

Exhibit C – Wildlife and Sensitive Plant Assessment

Wildlife and Federal Sensitive Plant Review

TSR North Solar Farm
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June 2020
PBS Project No. 80812.017



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INTRODUCTION

PBS Engineering and Environmental, Inc. (PBS) was contracted by TSR North Solar Farm LLC to conduct a wildlife resources review for the proposed TSR North Solar Farm (study area). The 596.5-acre study area is located approximately 3.3 miles southwest of the Prineville city center and approximately 4.5 miles northeast of Powell Butte, Oregon (Appendix A, Figure 1). Based on the Crook County zoning map, the study area is within the Exclusive Farm Use 3 (EFU 3) zone (Crook County 2008). Surrounding lands consist of juniper (*Juniperus occidentalis*) dominated uplands and rangeland. The study area is identified as tax lot 1223 on Crook County Assessor's map 15S 15E, Township 15 South, Range 15 East, Sections 14, 15, and 22 W.M. (ORMAP 2020).

DATABASE QUERIES

Oregon Conservation Strategy

The Oregon Conservation Strategy consists of several components, three of which - Ecoregions, Strategy Habitats, and Strategy Species - were drawn upon to inform this report (ODFW 2016a). The Centralized Oregon Mapping Products and Analysis Support System (COMPASS) geographic information system was used to obtain project-level reporting (Table 1) of Conservation Strategy components (ODFW 2020a).

Table 1. COMPASS Report Results

Ecoregion: Blue Mountains	
Strategy Habitats: Grasslands, Sagebrush Habitats	
Strategy Species:	
Birds	Western Bluebird (<i>Sialia mexicana</i>)
American White Pelican (<i>Pelecanus erythrorhynchos</i>)	Western Burrowing Owl (<i>Athene cunicularia hypugaea</i>)
Bell's Sparrow (<i>Artemisiospiza belli</i>)	Western Meadowlark (<i>Sturnella neglecta</i>)
Brewer's Sparrow (<i>Spizella breweri</i>)	Yellow-breasted Chat (<i>Icteria virens</i>)
Chipping Sparrow (<i>Spizella passerina</i>)	
Common Nighthawk (<i>Chordeiles minor</i>)	Amphibians/Reptiles
Ferruginous Hawk (<i>Buteo regalis</i>)	Columbia Spotted Frog (<i>Rana luteiventris</i>)
Franklin's Gull (<i>Leucophaeus pipixcan</i>)	Northern Sagebrush Lizard (<i>Sceloporus graciosus graciosus</i>)
Harlequin Duck (<i>Histrionicus histrionicus</i>)	Western Toad (<i>Anaxyrus boreas</i>)
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Western Rattlesnake (<i>Crotalus atrox</i>)
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	
Long-billed Curlew (<i>Numenius americanus</i>)	Mammals
Northern Goshawk (<i>Accipiter gentilis</i>)	California Myotis (<i>Myotis californicus</i>)
Olive-sided Flycatcher (<i>Contopus cooperi</i>)	Hoary Bat (<i>Lasiurus cinereus</i>)
Oregon Vesper Sparrow (<i>Pooecetes gramineus affinis</i>)	Long-legged Myotis (<i>Myotis volans</i>)
Pileated Woodpecker (<i>Hylatomus pileatus</i>)	Pallid Bat (<i>Antrozous pallidus</i>)
Red-necked Grebe (<i>Podiceps grisegena</i>)	Pygmy Rabbit (<i>Brachylagus idahoensis</i>)
Short-eared Owl (<i>Asio flammeus</i>)	Silver-haired Bat (<i>Lasionycteris noctivagans</i>)
Snowy Egret (<i>Egretta thula</i>)	Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)
Swainson's Hawk (<i>Buteo swainsoni</i>)	Western Gray Squirrel (<i>Sciurus griseus</i>)
Trumpeter Swan (<i>Cygnus buccinator</i>)	

In addition to Strategy species, the COMPASS maps depict winter range habitat for the big game species deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*) in eastern Oregon (ODFW 2016a). The study area is not in the ODFW deer or elk winter range.

