Kimley»Horn

November 18, 2025

Mr. Kevin Johnk
Sterling Ranch, LLC
8155 Piney River Ave, Suite 200
Littleton, CO 80125

Subject: Wildlife Habitat Assessment
Waterton Business Park
Douglas County, Colorado

Sterling Ranch, LLC retained Kimley-Horn and Associates, Inc. (Kimley-Horn) to complete an assessment of potential habitat for state and federally listed species, migratory birds, and big game and to prepare this memorandum for the Waterton Business Park project located off Waterton Road in Douglas County, Colorado (***Figure 1 – Project Location Map, Figure 2 – USGS Map***). The project consists of a mixed-use commercial and industrial development. A site plan for the proposed project is included in **Appendix A.**

Project Location

The project site is situated west and east of Waterton Road and east of North Moore Road. The project site is in Sections 32 and 33, Township 6 South, Range 68 West, and Sections 4 and 5, Township 7 South, Range 68 West in Douglas County, Colorado (***Figure 1***). The center latitude/longitude of the project site is 39.4877889N, -105.0209708W. The average elevation of the project site is approximately 5,700 feet above sea level (ASL).

Site Description

The 327.3-acre project site is made up of three (3) parcels (Parcel ID 2229-321-00-001, 2229-321-00-003, and 2229-321-00-004) and portions of three (3) parcels (Parcel ID 2229-332-00-002, 2229-333-00-005, and 2229-324-00-002) and consists of primarily disturbed shrubland. A large portion of the site, approximately 150 acres, consists of vacant land containing a former powder plant. Approximately 50 acres of the site is utilized as the storage yard for Douglas County including a soil stockpile, materials and machinery, materials for winter roadway treatment, and demolished concrete and asphalt rubble. The remainder of the site consists of vacant grassland and shrubland, a detention pond, a small area managed for EVOC Training purposes, and unimproved roads. One (1) ephemeral stream runs along the southwestern boundary and two (2) ephemeral streams run perpendicular to the eastern boundary (***Figure 3 – Habitat Characterization Map)***.

Dominant upland species in the grassland and shrubland areas consisted of kochia (*Bassia scoparia*), blue grama (*Bouteloua gracilis*), rubber rabbitbrush (*Ericameria nauseosa*), and basin wild rye (*Leymus cinereus*). The ephemeral drainages were dominated by hairy false golden aster (*Heterotheca villosa*), slimflower scurfpea (*Psoralea tenuiflora*), and western snowberry (*Symphoricarpos occidentalis*). Various noxious and nuisance weed species were observed including kochia, curly dock (*Rumex crispus*), hoary alyssum (*Berteroa incana*), quackgrass (*Elymus repens*), common mullein (*Verbascum thapsus*), cheatgrass (*Bromus tectorum*), diffuse knapweed (*Centaurea diffusa),* and field bindweed (*Convolvulus arvensis*).

The project site is bound to the north by a commercial business, to the east by county-owned vacant land (Sterling Ranch Conservation Easement), to the south by county-owned land, and to the west by county-owned land and residential lots. From the earliest aerial of 1944, the powder plant can be observed within the eastern portion of the project site. The remaining portions of the project site were primarily vacant grassland from the earliest aerial to 1971 when unimproved roads and buildings were constructed. Between 1971 and 1978, two impounded ponds were constructed in the eastern extent. Little to no change occurred within the limits from 1978 to 2015. From 2017 to present day, the Douglas County storage yard has expanded throughout the eastern portion of the site.

Within the project site, hydrology drains from higher elevations in the southwest to eventually empty into Plum Creek to the east of the site. Plum Creek is a perennial stream/wetland complex that runs north into the South Platte River within Chatfield Reservoir. Plum Creek is a National Hydrography Dataset (NHD) mapped perennial stream and a National Wetland Inventory (NWI) mapped permanently flooded, lower perennial riverine feature. The unnamed drainage along the southwestern project boundary runs northeast and is mapped as a seasonally flooded, intermittent stream. The two (2) unnamed drainages within the eastern portion of the project site are not mapped features by NHD or NWI. Representative photos of the project site can be found in **Appendix B.**

Site History

On September 26, 2023, the Douglas County Board of County Commissioners (BOCC) unanimously approved a Chemours Land Exchange between Sterling Ranch Acquisitions, LLC (separate from Sterling Ranch Development Company) and Douglas County BOCC. In this land exchange agreement, Douglas County received land to develop a fleet maintenance facility and a conservation easement, and Sterling Ranch received land to develop as part of the Sterling Ranch Development. The proposed conservation easement will permanently protect 204 acres of land as open space and as an elk migration corridor, which was at risk for general industrial development per its previously designated zoning classification. The preservation of this land also provides a connection to the Dupont Conservation Easement, established in 2002. During the land exchange, which was executed by a separate agreement, the wildlife corridor will be conserved and maintained in perpetuity as a wildlife corridor and open space buffer for the community of Louviers.

