. Pile burning was completed in December 2021 with snow on the ground to contain fire to slash piles. Burn scars were re-seeded with a dryland grass mix of crested wheatgrass, tall wheatgrass and perennial ryegrass. Figures 1 and 2, 3 and 4 respectively were taken in the same area and show pre/post treatment conditions.

On the Stratton Place mitigation site cutting and piling were completed in February and March 2020. Juniper with basal diameters less than 3 inches were cut with lopping shears. Juniper with basal diameters greater than 3 inches were cut using a chain saw. All slash piling was completed using a rubber tire tractor with front bucket and thumb attachment. Pile burning was completed in December 2021 and January 2022 with snow on the ground to contain fire to slash piles. Burn scars were re-seeded with a dryland grass mix of crested wheatgrass, tall wheatgrass and perennial ryegrass. Figures 5 and 6, 7 and 8 respectively were taken in the same area and show pre/post treatment conditions.

The Ventenata treatment on the Stratton Place was completed in October 2021. Plateau (imazapic) was ground applied by a licensed contractor at a rate of 8 ounces per acre. Controlling noxious weeds usually requires multiple treatments over time to be successful. As stated in the mitigation plan (Appendix 1) Newsun provided funding for the first treatment and any subsequent control activities will be the responsibility of the landowner. The treatment was a cooperative project between Lakeview BLM and the NewSun mitigation project. Lakeview BLM provided all the chemical and paid for their share of the applicator's services.

Conclusions

Dense juniper stands are selected by mule deer and elk to provide winter cover; however, they provide little forage value. Juniper encroachment and establishment of non-native annual grasses can significantly impact forage quality for big game. The mitigation actions were designed to: 1.) Reduce juniper encroachment in areas that still had a shrub understory available to be used as forage, and were in close association with dense juniper stands that would provide cover. 2.) Initiate control of Ventenata at the Stratton Place. The mitigation areas are currently being used as winter habitat by mule deer and elk and the purpose of the mitigation actions was to maintain and/or improve forage quality into the future, and therefore provide a net benefit of habitat

quality. In addition to the benefits realized for big game, treating juniper to retain a healthy shrub/bunchgrass/forb component reduces soil erosion and provided habitat for a host of neotropical passerines which use these vegetation associations for nesting and brood rearing (e.g. Western Meadowlark, Brewers Sparrow, Green-tailed Towhee).

Selecting wildlife mitigation areas on private ranch lands provides the additional benefit of increasing the economic viability of those operations through the vegetation treatments that benefit both wildlife and ranching; and the financial benefit supplied by NewSun. This allows the landowners to retain large areas of open space which is critically important for cattle operations and healthy wildlife populations.

Within the cutting units all pre-settlement juniper were saved. Additionally, the landowners chose to retain several individual, large post-settlement junipers to provide cover for both cattle and wildlife. Because a tractor was used for piling at the Stratton Place, juniper piles were generally smaller and less tightly packed than those piled with the excavator at Bridge Creek Ranch. This resulted in lower consumption of larger diameter juniper slash and larger, more numerous, but less severe burn scars.

Table 1. Mitigation Costs by Activity for Newun's Fort Rock North and South Solar Developments

Table 4: Mitigation Costs							
	Bridge Creek Ranch		Stratton Place				Total
Activity	Acres	Cost	Acres	Cost	FR/SL SWCD	FNRC	Cost
Mitigation Funds Management					16,000		16,000
Project Implementation	389		710			19,098	19,098
Incentive Payment		5,000		5,000			10,000
Juniper Cut/Pile	309.6	58,824	142.8	29,988			88,812
Pile Burning		15,450		7,140			22,590
Seeding Burn Spots		500		500			1000
Ventenata Treatment ^a			69	4,000			4,000
							161,500
^a 49 acres on Stratton Property and 20 acres on Lakeview BLM.							
Mitigation account paid \$2500 of application costs and BLM paid \$1500 and provided chemical							
for the entire treatment area							



Figure 1. Pre-treatment Bridge Creek Ranch south of Bridge Creek upstream from the meadow.



Figure 2. Post-treatment Bridge Creek Ranch south of Bridge Creek upstream from the meadow.



Figure 3. Pre-treatment Bridge Creek Ranch southwest of meadow.



Figure 4. Post treatment Bridge Creek Ranch southwest of meadow.



Figure 5. Pre-treatment Stratton Place in southeast cut unit.



Figure 6. Post treatment Stratton Place in southeast cut unit.



Figure 7. Pre-treatment Stratton Place in center/west cut unit.



Figure 8. Post treatment Stratton Place in center/west cut unit.

Appendix 1

**Mitigation Plan for Fort Rock North and South Solar Development
Lake County, Oregon**

Prepared For:

**NewSun Energy Holdings Oregon LLC
3500 S DuPont Highway Dover, DE 19901.
(520) 981-7303**

Prepared By:

**Fosters Natural Resource Contracting
16981 Highway 395, Lakeview, OR, 97630.
541-219-0252
fostersnrc@gmail.com.**

NewSun Energy Holdings Oregon LLC (NewSun) is developing two solar facilities in the Fort Rock Valley, Oregon. Fort Rock North is a 200 acre facility being developed under Lake County Conditional Use Permit 17-062 CUP. Fort Rock South is a 212 acre facility permitted under conditional use permit 18-020 CUP. One condition of these permits directs NewSun to work with Oregon Department of Fish and Wildlife (ODFW) to develop and implement a plan to mitigate for impacts of development to wildlife habitat. This document presents the actions needed to meet that condition of the permits.