Crook County GIS

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 deer or elk general range. However, a portion of the study area is mapped within the Crook County pronghorn range.

USFWS Information, Planning, and Conservation System (IPaC)

The U.S. Fish and Wildlife Service (USFWS) IPaC system was reviewed to identify the potential presence of wildlife species listed as federally endangered, threatened, or candidate species under the federal Endangered Species Act (ESA) of 1973. The report (Appendix B) indicates that the only listed species expected to occur at this location is the gray wolf (*Canis lupus*) (USFWS 2020a). Gray wolf designated critical habitat does not occur within the study area and according to ODFW there are no known or estimated wolf use areas in the vicinity of the study area (ODFW 2018). Therefore, it is PBS' opinion that the project will have no effect on the gray wolf. The IPaC report is included in Appendix B of this memo.

In addition to endangered, threatened, or candidate species, the IPaC report also lists birds protected under the Migratory Bird Treaty Act of 1918, the Bald and Golden Eagle Protection Act of 1940, and/or birds listed on the USFWS Birds of Conservation Concern (BCC) list, which identifies bird species that are high conservation priorities (USFWS 2015). These birds are listed under Table 2 below:

Table 2. IPaC Migratory Birds

Bird Species	
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Long-billed Curlew (<i>Numenius americanus</i>)
Brewer's Sparrow (<i>Spizella breweri</i>)	Olive-sided Flycatcher (<i>Contopus cooperi</i>)
Clark's Grebe (<i>Aechmophorus clarkii</i>)	Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>)
Golden Eagle (<i>Aquila chrysaetos</i>)	Tricolored Blackbird (<i>Agelaius tricolor</i>)
Lesser Yellowlegs (<i>Tringa flavipes</i>)	Willet (<i>Tringa semipalmata</i>)

Oregon Biodiversity Information Center (ORBIC)

The Portland State University's Oregon Biodiversity Information Center (ORBIC) report was obtained to identify the potential presence of wildlife species with federal status. According to the ORBIC report, no species with federal status are expected to occur on the study area (PSU 2020).

USFWS Environmental Conservation Online System (ECOS) Species By County Report

The USFWS ECOS Species by County report was reviewed to identify the potential presence of wildlife species listed as federally endangered, threatened, or candidate species under the federal ESA of 1973 (USFWS 2020b). The report is included in Appendix B of this memo.

In addition to the gray wolf identified in the IPaC report, the USFWS Species by County report also lists the bull trout (*Salvelinus confluentus*). This species is reliant on cold streams, rivers, or lakes for survival, and none of these habitats occur within the study area (USFWS 2020c). Therefore, it is PBS' opinion that the project will have no effect on the bull trout.

Federal Sensitive Plants

The USFWS ECOS Species by County report, the ORBIC report, and the Oregon Department of Agriculture (ODA) Listed Plants by County table (ODA 2020) were reviewed to identify the potential presence of plant species listed as federally endangered, threatened, or candidate species under the federal ESA of 1973. No plant species were identified in these reports.

Fish and Wildlife Habitat Mitigation Policy

ODFW uses the Fish and Wildlife Habitat Mitigation Policy to guide its recommendations to permitting agencies for solar development projects. This policy is based on a category framework as defined in Table 3 (ODFW 2014, State of Oregon 2020).

Table 3. ODFW Habitat Categories

Habitat Category	ODFW Mitigation Strategy
"Habitat Category 1" is irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.	Avoidance
"Habitat Category 2" is essential 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.	In-kind, in-proximity mitigation
"Habitat Category 3" is essential habitat for fish and wildlife, or 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.	In-kind, in-proximity mitigation
"Habitat Category 4" is important habitat for fish and wildlife species.	In-kind or out-of-kind, in-proximity or off-proximity mitigation
"Habitat Category 5" is habitat for fish and wildlife having high potential to become either essential or important habitat.	Actions that improve habitat conditions
"Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife.	Minimize direct habitat loss and avoid off-site impacts

SITE VISIT

PBS conducted site visits to the study area on March 24-25, 2020 to observe Strategy and other species present onsite. It should be noted that the field surveys were conducted in the spring, and species not observed may be present during other times of the year. The area was surveyed by walking linear transects while visually observing areas of the project area. Wildlife species were identified either by direct observation, call, scat, or tracks, and dense juniper stands were intensively searched for wildlife presence.

