

Wildlife and Federal Sensitive Plant Review

West Prineville Solar Farm
Prineville, Oregon 97754



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April 2020
PBS Project No. 80812.016



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INTRODUCTION

PBS Engineering and Environmental, Inc. (PBS) was contracted by West Prineville Solar Farm LLC to conduct a wildlife resources review for the proposed West Prineville Solar Farm (study area). The 653.5-acre study area is located approximately 6 miles southwest of the Prineville city center and approximately 3.5 miles east 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). The study area is identified as tax lots 2900 and 3000 on Crook County Assessor's map 15S 15E, Township 15 South, Range 15 East, Sections 28 and 33 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 2020).

Table 1. COMPASS Report Results

Ecoregion: Blue Mountains	
Strategy Habitats: Grasslands, Ponderosa Pine Woodlands, Flowing Water and Riparian Habitats, Sagebrush Habitats, Wetlands	
Strategy Species:	
Birds	White-headed Woodpecker (<i>Picoides albolarvatus</i>)
American White Pelican (<i>Pelecanus erythrorhynchos</i>)	Willow Flycatcher (<i>Empidonax traillii</i>)
Bell's Sparrow (<i>Artemisiospiza belli</i>)	Yellow-breasted Chat (<i>Icteria virens</i>)
Brewer's Sparrow (<i>Spizella breweri</i>)	
Chipping Sparrow (<i>Spizella passerina</i>)	Amphibians/Reptiles
Common Nighthawk (<i>Chordeiles minor</i>)	Northern Sagebrush Lizard (<i>Sceloporus graciosus graciosus</i>)
Ferruginous Hawk (<i>Buteo regalis</i>)	Western Toad (<i>Anaxyrus boreas</i>)
Flammulated Owl (<i>Psiloscops flammeolus</i>)	Western Rattlesnake (<i>Crotalus atrox</i>)
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Mammals
Long-billed Curlew (<i>Numenius americanus</i>)	California Myotis (<i>Myotis californicus</i>)
Oregon Vesper Sparrow (<i>Pooecetes gramineus affinis</i>)	Hoary Bat (<i>Lasiurus cinereus</i>)
Pileated Woodpecker (<i>Hylatomus pileatus</i>)	Long-legged Myotis (<i>Myotis volans</i>)
Short-eared Owl (<i>Asio flammeus</i>)	Pallid Bat (<i>Antrozous pallidus</i>)
Swainson's Hawk (<i>Buteo swainsoni</i>)	Pygmy Rabbit (<i>Brachylagus idahoensis</i>)
Western Bluebird (<i>Sialia mexicana</i>)	Silver-haired Bat (<i>Lasionycteris noctivagans</i>)
Western Burrowing Owl (<i>Athene cunicularia hypugaea</i>)	Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)
Western Meadowlark (<i>Sturnella neglecta</i>)	Western Gray Squirrel (<i>Sciurus griseus</i>)

In addition to Strategy species, COMPASS maps of 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 2012). The study area is not within the Crook County deer, elk, or pronghorn general 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>)	Olive-sided Flycatcher (<i>Contopus cooperi</i>)
Brewer's Sparrow (<i>Spizella breweri</i>)	Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>)
Clark's Grebe (<i>Aechmophorus clarkii</i>)	Sage Thrasher (<i>Oreoscoptes montanus</i>)
Golden Eagle (<i>Aquila chrysaetos</i>)	Tricolored Blackbird (<i>Agelaius tricolor</i>)
Lesser Yellowlegs (<i>Tringa flavipes</i>)	Willet (<i>Tringa semipalmata</i>)
Long-billed Curlew (<i>Numenius americanus</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 a site visit on March 26, 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 juniper uplands, agricultural fields, an area with offices and outbuildings where a septic effluent land treatment business occurs, and fields used for effluent spreading, alternating with cattle grazing. Steep juniper forested areas are present on the southwest and northeast of the study area. An area of port-a-potties, aboveground tanks, and heavy machinery was located on the southern portion of the study area, east of the office area. Large rock and soil piles were located south of this area. Surrounding lands are primarily agricultural, rangeland, and rural residential. Powerlines are aligned across the study area from north to south, and an electrical substation is present adjacent to the southeast of the study area. Evidence of cattle grazing onsite was observed during the March 26, 2020 site visit. Photographs from the site visit are included in Appendix D.

