

# Threatened and Endangered Species Analysis Report

## Circle A Minor Subdivision 17110 East Goshawk Road, Colorado Springs

### *Introduction*

JDS Hydro Consultants, Inc. (JDS Hydro) was contacted to provide environmental services for a proposed subdivision of a 15-acre property in the Black Forest area of Colorado Springs, Colorado. The project is referred to as the Circle A Minor Subdivision project and is located at 17110 E. Goshawk Road. The property owner requested a biological study regarding threatened and endangered species and potential effects to these listed species from the project. This report will outline results from the desktop review, habitat assessment, and effects analysis.

### *Desktop Review*

According to the official species listed obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website accessed on July 8, 2019, there are ten threatened, endangered, or proposed threatened species that could potentially occur in the project area: North American wolverine (*Gulo gulo luscus*), Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Least Tern (*Sterna antillarum*), Mexican Spotted Owl (*Strix occidentalis lucida*), Piping Plover (*Charadrius melodus*), Whooping Crane (*Grus americana*), greenback cutthroat trout (*Oncorhynchus clarkia stomias*), pallid sturgeon (*Scaphirhynchus albus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and western prairie fringed orchid (*Platanthera praeclara*). There are no critical habitats within the project area. The IPaC list is attached in **Appendix A**.

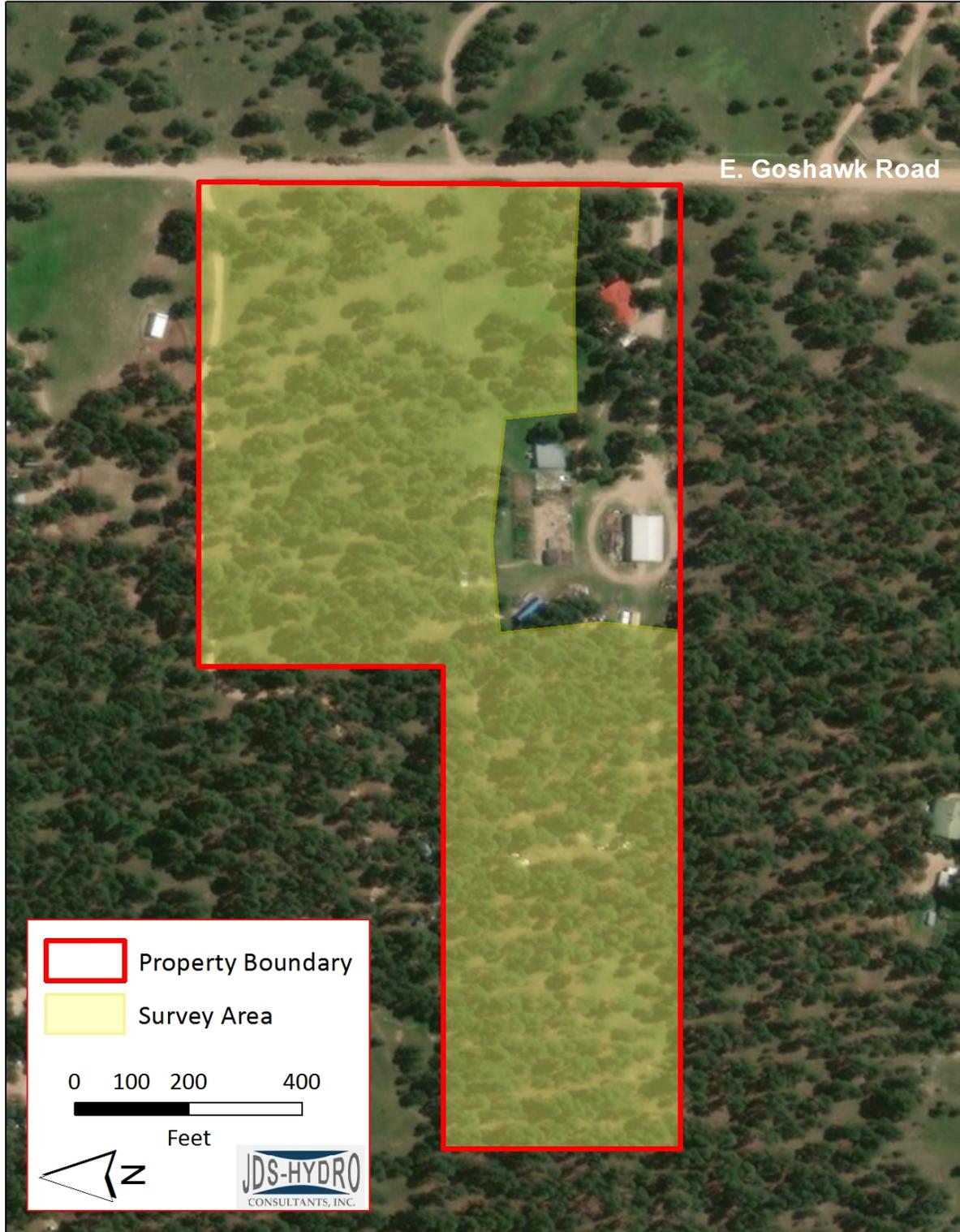
Recent aerial photography indicates that most of the property is heavily wooded or developed. A residence, barn, greenhouse, and several outbuildings exist on the south and eastern portions of the property. The USGS topographic map shows the property being relatively level with no creeks or tributaries flowing through it. Please see **Figure 1** for an aerial map and **Figure 2** for a topographic map of the property.