ODFW's rules which govern the specifics of mitigation are found in their Habitat Mitigation Policy (Oregon Administrative Rule 635-415-000). Per that policy affected habitats are classified based on their value to wildlife and abundance in the state. Classifications range from Category 1 habitats which are irreplaceable and of high value to certain wildlife species (e.g. Pre-settlement juniper stands); to Category 6 habitats which are very abundant and of little value to most wildlife species (e.g. the parking lot at the REI store in Bend). Application of the

mitigation policy is advisory unless mitigation is directed by the permitting agency for certain developments in the state. In this case the Conditional Use Permits required mitigation.

The primary impact of both solar developments is to big game winter range in Lake County. Under the mitigation policy there are 2 classifications of big game winter range in Oregon. Winter range areas which have been adopted under a county's Land Use Comprehensive Plan as a Goal 5 Resource are Category 2 habitats and the direction for mitigation is there be "No net loss and a net benefit" for these habitats. Generally, Category 2 habitats are mitigated at a 3:1 ratio. For the purposes of this document the winter ranges under this classification are referred to as county adopted winter range. The other classification is referred to as biological winter range. These are areas which are used less or intermittently by wintering big game animals and are classified as Category 3 habitats. Direction in the mitigation policy for Category 3 habitats is "No net loss" and are mitigated at a 1:1 ratio.

Fort Rock North is located within the county adopted winter range of the Paulina Wildlife Management Unit (WMU). The area is Category 2 habitat and mitigation will be developed at a 3:1 ratio (600 acres of required mitigation). Fort Rock South is located within the biological winter range of the Fort Rock WMU. The area is Category 3 habitat and mitigation will be developed at a 1:1 ratio (212 acres of required mitigation).

Winter Habitat Selection by Mule Deer

Oregon Department of Fish and Wildlife developed a winter habitat resource selection function (RSF), (Coe et al. 2018) for mule deer (*Odocoileus hemionus*). The RSF showed significant use of Phase 2 and 3 juniper stands as winter habitat. We suspect this selection is to retain body condition through the juniper's effect of blocking wind and providing some thermal benefit in the winter. Areas of sagebrush and bitterbrush next to these juniper stands are used for foraging. Therefore, a mix of older age juniper stands associated with sage/bitterbrush dominated vegetation is good habitat for wintering mule deer.

Mitigation Area

Portions of two properties were selected for mitigation. The first property is the Stratton Place, owned by Carrie and Lance Brown (Fig. 1). The Stratton Place is located within the county adopted winter range of the Fort Rock WMU. The second property is Bridge Creek Ranch (T28,R13,S 24,25,35,36) owned by O'Leary Land LLC (Fig. 2). Bridge Creek Ranch lies within county adopted winter range for the Silver Lake WMU. The total treatment area for the two properties total 1099 acres. Mitigation treatments were designed to improve big game winter habitat by improving forage cover ratios. The treatments are logical for the condition of juniper and winter habitat present on the two properties and NewSun is exceeding the mitigation requirements of their CUPs.

Dominant upland vegetation on both properties is sagebrush/bitterbrush (*Artemisia tridentata*/*Purshia tridentata*) typical of the northern Great Basin. Juniper (*Juniperus occidentalis*) encroachment ranges from none to mixed stands of late Phase 2 or Pre-settlement

juniper stands (Miller et al., 2007). Approximately 104 acres of Phase 2 juniper were cut previously on the Stratton Place.

Treatment Prescriptions

Stratton Place

The 4 cut units identified in Figure 1 total 142.8 acres. These cut units were selected because they have soils and slopes which will allow understory shrubs, grass and forbs to respond when juniper are removed. Juniper stands in the southeast, northwest and southwest cut units are early to mid-Phase 2 with a dominate understory of big sage brush and bunch grass. The cut unit on the west side of the BLM inholding has a mid to late Phase 2 juniper stand. All of the cut units are closely associated with juniper stands which will provide winter deer cover. These retained juniper stands are either on BLM property or areas of rocky soils and steeper slopes on the Stratton Place. Within the cut units all post settlement juniper will be cut, piled and burned. 2018 cost estimates for this type of juniper treatment in other areas of Lake County range from \$230 to \$260 per acre to cut, machine pile and burn the piles.

Several areas of Ventenata (*Ventenata dubia*) totaling 69 acres were found. About 20 acres of the Ventenata area shown in Figure 1 is on BLM property. A treatment plan will need to be developed in cooperation with Lakeview BLM. Ventenata is an invasive annual grass that has little forage value and can out compete more desirable plant species, thereby reducing grazing or browsing value of the effected land. The only effective control method for this species is application of a pre-emergent herbicide. To be effective, most weed treatments are multi-year projects. Under their Conditional Use Permit NewSun is not required to treat weeds in the mitigation area. However, to maintain forage quality for big game and cattle they are willing to treat Ventenata in 2020, thereby starting the treatment process. 2019 cost estimates for similar projects in Lake County are \$40 to \$50 per acre.

Bridge Creek Ranch

The 309.6 acre cut unit shown in Figure 2 has a mix of Phase 1 and early Phase 2 juniper with big sagebrush, bitterbrush, bunch grass and forbs in the understory. Pre-settlement juniper are most abundant in the late Phase 2/Phase 3 stand and on the rim rocks along the south side of Bridge Creek. Both of these areas will not be cut. Scattered pre-settlement trees also occur throughout the cut unit and these individual trees also will not be cut. All other juniper in the cut area will be cut, piled and burned. 2018 cost estimates for this type of treatment in other areas of Lake County range from \$210 to \$240 per acre for cutting, machine pile and burning the piles.

Pre-Settlement Juniper

These are individual or small groups of juniper which are 150 years old or older and usually established prior to European settlement of North America. Where they occur in the treatment units these juniper will not be cut. They occur throughout both the Stratton Place and Bridge Creek Ranch usually in rock outcrops or on very rocky soils which are not prone to burn. Because of their age and structure Pre-Settlement Juniper are beneficial to numerous wildlife species.