Wildlife

During the March 26, 2020 site visit, two species with ODFW Conservation Strategy modeled strategy wildlife habitat were observed onsite: the western meadowlark and the chipping sparrow. Additionally, a USFWS migratory bird protected under the Migratory Bird Treaty Act, the bald eagle, was observed flying overhead.

Strategy Species are defined as having small or declining populations, are at-risk, and/or are of management concern (ODFW 2016a). ODFW recommends reporting the species presence to ORBIC if the species has a listed status. The western meadowlark and chipping sparrow are not state or federally listed, so no reporting action is necessary for these species. Additionally, the western meadowlark and chipping sparrow are only listed as a strategy species for the Willamette Valley ecoregion, meaning this ecoregion represents the highest priorities for implementing conservation actions (ODFW 2016a). The study area is part of the Blue Mountains ecoregion.

Migratory Birds

No ground nests were observed onsite during the site visit. However, a red-tailed hawk nest located in dense juniper in the northeast part of the study area was observed. This nest was actively being guarded by a red-tailed hawk. 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 study area is reportedly used for cattle grazing, 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.

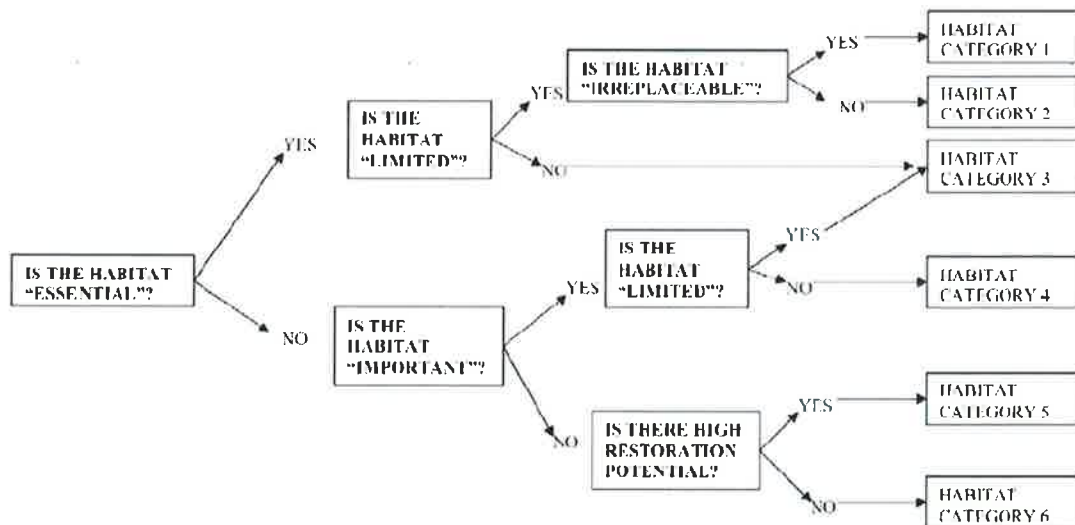
The Migratory Bird Treaty Act (MBTA) is the primary law protecting migratory birds in the United States (USFWS 2017). The MBTA prohibits the taking, possession, and commerce of migratory birds including their body parts, feathers, nests, or eggs (USFWS 2017). The MBTA defines "take" as to pursue or attempt 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

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). In addition to the high human and vehicle usage of the study area from the business onsite, Highway 126 is adjacent to the north of the study area, and the Prineville Airport is approximately 2.75 miles northeast 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).

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 any big game species, and as described earlier in the report, is not quality habitat for big game species.

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

Due to the determination of the study area to be within the "Habitat Category 6" ODFW habitat category, lack of threatened or endangered species onsite during the site visit, and the lack of mapped big game habitat, it appears that the proposed project will not adversely affect sensitive wildlife populations.

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.