Methodology

Kimley-Horn accessed the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPAC) online system (http://ecos.fws.gov/ipac/), the Colorado Parks and Wildlife (CPW) Species Activity Mapping (SAM) Data, the Colorado Natural Heritage Program (CNHP) Colorado's Conservation Data Explorer (CODEX; https://codex.cnhp.colostate.edu/content/map), and Douglas County, Colorado's Open Data (DougCo Hub; https://dcdata-dougco.opendata.arcgis.com/pages/data) to determine if any federal or state listed species and big game species and their associated corridors could potentially occur in the vicinity of the project site (**Appendix C**). A site visit was conducted by Kimley-Horn on August 28, 2024, and November 7, 2025, to perform an assessment of potential habitat for the aforementioned species.

Results

Wildlife, or signs of wildlife, observed within the project site during field reconnaissance are included below in **Table 1**. Signs of wildlife include burrows, tracks, scat, etc.

Table 1 – Wildlife Species Observed within the Project Site		
Common Name	**Scientific Name**	**Status**
Avian		
Red-tailed hawk	*Buteo jamaicensis*	MBTA
Mammalian		
Mule deer	*Odocoileus hemionus*	NL*
Elk	*Cervis canadensis*	NL*
Legend: MBTA – Avian species protected under the Migratory Bird Treaty Act (MBTA); NL - Not Listed; *Managed by CPW		

Based on field reconnaissance and database reviews, a listing of the state and federally listed and managed species potentially occurring within the vicinity of the project site has been compiled. **Table 2** lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, signs (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species. None indicates no suitable habitat is present within the project site. A Low ranking indicates that suitable habitat for that species was documented and/or observed within the project site, but the species has not been documented within one (1) mile of the project site. A Moderate ranking indicates that suitable habitat exists, and the species has been documented within one (1) mile of the project site. A High ranking indicates that suitable habitat exists, and the species was observed during field reconnaissance.

Table 2 – State and Federally Listed and Managed Species with the Potential to Occur within the Project Site in Douglas County, Colorado						
Common Name	**Scientific Name**	**Status**	**Documented (<1 Mile)**	**Habitat Present**	**Likelihood of Occurrence**	**Action Required**
Mammals						
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	FT, ST	Yes	No	Low	No
Big Game	***Multiple***	**NL***	**Yes**	**Yes**	**High**	**Yes**
Birds						
Piping plover	*Charadrius melodis*	FT, ST, MBTA	No	No	None	No**
Whooping crane	*Grus americana*	FE, SE, MBTA	No	No	None	No
Raptors	**-**	**MBTA**	**Yes**	**Yes**	**High**	**Yes**
Passerine Songbirds	-	MBTA	Yes	Yes	High	Yes
Fishes						
Pallid sturgeon	*Scaphirhynchus albus*	FE	No	No	Low	No**
Flowering Plants						
Ute ladies'-tresses	*Spiranthes diluvialis*	FT	No	No	Low	No
Western prairie fringed orchid	*Platanthera praeclara*	FT	No	No	Low	No**
Insects						
Monarch butterfly	*Danaus plexippus*	Proposed FT	No	Yes	Low	No

Table 2 – State and Federally Listed and Managed Species with the Potential to Occur within the Project Site in Douglas County, Colorado						
Common Name	**Scientific Name**	**Status**	**Documented (<1 Mile)**	**Habitat Present**	**Likelihood of Occurrence**	**Action Required**
Suckley's Cuckoo Bumble Bee	*Bombus suckleyi*	Proposed FE	No	Yes	Low	No
Western regal fritillary	*Argynnis idalia occidentalis*	Proposed FT	No	Yes	Low	No

Legend:
FE – Federally Endangered; FT – Federally Threatened; FT(S/A) – Threatened due to Similarity of Appearance; C – Candidate for Listing
SE – State Endangered; ST – State Threatened; SC – Species of Concern
MBTA - Avian species protected under the Migratory Bird Treaty Act (MBTA)
NL – Not Listed, but have other regulatory protections
Species in **bold** were observed on-site during field reconnaissance
*Managed by Colorado Parks and Wildlife
**Unless the project plans for water depletions

The listed species described below have been determined to have suitable habitat within the site and require additional action.

Big Game

Species in this category are not listed under the Endangered Species Act; however, they are part of the respective CPW Herd Management Plans. The project site is within the species ranges of elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), and white-tailed deer (*Odocoileus virginianus;* ***Figure 4 – Species Occurrence Map***). Suitable habitat for these species is present within the project site and signs of these species (skat, tracks) were observed during field reconnaissance. No mule deer migration corridors are mapped within the project site or within a mile radius by CPW SAM Data or CNHP CODEX. No elk migration corridors are mapped within the project site by CPW SAM Data or CNHP CODEX. The nearest CPW-mapped elk migration corridor is located 0.44 miles south of the project site.