The study area consists of heavily grazed juniper uplands. Powerlines traverse the site from east to west, and from southwest to northeast. Highway 126 is located adjacent to the west of the study area, and the Por-Tay Northwest LLC Powell Butte Aggregate Pit property is located adjacent to the southeast. Active cattle grazing was observed on the majority of the site during the site visits. Photographs from the site visits are included in Appendix D.

Wildlife

No endangered, threatened, or Strategy wildlife species were observed on the study area during the site visits.

Migratory Birds

No ground nests or raptor nests were observed onsite during the site visit. The study area 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. The majority of the study area was used for cattle grazing at the time of the site visit, which may negatively impact ground nesting birds. Noise from construction and increased traffic may disturb ground-nesting birds, should they exist in the area. PBS recommends that construction take place outside the nesting season to avoid impacts active nest sites. If construction must take place during the nesting season, PBS recommends that a pre-construction survey be conducted between late spring through summer by a qualified biologist 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 should be left undisturbed and monitored until a qualified biologist determines that the nest is no longer occupied.

The Migratory Bird Treaty Act (MBTA) is the primary law protecting migratory birds in the United States (USFWS 2017). The MBTA prohibits the taking, possession, and commerce of migratory birds including their body parts, feathers, nests, or eggs (USFWS 2017). The MBTA defines "take" as to pursue or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect migratory birds, their nests, or their eggs. The US Department of the Interior M-Opinion 37050 states that the MBTA does not prohibit the incidental or unintentional take of migratory birds or their nest contents (US Department of Interior 2017). Given that the proposed project does not include "direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control," the project should not result in take under the MBTA.

Big Game Habitat

The study area does not provide optimal habitat for pronghorn. Pronghorn prefer a low density of trees in order to visually observe and run from predators; typically less than two trees per acre (Yoakum et al. 2014). Ideally, trees and tall shrubs over 2.5 feet tall should comprise less than 5% of the total cover, and an average vegetation structure of approximately 15 to 24 inches is preferred by pronghorn (Kindschy et al. 1982,

Yoakum et al. 2014). During the PBS site visit, greater than 70% of the study area consisted of trees and tall shrubs over 2.5 feet tall. Areas dominated by big sagebrush (*Artemisia tridentata*) are considered marginal pronghorn habitat, due to the height these plants can grow (Kindschy et al. 1982). Due to the forested nature of the study area and the prevalence of big sagebrush, the study area does not appear to be optimal pronghorn habitat.

Elk prefer edge habitats, bedding in areas of high canopy cover (75-100%) for thermal and hiding cover, and typically foraging in areas of low canopy cover (0-25%) (ODFW 2003, Innes 2011). Edge habitats provide a higher diversity and greater quantity of forage plants than do either of the adjacent communities individually (Innes 2011). Additionally, elk prefer habitat within 800 meters of water (Innes 2011). The study area does not contain much edge habitat, and the closest permanent water source is the Crooked River, located approximately 3,300 meters to the east. Due to the homogenous nature of the study area and its distance from water, the study area does not appear to be optimal elk habitat.

Mule deer require forage, particularly grasses, forbs, and shrubs, that is nutritious year-round, which typically requires several plant communities throughout the year (Innes 2013). Diversity of habitats in close proximity is important in mule deer habitat selection. Similar to elk, mule deer prefer edge habitats, bedding in areas of high canopy cover for thermal and hiding cover, and typically foraging in open areas (Leckenby et al. 1982, Innes 2013). Due to the homogenous nature of the study area, the study area does not appear to be optimal deer habitat.

Heavy livestock grazing, as evident on the study area, 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, Highway 126 is adjacent to the west of the study area, the Prineville Airport is approximately 0.25 miles north of the study area, and the aggregate mining operation is adjacent to the southeast. 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).