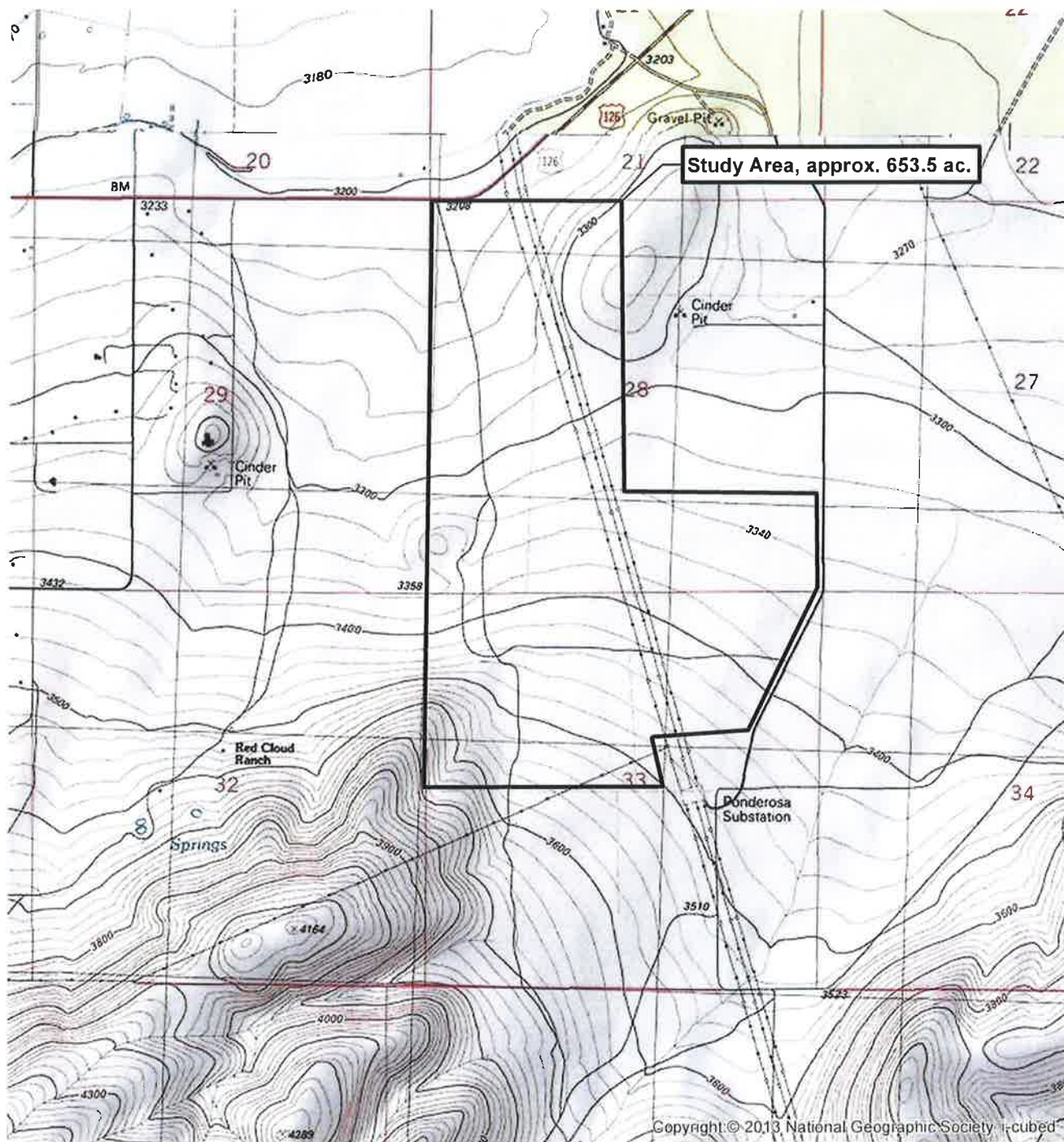
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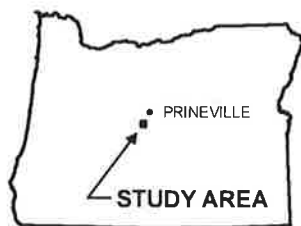
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APPENDIX A

Figures



SOURCE: USGS POWELL BUTTE, OR (1986, UPDATED 1988) 7.5 MINUTE QUADRANGLE.