Late Phase 2/ Phase 3 Stands

These stands are used significantly by mule deer during the winter. Phase 3 stands are dominated by juniper trees in excess of 100 years old with an understory of sparse herbaceous vegetation and few if any shrubs. Late Phase 2 stands have similar aged trees but more shrubs in the understory, albeit the shrubs present are stressed due to competition with juniper. On both properties these stands are located in areas with shallow rocky soils. These stands were not selected for cutting and will be left to provide cover for wintering deer.

Treatment Timing

We expect this project to take several years to complete the juniper cutting and an additional year after each cutting period to complete pile burning. There are numerous contractors available to cut juniper but it has been our experience there are only a few of those which provide good service. Although we will solicit bids for the juniper work, the dependable contractors are in high demand and worth waiting for. Cutting and piling should occur between October and April to be outside of fire season. To minimize fire impacts on shrub and grass species, pile burning should be done in the winter months after the piles are allowed to dry for several months. For these reasons we expect the mitigation project to be completed between January, 2020 and April 2024.

Maintenance

The mitigation rules direct a plan to maintain habitat values developed in the treatment area for the duration of the original impacts. Because there will be juniper left within close proximity to the cut units, we expect establishment of new juniper trees due to seed dispersal. In the northern Great Basin juniper trees between 3 and 8 feet tall, generally range in age from 25 to 40 years. The duration of the solar project is intended to be 50 years. To maintain the effectiveness of mitigation, assuming the landowners at that time are willing, 25 years after the original mitigation treatment NewSun will contract to have newly established juniper in the cut units removed.

The mitigation actions identified are primarily intended to maintain or enhance winter habitat for big game animals, specifically mule deer. In order to retain the habitat condition developed NewSun will provide an incentive payment to each landowner with the condition that they agree to not cut Pre-Settlement or juniper in the Phase 2/Phase 3 areas retained as cover. This incentive payment would be \$10,000 total or \$5,000 for each landowner, and be in effect for 10 years.

Project Administration

NewSun will contract with the Fort Rock/Silver Lake Soil and Water Conservation District (SWCD) and Fosters Natural Resource Contracting (FNRC) to implement this mitigation plan. The SWCD will act as the business administrator for the project and be responsible for paying contractors and other invoices due during project implementation. The SWCD will charge a 10% administration fee for providing their service. FNRC will act as the project administrator and be responsible for hiring contractors, treatment unit layout and approving invoices submitted to the SWCD for payment. FNRC will charge a standard rate of \$100/hour plus mileage for their service.

Cost Estimate Summary

Juniper Cut/Pile Burning			
Stratton Place	142.8 ac	\$260/ac	\$37,128
Bridge Creek Ranch	309.6 ac.	\$240/ac	\$74,304
Ventemata Treatment	49 ac.	\$50/ac.	\$2450
Miscellaneous Expenses			\$5118
Incentive Payment to Landowners			\$10,000
FR/SL SWCD administration fees			\$16,000
<u>FNRC fees for implementing mitigation plan</u>			<u>\$15,000</u>
Estimated Total			\$160,000

Literature Cited

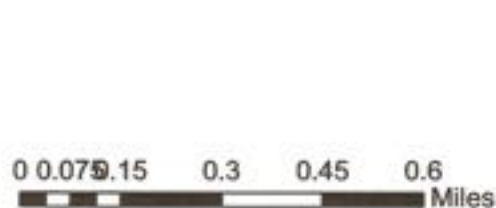
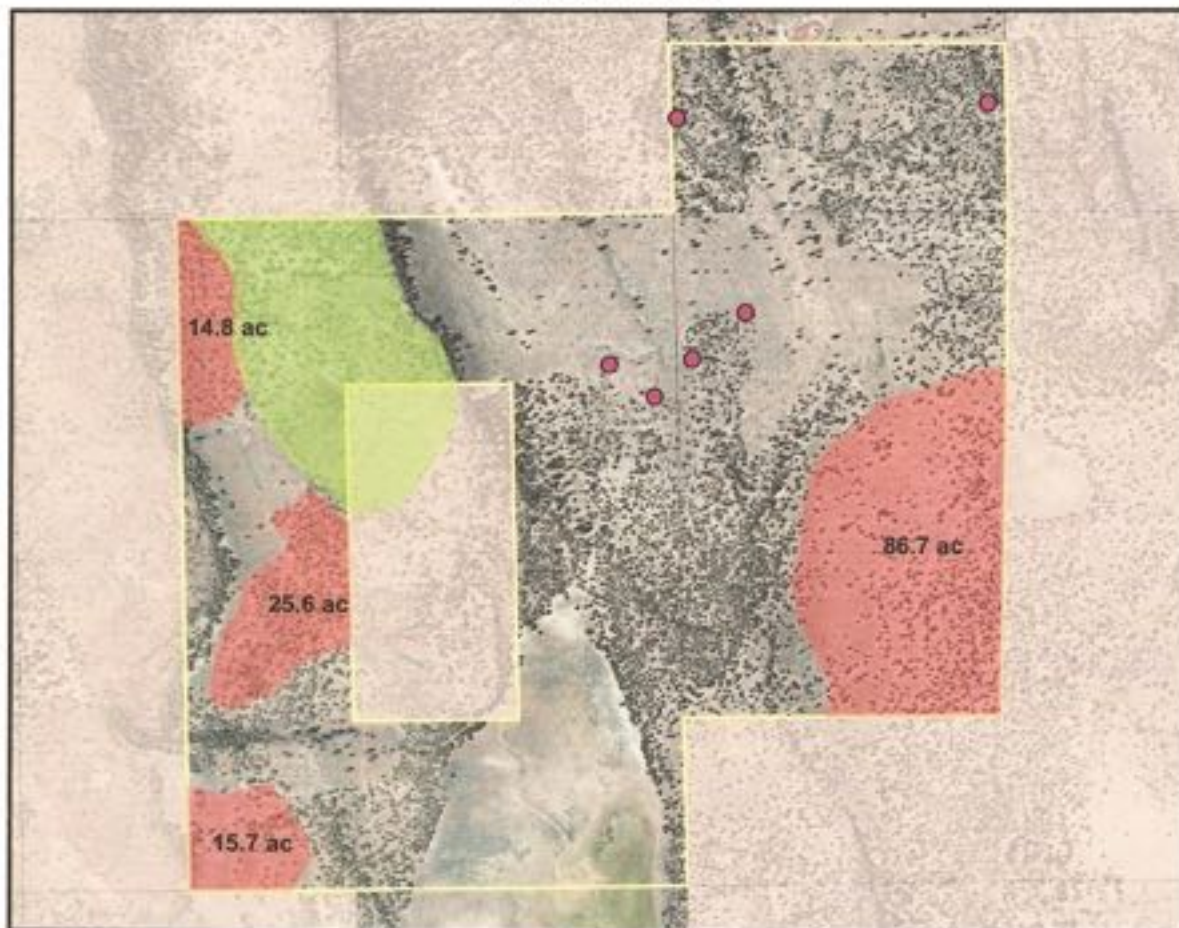
Coe, P.K., D.A. Clark, R.M. Nelson, S.C. Gregory, J.B. Cupples, M.J. Hedrick, B.K. Johnson, D.H. Jackson. 2018. Multiscale models of habitat use by mule deer in winter. J. Wildl. Manage. 10.1002/jwmg.21484.