ODFW Communication

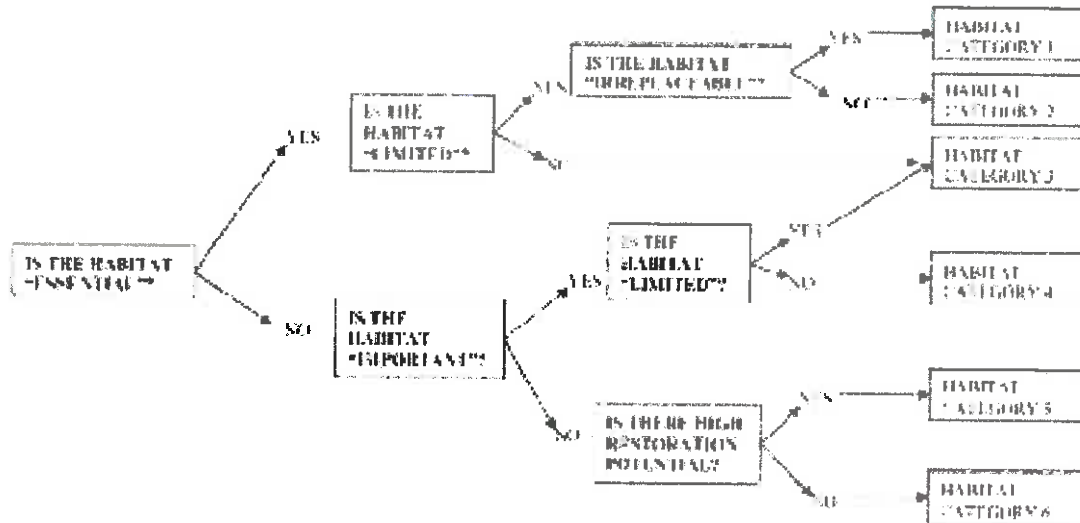
PBS contacted ODFW district wildlife biologist Sara Gregory for opinions about the proposed project's effect on sensitive wildlife in the area. On April 2, 2020 (Gregory, personal communication), Ms. Gregory provided three documents (attached in Appendix C):

1. ODFW's Proposed Changes to the Crook County Comprehensive Plan for Antelope Winter Range, 2011 dated May 2, 2011 (ODFW 2011).
2. ODFW Map Process SN 12 13 12 letter regarding the Goal 5 Big Game Habitat Update (ODFW 2012a)
3. ODFW's Proposed Pronghorn Winter Range Maps for Crook County dated September 20, 2012 (ODFW 2012b).

These documents appear to be part of a deliberative process to reevaluate the big game overlays in Crook County. The ODFW Map Process SN 12 13 12 letter contains the following statement "The final Goal 5 product proposes to designate the western portion of Crook County as 'impacted area,' and to reduce habitat protections in recognition of the degraded habitat in the impacted area. It also recommends removal of Goal 5 big game protections from EFU 3 due to the significant amount of development already in the area." On April 3, 2020 (Gregory, personal communication), Ms. Gregory indicated that the recommendations contained in the letter were never formally adopted; therefore, the historical framework is still in place.

Fish and Wildlife Habitat Mitigation Policy Habitat Categories

ODFW uses the Fish and Wildlife Habitat Mitigation Policy to guide its recommendations to permitting agencies for solar development projects. Designating fish or wildlife habitats into the appropriate Habitat Category involves selecting 'yes' or 'no' in a sequence of questions to determine habitat function and value, based on the following flow chart (ODFW 2020b):



Based on PBS field observations during the site visit, the Habitat Category for the study area for big game was determined as follows:

Step 1: Is the habitat "essential?" No.

Essential habitat is defined as any habitat condition or set of habitat conditions which, if diminished in quality or quantity, would result in depletion of a fish or wildlife species (State of Oregon 2020). Habitat quality is the relative importance of a habitat with regard to its ability to influence species presence and support the life-cycle requirements of the fish and wildlife species that use it (State of Oregon 2020). The study area does not provide any essential, irreplaceable habitat for big game. The reduction of habitat quality or quantity of the study area would not likely result in the reduction of big game species. It is not mapped as winter range for elk or deer, and as described earlier in the report, is not quality habitat for pronghorn.