OREGON



SCALE: 1" = 2,000'



PREPARED FOR: WEST PRINEVILLE SOLAR FARM LLC.



LOCATION MAP

WEST PRINEVILLE SOLAR FARM
PRINEVILLE, CROOK COUNTY, OREGON

APR 2020
80812.016

FIGURE

1

APPENDIX B

IPaC Resource List

USFWS ECOS Species by County Report



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
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Phone: (503) 231-6179 Fax: (503) 231-6195

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



In Reply Refer To:

March 06, 2020

Consultation Code: 01EOFW00-2020-SLI-0280

Event Code: 01EOFW00-2020-E-00531

Project Name: West Prineville Solar Site

Subject: 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-0280

Event Code: 01EOFW00-2020-E-00531

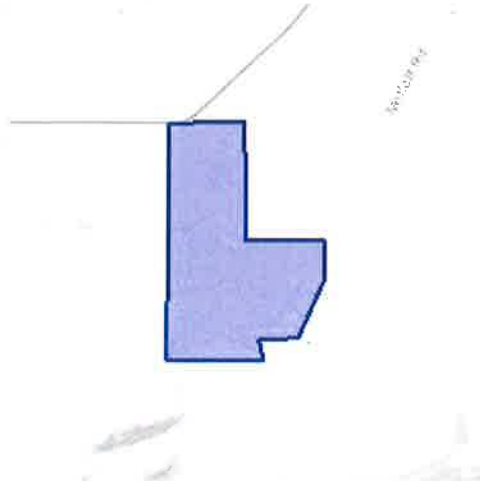
Project Name: West Prineville Solar Site

Project Type: POWER GENERATION

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

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/44.236560163000064N120.93751035578461W>



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 Information for Planning and Consultation **U.S. Fish & Wildlife Service**

Last login March 06, 2020 01:31 PM MST

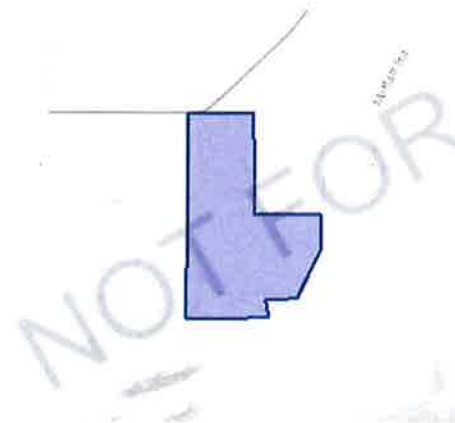
IPaC resource list

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.

Location

Crook County, Oregon



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>

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. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. 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*

Breeds Dec 1 to Aug 31

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>

Brewer's Sparrow *Spizella breweri*

Breeds May 15 to Aug 10

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>

Clark's Grebe *Aechmophorus clarkii*

Breeds Jan 1 to Dec 31

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

Golden Eagle *Aquila chrysaetos*

Breeds Dec 1 to Aug 31

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>

Lesser Yellowlegs *Tringa flavipes*

Breeds elsewhere

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

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

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>

Sage Thrasher *Oreoscoptes montanus*

Breeds Apr 15 to Aug 10

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/9433>

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.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ()

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

- The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (☀)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