Miller R.F., Bates, J.D., Svejcar, T.J., Pierson, F.B., Eddleman, L.E. 2007. Western juniper field guide: Asking the right questions to select appropriate management actions. U.S. Geological Survey Circular 1321. 61pp.

Property Owner: Lance & Carrie Brown
Legal Description:
T27S R13E Sec. 27, 34, 35

Date: September 2019
Foster Natural Resource Contracting
Developed by: Mary Foster
State and County: OR, Lake County

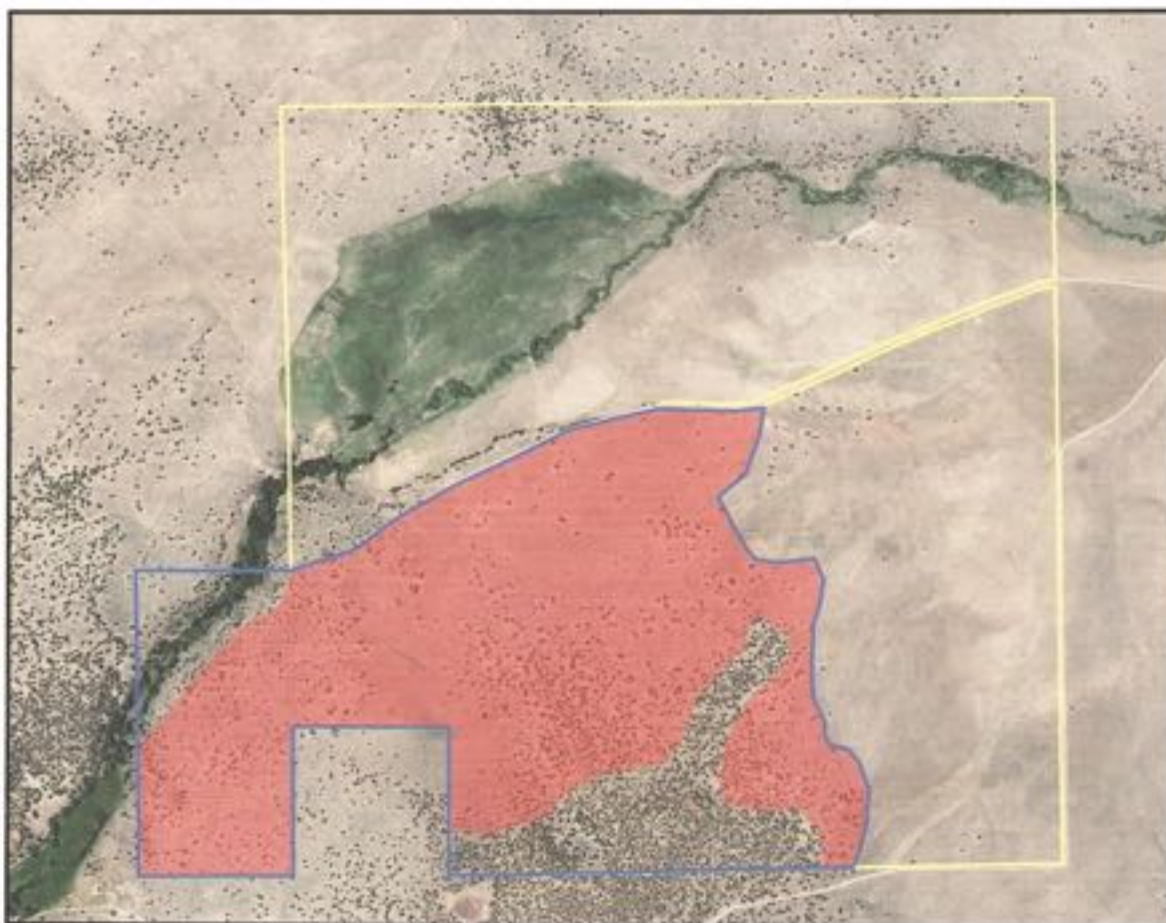
Figure 1. New Sun Energy Holdings Oregon LLC
Stratton Place Mitigation Map
September 2019
710 acres total