Step 2: Is the habitat "important?" No.

Important habitat is defined as any habitat recognized as a contributor to sustaining fish and wildlife populations on a physiographic province basis over time (State of Oregon 2020). As the habitat has been grazed by cattle and is near human disturbed and developed land, the study area does not provide any natural features or processes that have been shown to sustain big game. Additionally, the type of habitat within the study area is not unique to the area, and similar conditions exist on surrounding lands.

Step 3: Is there high restoration potential? No.

High restoration potential exists when previous uses or activities that have reduced habitat value are able to be eliminated or severely reduced (ODFW 2020c). Restoration of the study area for big game would include changing the functional vegetation community and the discontinuance of cattle grazing and human activity in

the area. Due to the impacted nature of the study area and its setting of near urban areas and paved roads, the potential for restoring the habitat is low.

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 6" for big game. "Habitat Category 6" is defined as habitat that has low potential to become essential or important habitat for fish and wildlife with no irreplaceable habitats present. In practice, this means that Habitat Category 6 habitat impacts that may occur as a result of the project can be mitigated according to ODFW's mitigation strategy described above in the "Fish and Wildlife Habitat Mitigation Policy" section of this report.

CONCLUSIONS

PBS concludes that the study area is impacted by historical and ongoing human activities which agrees with the "impacted area" mapping that was supplied by ODFW. Because the map revisions were never adopted, ODFW's policy is to assign areas within big game overlays as Habitat Category 2. The rationale for this 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. It would appear that some flexibility is 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.

PBS QUALIFICATIONS

Holly Burnett is a Staff Scientist employed at PBS since 2016. Holly completed a Bachelor of Science degree in Biology with concentrations in Ecology and Zoology from Towson University in 2011 and completed a Master of Science degree in Biology with a concentration in Wildlife Biology from Ball State University in 2014. Holly's graduate thesis focused on bat habitat assessments amidst different silviculture methods in an experimental forest ecosystem, and she was a Naturalist with the Maryland Department of Natural Resources following graduate school. Holly has conducted numerous wildlife and raptor surveys and reports for solar development companies during her time at PBS. Holly has also attended professional continued education courses including the Biological Assessment Writing Workshop and Certified Sediment and Erosion Control Lead Workshop.

Since 2014, Greg Swenson has been a Senior Scientist responsible for managing PBS' Natural Resources discipline. Greg completed a Bachelor of Science degree in Forest Resources from the University of Georgia in 1998 and obtained Professional Wetland Scientist certification in 2007. His technical proficiencies include a strong understanding of the regulatory requirements under the federal Clean Water Act, federal Endangered Species Act, National Environmental Policy Act, and Oregon Statewide Planning Goals. Greg has completed numerous sensitive plant and animal studies in Oregon pursuant to ODFW requirements.