Douglas County's Wildlife Mapping shows a wildlife migration corridor intersecting the northeast corner of the project site within Plum Creek's upland buffer. The nearest Douglas County-mapped wildlife movement corridor is located within the southern terminus of the project site; however, it is almost entirely contained within the conservation easement south and southeast of the project site. An overland connection is mapped within the southern 1/4 of the project site by Douglas County. However, this data is not representative due to the impassable fences that sever movement between Plum Creek and the west. The project site is predominantly within the Douglas County Moderate Habitat Value Area. 10 acres of the project site within the northeast is within the Douglas County High Habitat Value Area. The project site is 0.29 miles south of the Low Habitat Value Area. The nearest Douglas County wildlife crossing is located 0.56 miles east of the project site. The northern portion of the project site provides suboptimal conditions for migration due to fencing and moderate levels of traffic on Waterton Rd and Moore Rd. The central portion provides suboptimal conditions for migration due to the approximately 50-acres of Douglas County storage of materials and machinery, the perimeter fencing surrounding the former powder plant, as well as fencing on both sides of Waterton Rd. The southern portion of the project site presents limited suitable conditions due to impassable fencing that begins east of the project site and continues south along Waterton Rd. Based on field reconnaissance, big game activity within the project site exhibits sporadic movement with habitat fragmentation likely forcing wildlife to use Waterton Rd. In consultation with the project proponent, it was determined that the Waterton Business Park project proposes to facilitate big game

movement to the proposed 203.9-acre conservation easement south of the project site by removing impassable fencing to allow for more suitable travel paths to and along Plum Creek. It is assumed the high presence of impassable fences within and surrounding the project site is the primary driving force of unnatural migration patterns in lands surrounding the site. Further coordination with CPW is recommended to verify migration information within and around the site.

Passerine Songbirds and Raptors

Avian species in this category are not listed under the Endangered Species Act; however, they have additional protections under the Migratory Bird Treaty Act (MBTA) of 1918. Additionally, all raptors in Colorado are protected by the MBTA. CPW has published the "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020)". This document was created to provide developers with recommended buffers to avoid impacts to raptors in Colorado. CPW buffer recommendations are included as **Appendix D**. The CPW Raptor Nest Database did not document any active raptor nests as occurring within the restricted radii for raptors. The nearest documented raptor nest is a red-tailed hawk (*Buteo jamaicensis*) nest located 1.37 miles north of the project site with an active status as of August 2024 (***Figure 4***). If construction is to occur within the nesting season of songbird or raptor species, preconstruction avian nesting surveys are recommended.

Project Design Considerations

During project design, we recommend considering options that will prioritize wildlife habitat, movement, and conservation and minimize impacts to the Moderate Habitat Value Area. Protection of the adjacent drainageway, Plum Creek, will help to further maintain the Moderate Habitat Value Area.

The following recommendations should be considered to promote wildlife conservation during zoning:

- Sensible planning of transportation infrastructure to accommodate wildlife.
- Creation of development guidelines which minimize exclusionary fencing and promote wildlife friendly fencing.
- Implement appropriate erosion control practices during land disturbance activities, including practicing avoidance of unnecessary land disturbances.
- Provide habitat restoration through stabilization of land disturbances with beneficial vegetation through wildlife friendly native seed species, provide noxious weed and pest management practices and on-going pasture management to promote residual groundcover.

Summary and Recommendations

Sterling Ranch, LLC retained Kimley-Horn and Associates, Inc. (Kimley-Horn) to complete an assessment of potential habitat for state and federally listed species, migratory birds, and big game and to prepare this memorandum for the Waterton Business Park project located off Waterton Road in Douglas County, Colorado. The 327.3-acre project site consists of primarily disturbed grassland and shrubland. A large portion of the site, approximately 150 acres, consists of vacant land containing a former powder plant. Approximately 50 acres of the site is utilized as the storage yard for Douglas County including a soil stockpile, materials and machinery, materials for winter roadway treatment, and demolished concrete and asphalt rubble. The remaining of the site consists of vacant grassland, a detention pond, and unimproved

roads. One (1) ephemeral stream runs along the southwestern boundary and two (2) ephemeral streams run perpendicular of the eastern boundary.

Kimley-Horn accessed the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPAC) online system (http://ecos.fws.gov/ipac/), the Colorado Parks and Wildlife (CPW) Species Activity Mapping (SAM) Data, the Colorado Natural Heritage Program (CNHP) Colorado's Conservation Data Explorer (CODEX), and Douglas County, Colorado's Open Data (DougCo Hub) to determine if any federal or state listed species and big game species and their associated corridors could potentially occur in the vicinity of the project site (Appendix C). A site visit was conducted by Kimley-Horn on August 28, 2024, and November 7, 2025, to perform an assessment of potential habitat for the aforementioned species. Three groups of species (big game, passerine songbirds, and raptors) were determined to have suitable habitat and require additional action.

The following items are recommended regarding wildlife habitat:

- Further coordination with CPW is recommended to verify elk migration information within and around the site.
- Further coordination with CPW and Douglas County is recommended to modify the impassable fences obstructing natural migration patterns adjacent to the site.
- If disturbance activities are planned during the avian nesting season, a preconstruction avian nesting survey is recommended.

Should you have any questions regarding this assessment, please contact me at (719) 299-5093 or Alexis.Marchando@kimley-horn.com.

Sincerely,

Alexis Marchando

Alexis Marchando
Environmental Scientist
Kimley-Horn and Associates, Inc.