### *Habitat Assessment*

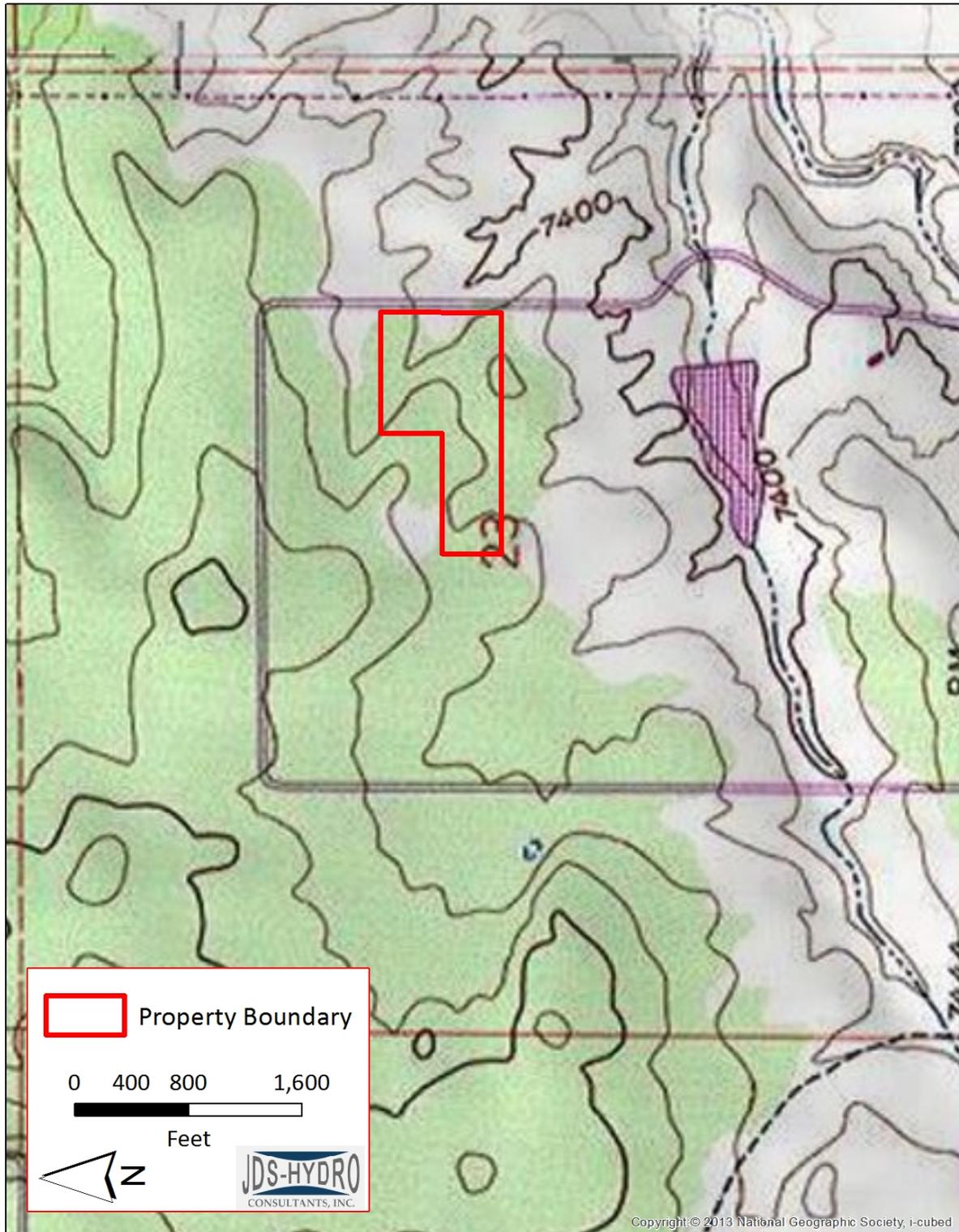
A habitat assessment was conducted on July 11, 2019 by JDS Hydro personnel to identify potential threatened and endangered species habitat within the subject property. Loose transects were walked throughout the undeveloped areas of the property. The typical vegetative assemblage observed was a ponderosa pine (*Pinus ponderosa*) overstory with a mixed grass/herbaceous understory. Typical grass and herbaceous species observed include sun sedge (*Carex inops* ssp. *heliophila*), poverty oatgrass (*Danthonia spicata*), prairie sandreed (*Calamovilfa longifolia*), foxtail (*Setaria* sp.), aster (*Aster* sp.), and silvery lupine (*Lupinus argenteus*).