Property Owner: O'Leary Lands LLC
Legal Description:
T28S R13E Sec. 25, 26, 35, 36

Date: September 2019
Foster Natural Resource Contracting
Developed by: Mary Foster
State and County: OR, Lake County

Figure 2. New Sun Energy Holdings Oregon LLC
Bridge Creek Ranch Mitigation Map
September 2019
389 acres total



Legend

WinterRange_TrmntArea

Property Owner

Juniper Treatment, 309.6 acres

Property_Boundary

0 0.075 0.15 0.3 0.45 0.6
Miles



Appendix 2

Signed landowner agreements – accompanying PDF file

MITIGATION IMPLEMENTATION AGREEMENT

This MITIGATION IMPLEMENTATION AGREEMENT is made this 7 day of December, 2019, by and between Fort Rock/Silver Lake Soil & Water Conservation District, (a municipal subdivision of government), hereinafter called **FR/SL SWCD** and O'Leary Lands LLC (herein referred to as "Landowner").

RECITALS

WHEREAS, FR/SL SWCD desires to act as funds manager for NewSun Energy in order to implement mitigation as required under Lake County Conditional Use Permits (17-062 CUP and 18-020 CUP) and identified in their mitigation plan (**Exhibit 1**) on property owned by the landowner, and

WHEREAS, the Landowner desires to have the benefit to rangeland health and grazing management delivered through implementation of the activities outlined in the mitigation plan (**Exhibit 1**).

NOW THEREFORE, the parties agree as follows:

Section 1. FR/SL SWCD will:

- a. Act as funds manager to implement the activities identified in **Exhibit 1**.
- b. Fosters Natural Resource Contracting to work with the Landowner and SWCD to implement mitigation activities, acting as a project manager for NewSun, ensuring mitigation is done as desired by ODFW to meet all permit requirements.

Section 2. Landowner will:

- a. Allow access for the project manager and juniper cutting or weed control contractors to cut juniper on 309.6 acres of the Bridge Creek Ranch; as described in **Exhibit 1**.
- b. Accept a one-time incentive payment of \$5000.00 which is provided with the specific condition that juniper stands remaining on the property after mitigation treatments are completed will be protected from further juniper cutting for a period of 10 years as described in **Exhibit 1**.
- c. Allow access, by permission each time access is needed of FR/SL SWCD employees or designated individuals for post treatment monitoring or tours to show the effects of mitigation activities.

Section 3. Both parties recognize:

- a.) That juniper cutting activities will take multiple years to complete however all activities identified in **Exhibit 1** will be completed by December of 2024.

- b.) With the exception of juniper treatment nothing in this agreement effects the Landowner's management of their property.
- c.) The Landowner will be notified every time FR/SL SWCD employees or their contractors want access to the property.
- d.) That funding to execute this agreement is coming from NewSun Energy to meet their required mitigation for solar development. This agreement becomes null and void should the agreement between FR/SL SWCD and New Sun be terminated and that only NewSun mitigation funds will pay for the work identified in **Exhibit 1**. The parties will not be responsible for completing the work identified in **Exhibit 1** if the mitigation funds from NewSun should be withdrawn or for any reason beyond the parties control become inadequate to complete the work.

Section 4. Other Terms.

- a. Binding Effect. This Agreement is binding on and inures to the benefit of the parties and their respective heirs, personal representatives, successors, and permitted assigns.
- b. Assignment. Neither this Agreement nor any of the rights, interests, or obligations under this Agreement may be assigned by either party without the prior written consent of the other party. Consent under this section may not be unreasonably withheld.
- c. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended or may be construed to confer on any person, other than the parties to this Agreement, any right, remedy, or claim under or with respect to this Agreement.
- d. Notices. All notices and other communications under this Agreement must be in writing and will be deemed to have been given if delivered personally, sent by facsimile (with confirmation), mailed by certified mail, or delivered by an overnight delivery service (with confirmation) to the parties at the following addresses or facsimile numbers (or at such other address or facsimile number as a party may designate by like notice to the other parties):

To O'Leary Lands LLC:
Post Office Box 69
Silver Lake, Oregon 97638

To Designee of Funds:
Fort Rock/Silver Lake Soil and Water Conservation District
(FR/SL SWCD)
Justin Ferrell, District Manager (PI)
17612 Highway 395
Lakeview, OR 97630

Any notice or other communication will be deemed to be given (a) on the date of personal delivery, (b) at the expiration of the 5th day after the date of deposit in the United States mail, or (c) on the date of confirmed delivery by facsimile or overnight delivery service.

- e. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties, which writing must refer to this Agreement.
- f. Construction. The captions used in this Agreement are provided for convenience only and will not affect the meaning or interpretation of any provision of this Agreement. All references in this Agreement to "Section" or "Sections" without additional identification refer to the Section or Sections of this Agreement. All words used in this Agreement will be construed to be of such gender or number as the circumstances require. Whenever the words "include" or "including" are used in this Agreement, they will be deemed to be followed by the words "without limitation."
- g. Counterparts. This Agreement may be executed in counterparts, each of which will be considered an original and all of which together will constitute one and the same agreement.
- h. Electronic Signatures. Electronic transmission of any signed original document, and retransmission of any signed facsimile or electronic transmission, will be the same as delivery of an original. At the request of any party, the parties will confirm electronically transmitted signatures by signing an original document.
- i. Further Assurances. Each party agrees to execute and deliver such other documents and to do and perform such other acts and things as any other party may reasonably request to carry out the intent and accomplish the purposes of this Agreement.
- j. Time of Essence. Time is of the essence with respect to all dates and time periods set forth or referred to in this Agreement.
- k. Expenses. Except as otherwise expressly provided in this Agreement, each party to this Agreement will bear its own expenses in connection with the preparation, execution, and performance of this Agreement and the transactions contemplated by this Agreement.
- l. Waiver. Any provision or condition of this Agreement may be waived at any time, in writing, by the party entitled to the benefit of such provision or condition. Waiver of any breach of any provision will not be a waiver of any succeeding breach of the provision or a waiver of the provision itself or any other provision.
- m. Governing Law. This Agreement will be governed by and construed in accordance with the laws of the state of Oregon, without regard to conflict-of-laws principles.