References

Audubon. 2023. Guide to North American Birds. Available at: https://www.audubon.org/bird-guide

Fertig. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). Available at: https://efotg.sc.egov.usda.gov/references/public/WY/UtesRangewideStatusReview2005byFertig.pdf

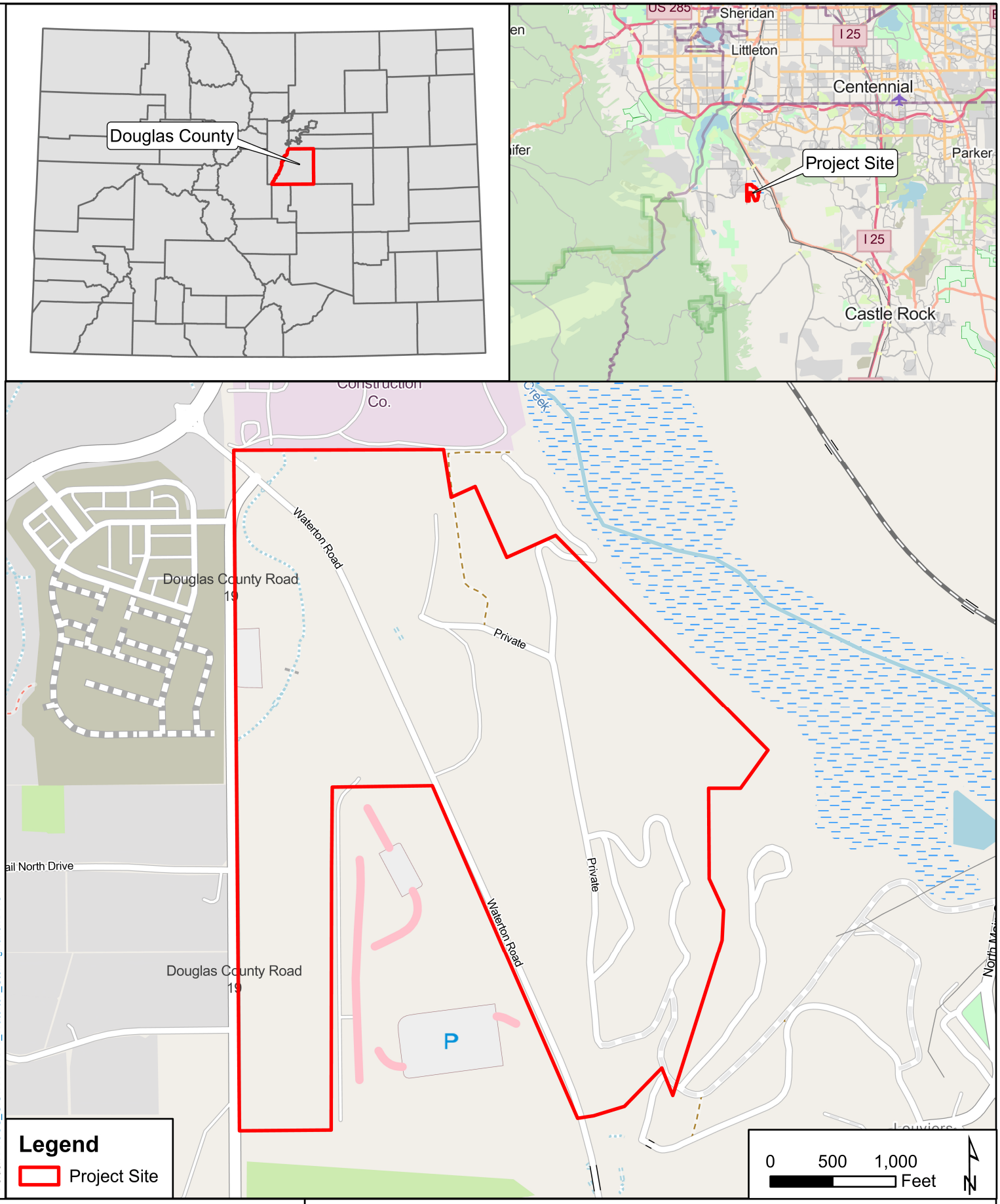
U.S. Fish and Wildlife Service (USFWS). 2018. Preble's Meadow Jumping Mouse Recovery Plan, Colorado. Region 6, Lakewood, Colorado. 148 pages. Available at: https://ecos.fws.gov/docs/recovery_plan/Final_Draftpreblesrecoveryplan_10032018_signed.pdf

USFWS. 2022. Review of Species That Are Candidates for Listing as Endangered or Threatened. Available at: https://www.govinfo.gov/link/fr/87/26152

Attachments:

Figure 1 – Location Map
Figure 2 – USGS Map
Figure 3 – Habitat Characterization Map
Figure 4 – Species Occurrence Map

Appendix A – Proposed Site Plan
Appendix B – Representative Site Photos
Appendix C – IPAC Report
Appendix D – Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors



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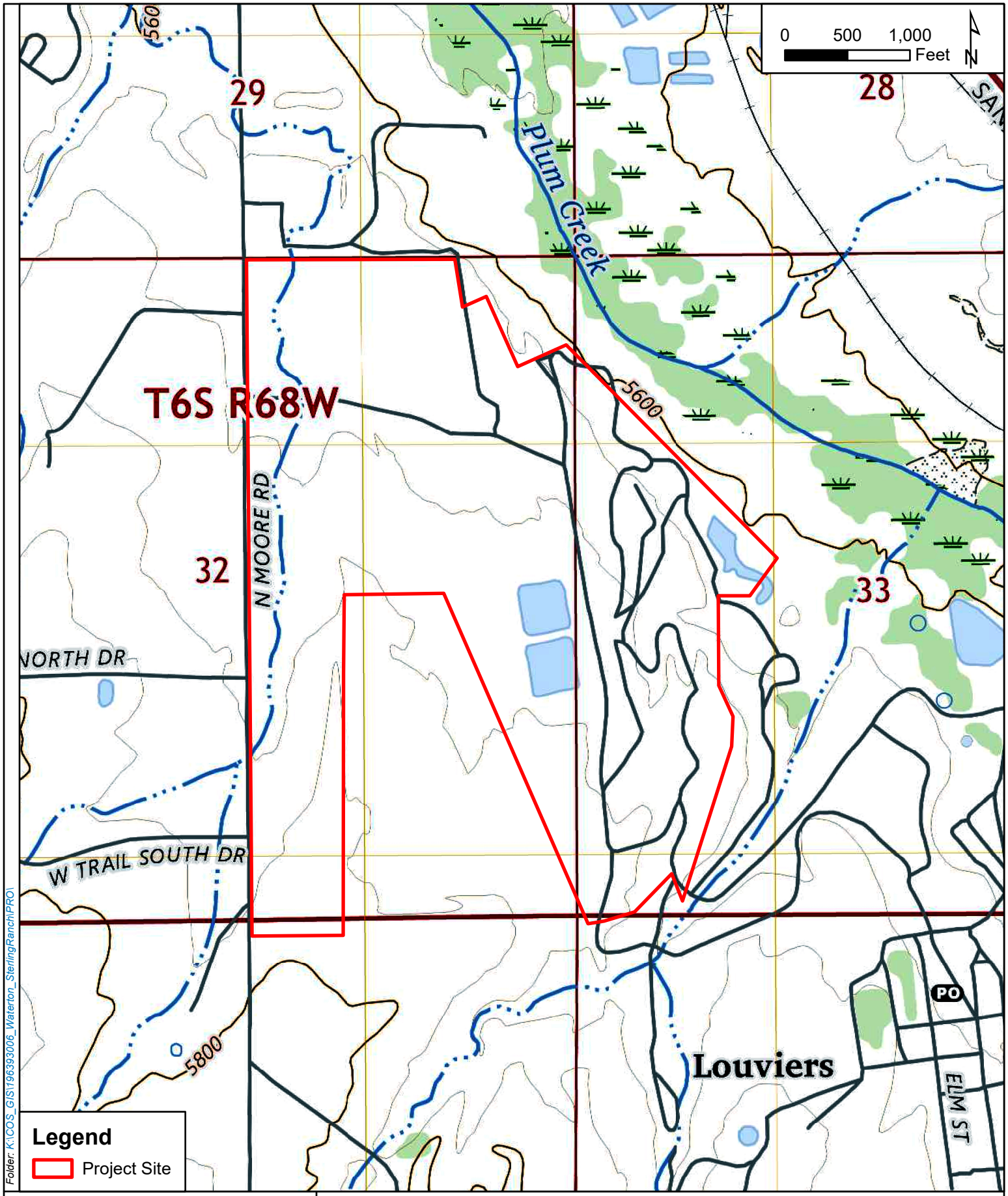
2 N Nevada Ave, Ste 900, Colorado Springs, CO
Phone (719) 453-0180
www.kimley-horn.com