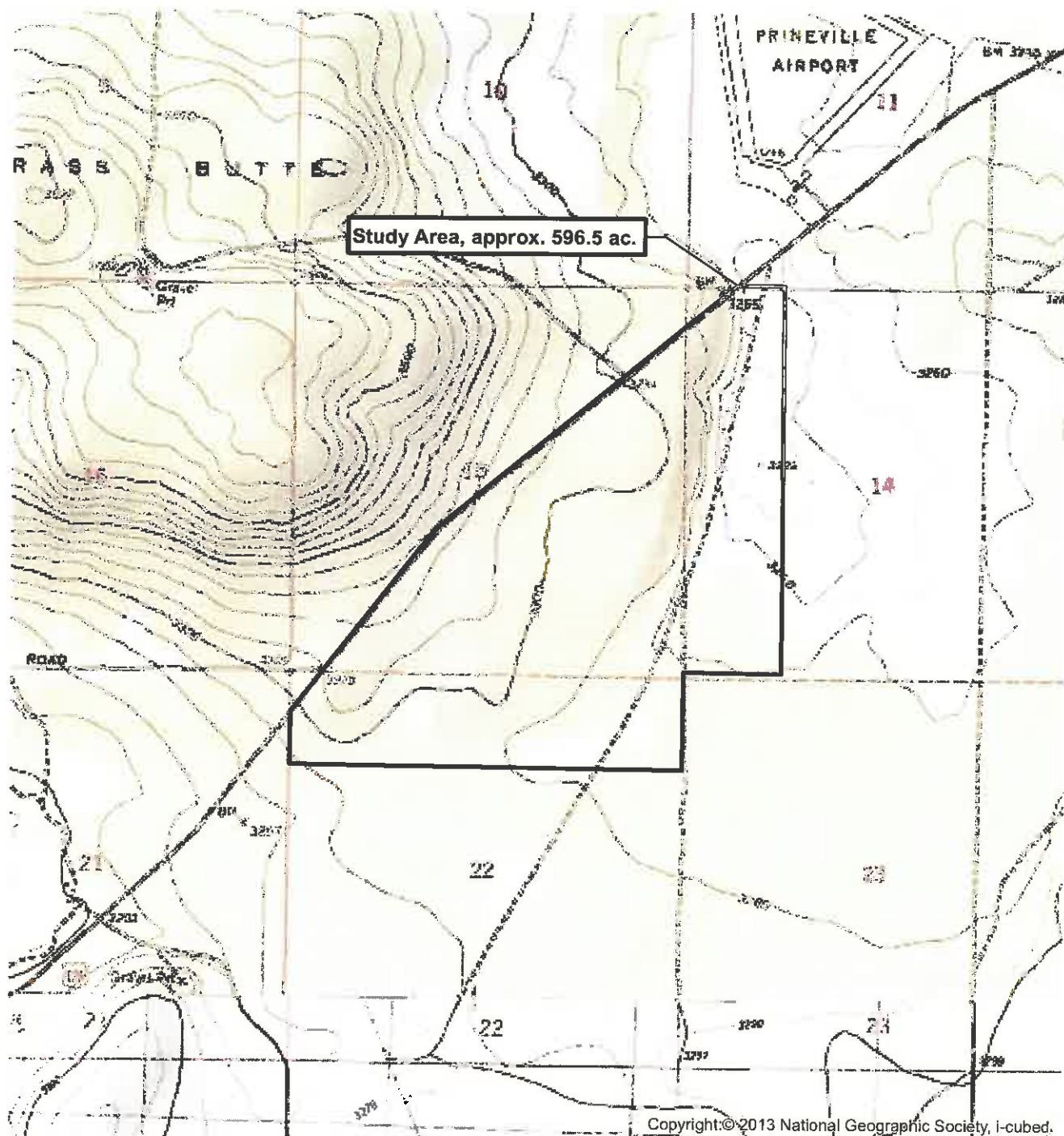
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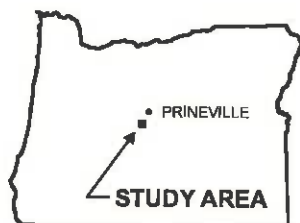
APPENDIX A

Figures



Copyright:© 2013 National Geographic Society, I-cubed.

SOURCE: USGS HOUSTON LAKES, OR (1962) 7.5 MINUTE QUADRANGLE.



OREGON



SCALE: 1" = 2,000'



PREPARED FOR: TSR NORTH SOLAR FARM LLC.



LOCATION MAP
TSR NORTH SOLAR FARM
PRINEVILLE, CROOK COUNTY, OREGON

JUN 2020
80812.017

FIGURE

1

APPENDIX B

**IPaC Resource List
USFWS ECOS Species by County Report**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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<https://www.fws.gov/oregonfwo/articles.cfm?id=149489416>



In Reply Refer To:

June 03, 2020

Consultation Code: 01EOFW00-2020-SLI-0278

Event Code: 01EOFW00-2020-E-00843

Project Name: TSR North Solar Site

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact the Endangered Species Division at the Service's Oregon Fish and Wildlife Office at (503) 231-6179. For information regarding listed marine and anadromous species under the jurisdiction of NOAA Fisheries Service, please see their website (http://www.nwr.noaa.gov/habitat/habitat_conservation_in_the_nw/habitat_conservation_in_the_nw.html).