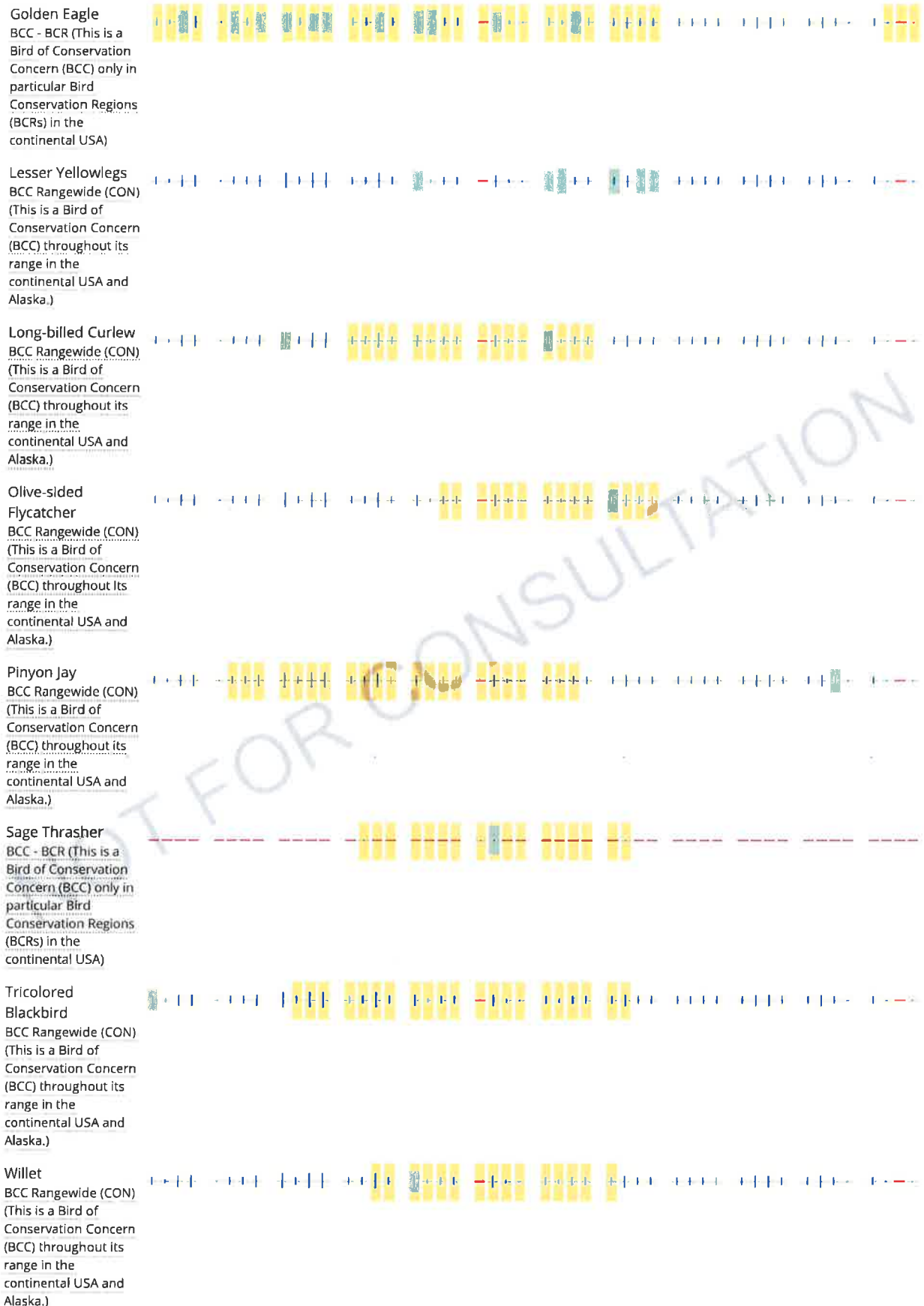
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





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

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

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](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view 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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Conserving the Nature of America

[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

Site Photographs



Photo 1. View of the office, on the south-central portion of the study area.



Photo 2. View of structures near the office, on the south-central portion of the study area.



Photo 3. View of the man-made pond, located northwest of the office structures.



Photo 4. View from west of the pond, along the western border of the study area, facing north.



Photo 5. View from the southwest corner of the study area, facing east.



Photo 6. View from the southern portion of the study area, facing northeast.



Photo 7. View from the southern portion of the study area, facing northwest by the powerlines.



Photo 8. View of the soil and rock piles on the southern portion of the study area.



Photo 9. View from the southeastern portion of the study area, facing south. The electrical substation on the south-adjacent property can be seen in the background.



Photo 10. View from the eastern border of the study area, facing west.



Photo 11. View from the middle of the field used for effluent spreading/cattle grazing, located north of the office area. The view is to the west.



Photo 12. View of the agricultural field on the northwest portion of the study area. The view is to the southwest.



Photo 13. View from the northeast portion of the study area, facing north.



Photo 14. View of the red-tailed hawk nest, on the northeast portion of the study area.



Photo 15. View of the tree that held the red-tailed hawk nest. The arrow indicates the nest.