Property Location Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 1



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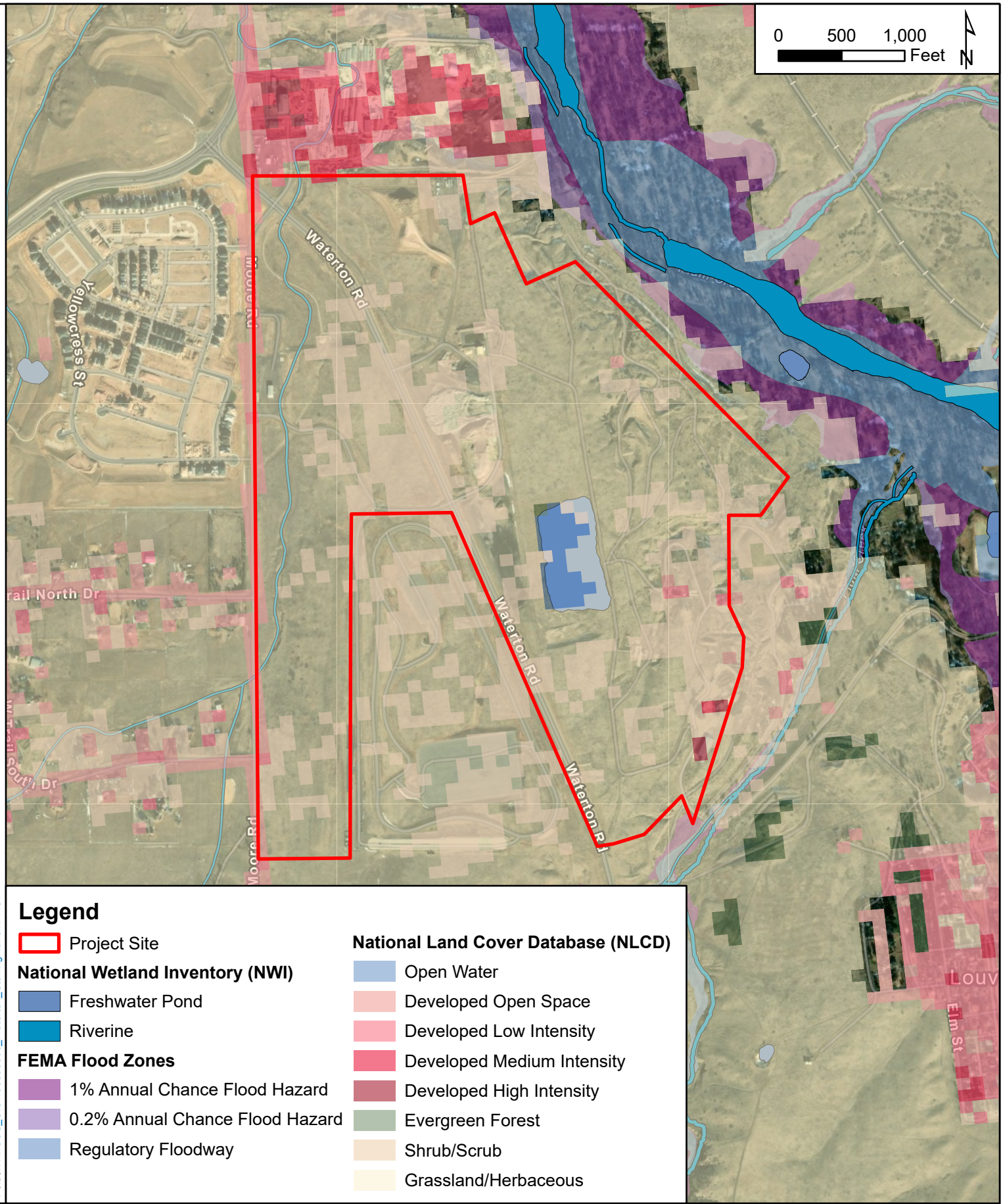
USGS Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 2



Legend

- Project Site

National Wetland Inventory (NWI)

- Freshwater Pond
- Riverine

FEMA Flood Zones

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway

National Land Cover Database (NLCD)

- Open Water
- Developed Open Space
- Developed Low Intensity
- Developed Medium Intensity
- Developed High Intensity
- Evergreen Forest
- Shrub/Scrub
- Grassland/Herbaceous

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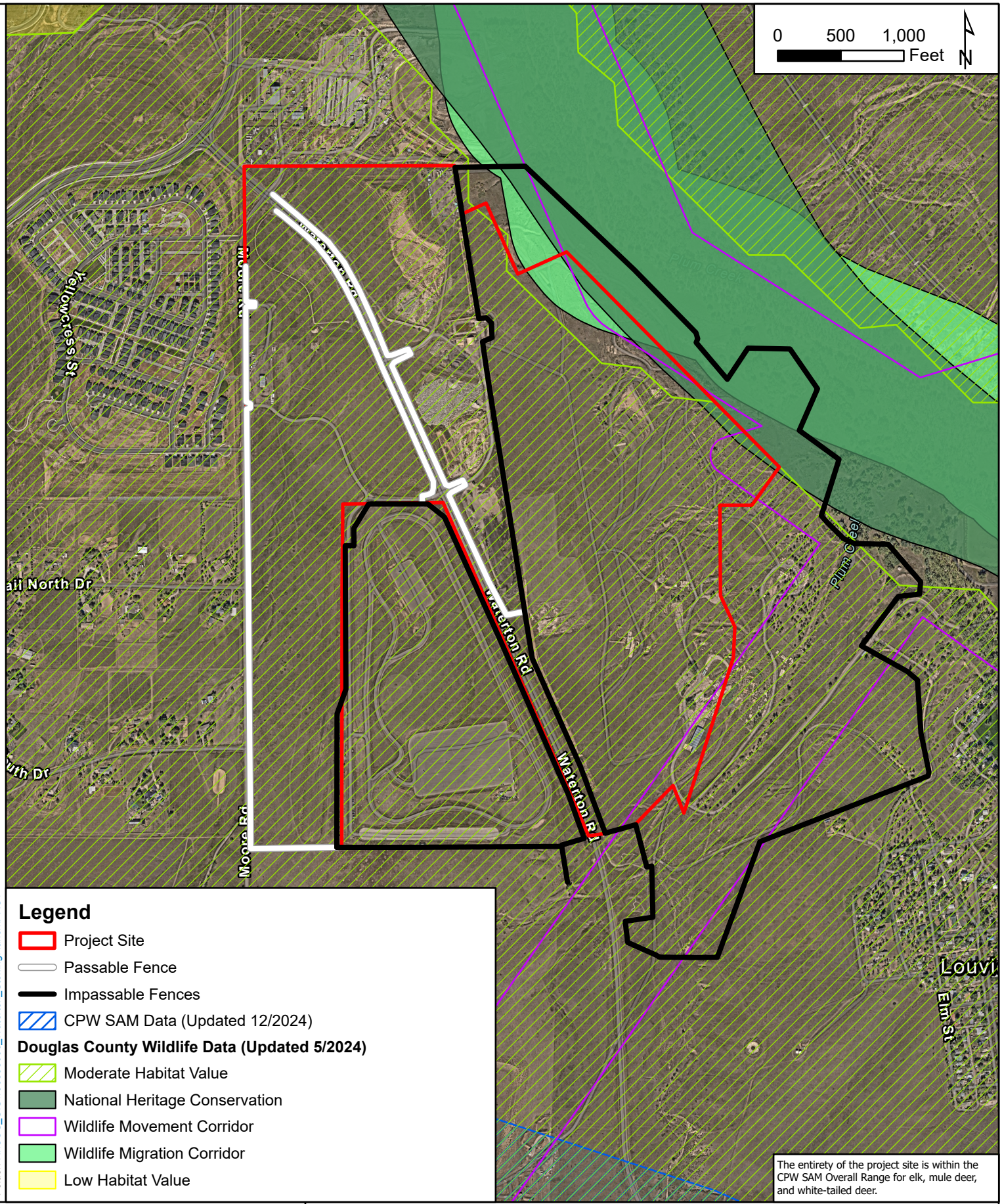
Habitat Characterization Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 3