No creeks or tributaries exist on the property. A shallow swale was observed running southeast in the eastern portion of the property; however, no ordinary high water mark was observed in the swale. It is filled with upland grass and herbaceous species. According to the property owner, the swale only holds minor amounts of water during storm events but is usually dry. No wetlands were observed on the property. Photographs of the property are provided in **Appendix B**.

**Figure 1: Aerial Photographic Map of the Property**



**Figure 2: USGS Topographic Map of the Property**



Effects Analysis

The table below shows the species the USFWS considers as potentially occurring on the property or surrounding areas, their federal status, and their habitat requirements. No suitable habitat for any of these listed or proposed listed species was identified on the subject property. Therefore, the proposed project will not affect any federally listed species. No coordination with USFWS is required.

**Table 1. Listed Species of Potential Occurrence in the Project Area**

Species	Federal Status	Suitable Habitat	Habitat within Project Area?
North American Wolverine ( <i>Gulo gulo luscus</i> )	Proposed Threatened	High, alpine environments	No
Preble's Meadow Jumping Mouse ( <i>Zapus hudsonius preblei</i> )	Threatened	Well-developed plains riparian vegetation with adjacent, relatively undisturbed grassland communities and a nearby water source. These riparian areas include a relatively dense combination of grasses, forbs, and shrubs	No
Least Tern ( <i>Sterna antillarum</i> )*	Endangered	Sandy or pebbly beaches, well above the water line, around lakes and reservoirs or on sandy soil sandbars in river channels	No
Mexican Spotted Owl ( <i>Strix occidentalis lucida</i> )	Threatened	Mixed conifer forests, Madrean pine-oak forests, and rocky canyons	No
Piping Plover ( <i>Charadrius melodus</i> )*	Threatened	Sandy lakeshore beaches, sandbars within riverbeds or even sandy wetland pastures. An important aspect of this habitat is that of sparse vegetation	No
Whooping Crane ( <i>Grus americana</i> )*	Endangered	Mudflats around reservoirs and in agricultural areas. While wintering, they live on salt flats that are dominated by coastal salt grass. Their nesting grounds are wetland communities dominated by bulrush	No
Greenback Cutthroat Trout ( <i>Oncorhynchus clarkia stomias</i> )	Threatened	Cold, clear, gravelly headwater streams and mountain lakes which provide an abundant food supply of insects	No
Pallid Sturgeon ( <i>Scaphirhynchus albus</i> )*	Endangered	Pallid sturgeons evolved and adapted to living close to the bottom of large, silty rivers with natural a hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars	No
Ute Ladies'-tresses ( <i>Spiranthes diluvialis</i> )	Threatened	Occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. Also found in wetland and seepy areas near freshwater lakes or springs	No

**Table 1. Listed Species of Potential Occurrence in the Project Area**

Species	Federal Status	Suitable Habitat	Habitat within Project Area?
Western Prairie Fringed Orchid ( <i>Platanthera praeclara</i> )*	Threatened	Moist tallgrass prairies and sedge meadows	No