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
(503) 231-6179

Project Summary

Consultation Code: 01EOFW00-2020-SLI-0278

Event Code: 01EOFW00-2020-E-00843

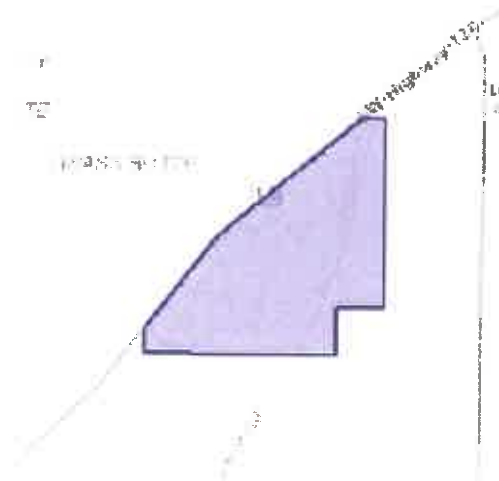
Project Name: TSR North Solar Site

Project Type: POWER GENERATION

Project Description: Crook County, OR. Future solar farm development.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/44.26735087150004N120.91090336480528W>



Counties: Crook, OR

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

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

Critical habitats

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

IPaC resource list

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

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

Project information

NAME

TSR North Solar Site

LOCATION

Crook County, Oregon



DESCRIPTION

Crook

County, OR. Future solar farm development.

Local office

Oregon Fish And Wildlife Office

☎ (503) 231-6179

☎ (503) 231-6195

2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398

<https://www.fws.gov/oregonfwo/articles.cfm?id=149489416>

NOT FOR CONSULTATION

Endangered species

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

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

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

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

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

Mammals

NAME

STATUS

Gray Wolf *Canis lupus*

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4488>

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

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

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

available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Dec 1 to Aug 31

Brewer's Sparrow *Spizella breweri*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9291>

Breeds May 15 to Aug 10

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Dec 31

Golden Eagle *Aquila chrysaetos*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/1680>

Breeds Dec 1 to Aug 31

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Long-billed Curlew *Numenius americanus*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5511>

Olive-sided Flycatcher *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Pinyon Jay *Gymnorhinus cyanocephalus*

Breeds Feb 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9420>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Willet *Tringa semipalmata*

Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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



U.S. Fish & Wildlife Service

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[ECOS](#) / [Species Reports](#) / Species By County Report

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Crook, Oregon

CSV

Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Status
Fishes	Bull Trout (Salvelinus confluentus)	U.S.A., conterminous, lower 48 states	Threatened	Idaho Fish and Wildlife Office	Recovery Plan for the Coterminous United States Population of Bull Trout (Salvelinus confluentus)	Implementation Progress	Final
Mammals	Gray wolf (Canis lupus)	U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico.	Endangered	Assistant Regional Director- Ecological Services			

APPENDIX C

ODFW Email

ODFW Provided Documentation

Holly A. Burnett

From: Sara C Gregory <Sara.C.Gregory@state.or.us>
Sent: Friday, April 03, 2020 11:05 AM
To: Holly A. Burnett
Subject: RE: ODFW Opinion

Hi Holly,

It is my understanding that much of what was in those documents that I sent you for reference was not approved and finalized because Ordinance 259 did not go through. So we are still using the historical framework. I apologize for any confusion.

You will need to direct your questions to the County as they are the regulatory body that will be deciding on approval of your project(s).

Have a good weekend,
Sara



Sara Gregory

Wildlife Habitat Biologist
Oregon Department of Fish & Wildlife
61374 Parrell Road
Bend, Oregon 97702

Office: 541-388-6147

Cell: 541-797-3180

sara.c.gregory@state.or.us



**MAKE OREGON'S FIRST WILDLIFE PLATE A REALITY.
GET YOUR VOUCHER TODAY!**

From: Holly A. Burnett [mailto:Holly.Burnett@pbsusa.com]
Sent: Friday, April 03, 2020 9:55 AM
To: Sara C Gregory <Sara.C.Gregory@state.or.us>
Subject: RE: ODFW Opinion

Thank you very much.