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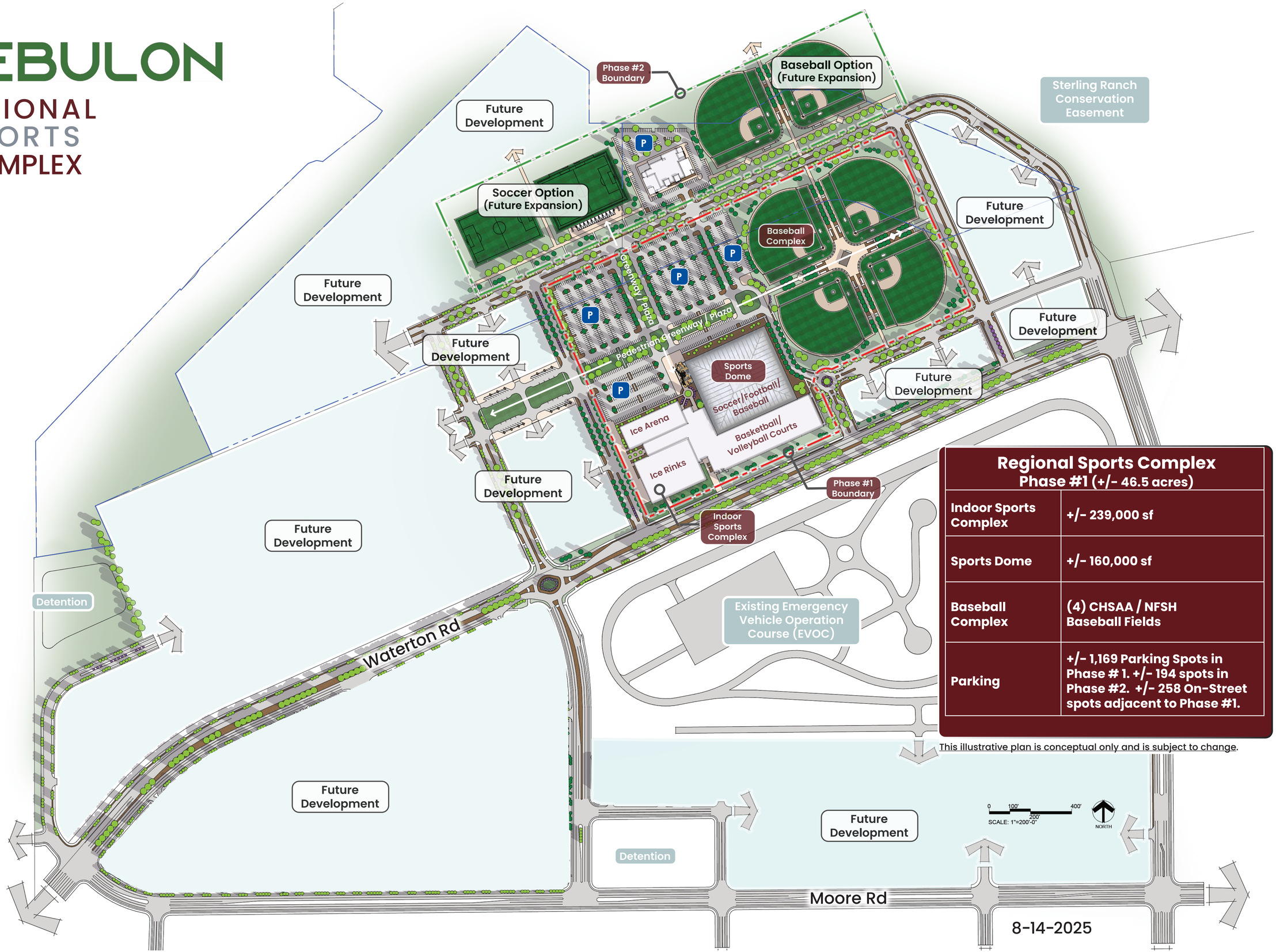
Species Occurrence Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 4

Appendix A
Site Plan

ZEBULON
REGIONAL SPORTS COMPLEX



Regional Sports Complex Phase #1 (+/- 46.5 acres)	
Indoor Sports Complex	+/- 239,000 sf
Sports Dome	+/- 160,000 sf
Baseball Complex	(4) CHSAA / NFSH Baseball Fields
Parking	+/- 1,169 Parking Spots in Phase # 1. +/- 194 spots in Phase #2. +/- 258 On-Street spots adjacent to Phase #1.