\*These species only need to be considered under the following conditions: Water-related activities/use in the N. Platte, S. Platte, and Laramie River Basins may affect listed species in Nebraska.

*Conclusion*

The subdivision of this property will not cause any effects to federally listed or proposed listed species.

**Appendix A:**  
**USFWS IPaC List**

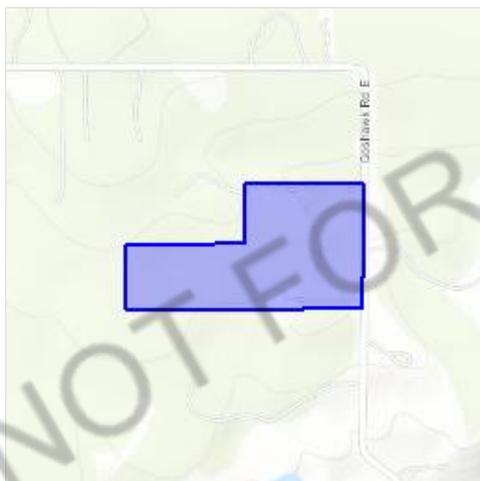
# IPaC resource list

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

El Paso County, Colorado



## Local office

Colorado Ecological Services Field Office

☎ (303) 236-4773

📠 (303) 236-4005

MAILING ADDRESS

Denver Federal Center

P.O. Box 25486

Denver, CO 80225-0486

PHYSICAL ADDRESS

134 Union Boulevard, Suite 670  
Lakewood, CO 80228-1807

<http://www.fws.gov/coloradoES>

<http://www.fws.gov/platteriver>

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. 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<sup>1</sup> 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 Fisheries<sup>2</sup>).

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

North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5123">https://ecos.fws.gov/ecp/species/5123</a>	Proposed Threatened
Preble's Meadow Jumping Mouse <i>Zapus hudsonius preblei</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/4090">https://ecos.fws.gov/ecp/species/4090</a>	Threatened

## Birds

NAME	STATUS
Least Tern <i>Sterna antillarum</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> <li>Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/8505">https://ecos.fws.gov/ecp/species/8505</a>	Endangered
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8196">https://ecos.fws.gov/ecp/species/8196</a>	Threatened
Piping Plover <i>Charadrius melodus</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> <li>Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Whooping Crane <i>Grus americana</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> <li>Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Endangered

## Fishes

NAME	STATUS
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Greenback Cutthroat Trout *Oncorhynchus clarkii stomias* Threatened  
 No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/2775>

Pallid Sturgeon *Scaphirhynchus albus* Endangered  
 This species only needs to be considered if the following condition applies:  
 • Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.  
 No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/7162>

## Flowering Plants

NAME	STATUS
Ute Ladies'-tresses <i>Spiranthes diluvialis</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/2159">https://ecos.fws.gov/ecp/species/2159</a>	Threatened
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> This species only needs to be considered if the following condition applies: • Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1669">https://ecos.fws.gov/ecp/species/1669</a>	Threatened

## 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<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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.)