- n. Attorney Fees. If any arbitration, suit, or action is instituted to interpret or enforce the provisions of this Agreement, to rescind this Agreement, or otherwise with respect to the subject matter of this Agreement, each party will be responsible for their own attorney fees.
- o. Injunctive and Other Equitable Relief. The parties agree that the remedy at law for any breach or threatened breach by a party may, by its nature, be inadequate, and that in addition to damages, the other parties will be entitled to a restraining order, temporary and permanent injunctive relief, specific performance, and other appropriate equitable relief, without showing or proving that any monetary damage has been sustained.
- p. Venue. Any action or proceeding seeking to enforce any provision of this Agreement or based on any right arising out of this Agreement must be brought against any of the parties in Lake County Circuit Court of the State of Oregon or, subject to applicable jurisdictional requirements, in the United States District Court for the District of Oregon, and each of the parties consents to the jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to such venue.
- q. Exhibits. The exhibits referenced in this Agreement are part of this Agreement as if fully set forth in this Agreement.
- r. Severability. If any provision of this Agreement is deemed to be invalid or unenforceable in any respect for any reason, the validity and enforceability of such provision in any other respect and of the remaining provisions of this Agreement will not be impaired in any way.
- s. Entire Agreement. This Agreement (including the documents and instruments referred to in this Agreement) constitutes the entire agreement and understanding of the parties with respect to the subject matter of this Agreement and supersedes all prior understandings and agreements, whether written or oral, among the parties with respect to such subject matter.

By their signatures below, the parties agree to this Mitigation Implementation Agreement as of the date of the last signature below (the "Effective Date").

LANDOWNER:

O'Leary Lands LLC

By:



Thomas O'Leary

Date:

12/12/2019

FR/SL SWCD

By:



Justin Ferrell, District Manager (PI)

Date:

12/1/19

MITIGATION IMPLEMENTATION AGREEMENT

This MITIGATION IMPLEMENTATION AGREEMENT is made this 7 day of December, 2019, by and between Fort Rock/Silver Lake Soil & Water Conservation District, (a municipal subdivision of government), hereinafter called **FR/SL SWCD** and Lance and Carrie Brown (herein referred to as "Landowner").

RECITALS

WHEREAS, FR/SL SWCD desires to act as funds manager for NewSun Energy in order to implement mitigation as required under Lake County Conditional Use Permits (17-062 CUP and 18-020 CUP) and identified in their mitigation plan (**Exhibit 1**) on property owned by the landowner; and

WHEREAS, the Landowner desires to have the benefit to rangeland health and grazing management delivered through implementation of the activities outlined in the mitigation plan (**Exhibit 1**).

NOW THEREFORE, the parties agree as follows:

Section 1. FR/SL SWCD will:

- a. Act as funds manager to implement the activities identified in **Exhibit 1**.
- b. Fosters Natural Resource Contracting to work with the Landowner and SWCD to implement mitigation activities, acting as a project manager for NewSun, ensuring mitigation is done as desired by ODFW to meet all permit requirements.

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- a. Allow access for the project manager and juniper cutting or weed control contractors to cut juniper on 309.6 acres of the Bridge Creek Ranch; as described in **Exhibit 1**.
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- a.) That juniper cutting activities will take multiple years to complete however all activities identified in **Exhibit 1** will be completed by December of 2024.

- b.) With the exception of juniper treatment nothing in this agreement effects the Landowner's management of their property.
- c.) The Landowner will be notified every time FR/SL SWCD employees or their contractors want access to the property.
- d.) That funding to execute this agreement is coming from NewSun Energy to meet their required mitigation for solar development. This agreement becomes null and void should the agreement between FR/SL SWCD and New Sun be terminated and that only NewSun mitigation funds will pay for the work identified in **Exhibit 1**. The parties will not be responsible for completing the work identified in **Exhibit 1** if the mitigation funds from NewSun should be withdrawn or for any reason beyond the parties control become inadequate to complete the work.

Section 4. Other Terms.

- a. Binding Effect. This Agreement is binding on and inures to the benefit of the parties and their respective heirs, personal representatives, successors, and permitted assigns.
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- c. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended or may be construed to confer on any person, other than the parties to this Agreement, any right, remedy, or claim under or with respect to this Agreement.
- d. Notices. All notices and other communications under this Agreement must be in writing and will be deemed to have been given if delivered personally, sent by facsimile (with confirmation), mailed by certified mail, or delivered by an overnight delivery service (with confirmation) to the parties at the following addresses or facsimile numbers (or at such other address or facsimile number as a party may designate by like notice to the other parties):

To Lance and Carrie Brown:
Post Office Box 100
Silver Lake, Oregon 97638

To Designee of Funds:
Fort Rock/Silver Lake Soil and Water Conservation District
(FR/SL SWCD)
Justin Ferrell, District Manager (PI)
17612 Highway 395
Lakeview, OR 97630

Any notice or other communication will be deemed to be given (a) on the date of personal delivery, (b) at the expiration of the 5th day after the date of deposit in the United States mail, or (c) on the date of confirmed delivery by facsimile or overnight delivery service.