In the word document letter in the attachments you sent me, from December 2012, it had said, "The final Goal 5 product proposes to designate the western portion of Crook County as "impacted area," and to reduce habitat protections in recognition of the degraded habitat in the impacted area. It also recommends removal of Goal 5 big game protections from EFU 3 due to the significant amount of development already in the area."

I saw on the Crook County Planning Zone maps that all of our study areas are within EFU 3, and within the "impacted area" on the "Proposed ODFW Pronghorn SN 9 20 2012" document. My question is: Did the 2012 recommendation to remove Goal 5 big game protections from EFU 3 zones go through? If so, what does that mean for areas within the EFU 3 zones/impacted area that are also in the ODFW/Crook County big game winter ranges?

Holly Burnett | 541-388-6147 | 541-797-3180 | holly.burnett@pbsusa.com | www.pbsusa.com

From: Sara C Gregory <Sara.C.Gregory@state.or.us>
Sent: Thursday, April 02, 2020 12:53 PM
To: Holly A. Burnett <Holly.Burnett@pbsusa.com>
Subject: RE: ODFW Opinion

Hi Holly,

If you have specific questions I can do my best to help. From your initial message on the 31st, it seems like you've done your due diligence to identify the species that will be impacted by these projects and should be mentioned in your report to the County.

Here is a link to our mitigation policy which will play into this process as well:
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=2989>

Best regards,
Sara



Sara Gregory
Wildlife Habitat Biologist
Oregon Department of Fish & Wildlife
61374 Parrell Road
Bend, Oregon 97702

Office: 541-388-6147
Cell: 541-797-3180
sara.c.gregory@state.or.us



From: Holly A. Burnett [<mailto:Holly.Burnett@pbsusa.com>]
Sent: Thursday, April 02, 2020 12:09 PM
To: Sara C Gregory <Sara.C.Gregory@state.or.us>
Subject: RE: ODFW Opinion

Thank you very much, those documents were helpful.
About the proposed sites themselves, do you have any comments or opinions about the proposed projects' effects on the sensitive wildlife and big game in the area? Thanks again,

Holly Burnett | Staff Scientist | 541-388-6147 | holly.burnett@pbsusa.com

From: Sara C Gregory <Sara.C.Gregory@state.or.us>
Sent: Thursday, April 02, 2020 11:50 AM
To: Holly A. Burnett <Holly.Burnett@pbsusa.com>
Subject: RE: ODFW Opinion

Hi Holly,

I've attached some documents to give you some perspective on the antelope layers.

We look forward to seeing your wildlife report.

Sara



Sara Gregory
Wildlife Habitat Biologist
Oregon Department of Fish & Wildlife
61374 Parrell Road
Bend, Oregon 97702

Office: 541-388-6147
Cell: 541-797-3180
sara.c.gregory@state.or.us



From: Holly A. Burnett [<mailto:Holly.Burnett@pbsusa.com>]
Sent: Wednesday, April 01, 2020 4:18 PM
To: Sara C Gregory <Sara.C.Gregory@state.or.us>
Subject: RE: ODFW Opinion

Hi Sara,

I was wondering when you think you will get a chance to look at these solar farm projects?

Also, we referenced some data from the Crook County GIS antelope range (<https://data-crookcounty.opendata.arcgis.com/datasets/antelope-range?geometry=-121.909%2C43.758%2C-118.335%2C44.448>). Crook County said in an email that they believe they got their data from ODFW. Do you know how these boundaries were drawn for their antelope range? Thank you.

Holly Burnett | Staff Scientist | 541-388-6147 | holly.burnett@pbsusa.com

From: Holly A. Burnett
Sent: Tuesday, March 31, 2020 1:21 PM



ODFW's Proposed Changes to the Crook County Comprehensive Plan for Antelope Winter Range, 2011

- No Change - 270,343 acres
- Proposed Deletion - 20,389 acres
- Proposed Addition - 28,902 acres

299,245 Total Acres recommended for Winter Range



ODFW GIS (mw), 05/02/2011
Source: Winter Range Data from the Crook County Comprehensive Plan