Lark Bunting *Calamospiza melanocorys*

Breeds May 10 to Aug 15

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

Willow Flycatcher *Empidonax traillii*

Breeds May 20 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/3482>

## 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  $0.05/0.25 = 0.2$ .
3. 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.

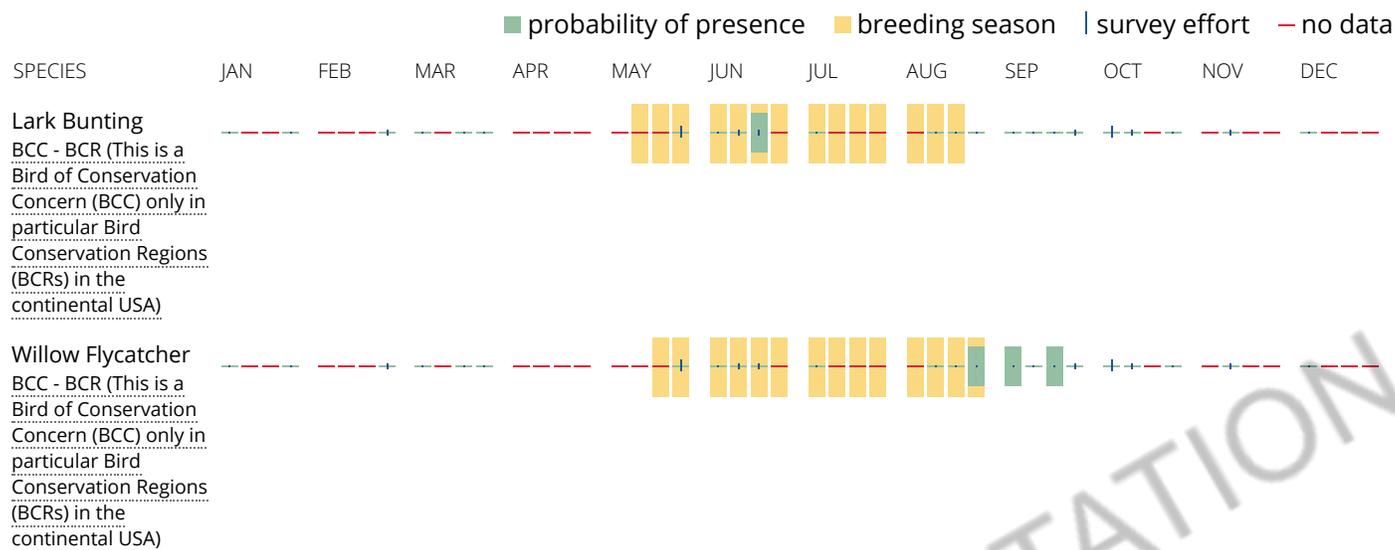
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### 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

### 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.

NOT FOR CONSULTATION

**Appendix B:**  
**Site Photographs**



Photo 1: Typical vegetative assemblage within the subject property – overstory of ponderosa pine trees and a grassy understory. Photo faces west from southern property boundary.



Photo 2: The property is partially developed with a residence, barn, greenhouse, and several outbuildings. Photo faces east from southern property boundary.



Photo 3: Facing south from near the western portion of the property.



Photo 4: Facing north from the western portion of the property.



Photo 5: ATV trail located in the western portion of the property.



Photo 6: Shallow swale observed in the eastern portion of the property. No ordinary high water mark or evidence of water was observed. Upland vegetative species grow within the swale.