- e. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties, which writing must refer to this Agreement.
- f. Construction. The captions used in this Agreement are provided for convenience only and will not affect the meaning or interpretation of any provision of this Agreement. All references in this Agreement to "Section" or "Sections" without additional identification refer to the Section or Sections of this Agreement. All words used in this Agreement will be construed to be of such gender or number as the circumstances require. Whenever the words "include" or "including" are used in this Agreement, they will be deemed to be followed by the words "without limitation."
- g. Counterparts. This Agreement may be executed in counterparts, each of which will be considered an original and all of which together will constitute one and the same agreement.
- h. Electronic Signatures. Electronic transmission of any signed original document, and retransmission of any signed facsimile or electronic transmission, will be the same as delivery of an original. At the request of any party, the parties will confirm electronically transmitted signatures by signing an original document.
- i. Further Assurances. Each party agrees to execute and deliver such other documents and to do and perform such other acts and things as any other party may reasonably request to carry out the intent and accomplish the purposes of this Agreement.
- j. Time of Essence. Time is of the essence with respect to all dates and time periods set forth or referred to in this Agreement.
- k. Expenses. Except as otherwise expressly provided in this Agreement, each party to this Agreement will bear its own expenses in connection with the preparation, execution, and performance of this Agreement and the transactions contemplated by this Agreement.
- l. Waiver. Any provision or condition of this Agreement may be waived at any time, in writing, by the party entitled to the benefit of such provision or condition. Waiver of any breach of any provision will not be a waiver of any succeeding breach of the provision or a waiver of the provision itself or any other provision.
- m. Governing Law. This Agreement will be governed by and construed in accordance with the laws of the state of Oregon, without regard to conflict-of-laws principles.

- n. Attorney Fees. If any arbitration, suit, or action is instituted to interpret or enforce the provisions of this Agreement, to rescind this Agreement, or otherwise with respect to the subject matter of this Agreement, each party will be responsible for their own attorney fees.
- o. Injunctive and Other Equitable Relief. The parties agree that the remedy at law for any breach or threatened breach by a party may, by its nature, be inadequate, and that in addition to damages, the other parties will be entitled to a restraining order, temporary and permanent injunctive relief, specific performance, and other appropriate equitable relief, without showing or proving that any monetary damage has been sustained.
- p. Venue. Any action or proceeding seeking to enforce any provision of this Agreement or based on any right arising out of this Agreement must be brought against any of the parties in Lake County Circuit Court of the State of Oregon or, subject to applicable jurisdictional requirements, in the United States District Court for the District of Oregon, and each of the parties consents to the jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to such venue.
- q. Exhibits. The exhibits referenced in this Agreement are part of this Agreement as if fully set forth in this Agreement.
- r. Severability. If any provision of this Agreement is deemed to be invalid or unenforceable in any respect for any reason, the validity and enforceability of such provision in any other respect and of the remaining provisions of this Agreement will not be impaired in any way.
- s. Entire Agreement. This Agreement (including the documents and instruments referred to in this Agreement) constitutes the entire agreement and understanding of the parties with respect to the subject matter of this Agreement and supersedes all prior understandings and agreements, whether written or oral, among the parties with respect to such subject matter.

By their signatures below, the parties agree to this Mitigation Implementation Agreement as of the date of the last signature below (the "Effective Date").

LANDOWNER:

O'Leary Lands LLC

By: 

Lance Brown

Date: Dec 11, 2019

FR/SL SWCD

By: 

Justin Ferrell, District Manager (PI)

Date: 12/2/19

Re: Letter Request: Crook County Mitigation Projects

From: **Mary Foster** | fostersnrc@gmail.com

Friday, Jun 10, 10:33 AM

To: **Paul Stern** | pstern@newsunenergy.net

To whom it may concern,

Foster's Natural Resource Contracting has 6 years experience assisting solar development companies with wildlife surveys, habitat assessments and development of wildlife mitigation plans. Most of our solar experience has been for NewSun Energy on three different solar developments in Lake County.

We are willing to work with NewSun on habitat mitigation projects, including juniper mitigation, in Crook County.

Mary Foster
Fosters Natural Resource Contracting
541-219-0252

Sent from my iPad

Exhibit __: Fencing for Habitat Restoration

Fencing is a commonly used management technique in habitat restoration projects. For example, recent restoration projects in Malheur NF included building fences around springs that have been degraded by livestock grazing. <https://onda.org/event/malheur-springs-project/>

Fences have also been installed to manage livestock grazing and limit browsing on the newly planted vegetation. <https://onda.org/east-fork-beech-creek-fence-repair-may-15-18/>

Corridor fencing to exclude livestock grazing along Interior Columbia Basin streams is a widely used approach to restore salmonids and their habitats.¹ The researchers found:

- “Grazing exclosures are a simple, holistic, and effective restoration strategy. Changes in vegetation composition structure as well as geomorphic features suggest that livestock exclusion succeeds in restoring many important components of productive wildlife and fish habitats. A significant increase in young of the year salmonid density was evident across exclosures but a difference was not detectable for larger fish whose home ranges greatly exceeded exclosure lengths of this study.
- We found significant differences in the cover, composition and structure of vegetation in all grazed/exclosed reaches. In the majority of exclosed reaches there were increases in the cover of forbs, shrubs, and sedges. Exposed bare ground was more extensive in grazed reaches.
- Wetland indicator scores, based upon streamside vegetation composition, indicate that cessation of livestock grazing results in a shift to more mesic wetland riparian vegetation.”



(Cover and this Figure are the Middle Fork John Day River at Phipps meadow in grazed (cover) and exclosed reaches (above).

Exhibit _

**Historical Range of ODFW Habitat Mitigation Recommendations for
Solar PV Projects**

Historically ODFW has recommended, and counties have approved, a wide range of habitat mitigation options for solar projects on comparable habitat as this project. The table below shows this range of mitigation recommendations for recently approved solar projects in Crook county, as well as for some of the Applicant's affiliate projects in Lake and Harney County. As can be seen from the table, these recommendations have ranged from no mitigation, to mitigation with no durability, to 3 to 1 ratios.

County	Project	Year (CUP Approval)	Acres	Habitat Category	Mitigation Ratio	Mitigation Type	Durability	Stie specified at time of CUP Approval	Binding Agreement at CUP Approval
Crook									
	Gala	2015	< 320	2	2:1	PTP	Y	Y	N
	Ponderosa	2016	< 320	2	2:1	PTP	Y	N	N
	Empire	2017	<320	2	2:1/1.3:1	PTP*/Juniper Mit	Y	N	N
	Tango	2017	< 320	2, 3	1.5:1	PTP	Y	N	N
	Millican	2020	400	2, 3	1.5:1/2:1	PTP	Y	Y	N
	Crook Flat	2020	< 320	2	1.5:1	PTP/Juniper Mit	Y	N	N
	West Prineville	2020	654	4	1:1	PTP/Juniper Mit	Y	N	N
Lake									
	Ft. Rock North	2017	< 320	2	3:1	PTP	N	N	N
	Ft. Rock South	2018	< 320	3	1:1	PTP	N	N	N
	Webster Road	2019	< 320	2	1.3:1	PTP/Juniper Mit/Other	Y	N	N
Harney									
	Riley I	2018	< 320	2	2:1	PTP	N	N	N
	Starvation Ridge	2017	< 320	2**	0	Not Required	N	NA	NA
* PTP (Payment to Provide, aka one-time fee-in-lieu payment)									
** Starvation Ridge is within county mapped big game winter range, however ODFW determined that it's proximity to disturbance limits the value of this parcel as wildlife habitat.									

As such, the proposed mitigation ratios proposed in the Wildlife Mitigation Plan are well within that historical range of ODFW recommendations.

Furthermore, the Applicant's affiliates have successfully completed, with ODFW concurrence and participation, three mitigation projects based on ODFW's recommendations. Correspondence from ODFW regarding the Ft. Rock North and Ft. Rock South Solar projects is attached below affirming that the Applicant's affiliate had *".... gone to significant lengths to ensure not only compliance with the letter of your permits (above and beyond the letter of your permits in reality) ..."*



Andrew McMahan <amcmahan@newsunenergy.net>

Mitigation Plan formal Acceptance

Jonathan Muir <Jonathan.D.Muir@state.or.us>

Tue, Nov 12, 2019 at 4:46 PM

To: Christoph Heinzer <cheinzer@develosol.com>, Darwin Johnson <djohnson@co.lake.or.us>

Cc: Mary Foster <fostersnrc@gmail.com>, Drew McMahan <amcmahan@newsunenergy.net>, justin ferrell <lakecountyswcd@hotmail.com>

Sorry for the delay Christoph. I've been out of town and trying to dig out from that absence for the past several days. I got your voicemail this morning as well as the email below. Thanks for your diligence in making sure I saw your request.

As noted in your email below, I have been in contact with Fosters Natural Resource Consulting and have reviewed the mitigation plan developed for these projects. I agree that the plan you've put together is satisfactory and sufficient to meet the goals of mitigation for this project, as well as ensuring you have complied with all conditions of your Conditional Use Permit. Assuming completed contracts as described below, I affirm that ODFW is satisfied with your mitigation plan and measures.

I'd like to note that you, Christoph, have in my opinion gone to significant lengths to ensure not only compliance with the letter of your permits (above and beyond the letter of your permits in reality), but maybe more importantly, have developed a plan here that really does aim to achieve some positive outcomes for the wintering wildlife being impacted by the development of your projects. That's not been a common theme in my experience with regards to commercial developments on winter range. Thank you for sticking with this and making sure it was worth the time and energy invested.

Best.

Jon Muir
District Wildlife Biologist
Oregon Dept. of Fish and Wildlife
18560 Roberta Rd.
Lakeview, OR 97630
(541) 947-2950

-----Original Message-----

From: Christoph Heinzer <cheinzer@develosol.com>

Sent: Friday, November 1, 2019 7:19 AM

To: Jonathan Muir <jonathan.d.muir@state.or.us>; Darwin Johnson <djohnson@co.lake.or.us>

Cc: Mary Foster <fostersnrc@gmail.com>; Drew McMahan <amcmahan@newsunenergy.net>; justin ferrell <lakecountyswcd@hotmail.com>

Subject: Mitigation Plan formal Acceptance

Jon and Darwin,

As you both already know, over the past several years we have been working diligently on our projects in Lake County, and one of the conditions of our permits was Juniper mitigation related to the projects sited on Kruse and Hufford land.

Over the past several months we have worked with Fosters Natural Resources Contracting to identify an appropriate site, develop a mitigation plan, and have kept the Oregon Department of Fish and Wildlife in the loop along the way to insure that all conditions of the permit are met.

We have now received approval from the Lake County Soil and Water Conservation District (SWCD) to administer the funds to complete the mitigation process, and are in the final edits of that contract as well as the contract with the landowners where the mitigation work will occur. An approved mitigation plan has been included with that approval, and I can provide that final mitigation plan should you not already have it.

Before we finalize everything, I would like written confirmation from both of you (email is fine) stating that you agree that once those documents are signed and the agreement is funded, the Lake County SWCD is authorized to distribute those funds to the landowner and Fosters Natural Resources Contracting can supervise the work to insure it is done per plan.

Our investors are looking for this confirmation in order to fund this work and feel comfortable that ALL conditions of the