This illustrative plan is conceptual only and is subject to change.

Appendix B
Representative Site Photos

Site Conditions

Photo 1 – Northwest Project Extent, Facing North

Photo 2 – Northeast Project Extent, Facing South

Representative Site Photos – November 7th, 2025		
Waterton Business Park **Douglas County, Colorado**		
Appendix B	***November 2025***	***Scale: NTS***

Kimley»Horn

Site Conditions

Photo 3 – Central Project Extent, Facing West

Photo 4 – East Project Extent, Facing East

Representative Site Photos – November 7th, 2025		
Waterton Business Park **Douglas County, Colorado**		
Appendix B	***November 2025***	***Scale: NTS***

Site Conditions

Photo 5 – Southwest Project Extent, Facing East

Photo 6 – Southeast Project Extent, Facing North

Representative Site Photos – November 7th, 2025		
Waterton Business Park Douglas County, Colorado		Kimley»Horn
Appendix B	*November 2025*	*Scale: NTS*

Appendix C
IPAC Report

IPaC U.S. Fish & Wildlife Service

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

Douglas 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
1 Denver Federal Center
Bldg 53 Room Fw100}
Denver, CO 80225-0001

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 Fisheries[2]).

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.

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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. IPaC only shows species that are regulated by USFWS (see FAQ).
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
Preble's Meadow Jumping Mouse Zapus hudsonius preblei Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4090	Threatened

Birds

NAME	STATUS
Piping Plover Charadrius melodus This species only needs to be considered if the following condition applies: • Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane Grus americana There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Pallid Sturgeon Scaphirhynchus albus Wherever found This species only needs to be considered if the following condition applies: • Water use or contamination may adversely affect the species. Within the Platte River basin, depletions may adversely affect the species. These affects must be considered even outside occupied range. See local FWS office for more information. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7162	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee Bombus suckleyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered
Western Regal Fritillary Argynnis idalia occidentalis Wherever found No critical habitat has been designated for this species.	Proposed Threatened

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses Spiranthes diluvialis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2159	Threatened
Western Prairie Fringed Orchid Platanthera praeclara Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1669	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.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
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 Oct 15 to Jul 31
Golden Eagle Aquila chrysaetos 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/1680	Breeds Dec 1 to Aug 31

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

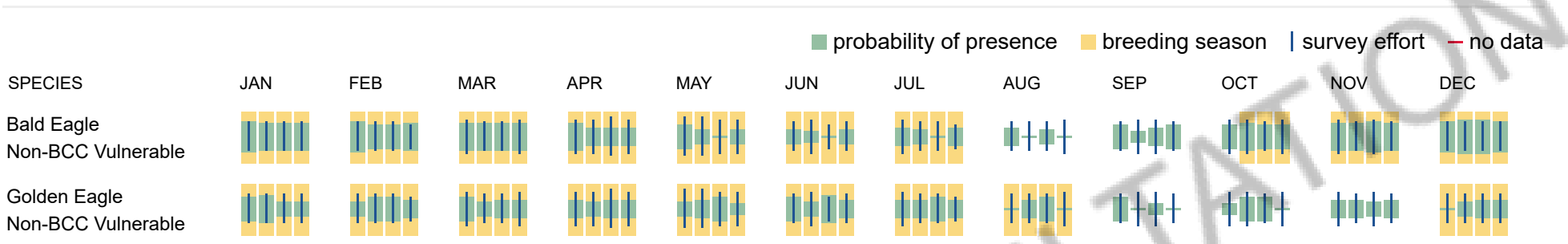
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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 an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). 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 line or no data line (red horizontal) 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 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 and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), 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.

Interpreting the Probability of Presence Graphs

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 taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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.

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.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
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 Oct 15 to Jul 31
Broad-tailed Hummingbird Selasphorus platycercus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 25 to Aug 21
Chestnut-collared Longspur Calcarius ornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 10
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ferruginous Hawk Buteo regalis — Breeds Mar 15 to Aug 15
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/6038

Golden Eagle Aquila chrysaetos — 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/1680

Grasshopper Sparrow Ammodramus savannarum perpallidus — Breeds Jun 1 to Aug 20
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/8329

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

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds Apr 1 to Jul 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/5511

Long-eared Owl asio otus — Breeds Mar 1 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/3631

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15
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/8350

Pectoral Sandpiper Calidris melanotos — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Sprague's Pipit Anthus spragueii — 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/8964

Thick-billed Longspur Rhynchophanes mccownii — Breeds May 1 to Aug 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Whimbrel Numenius phaeopus hudsonicus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

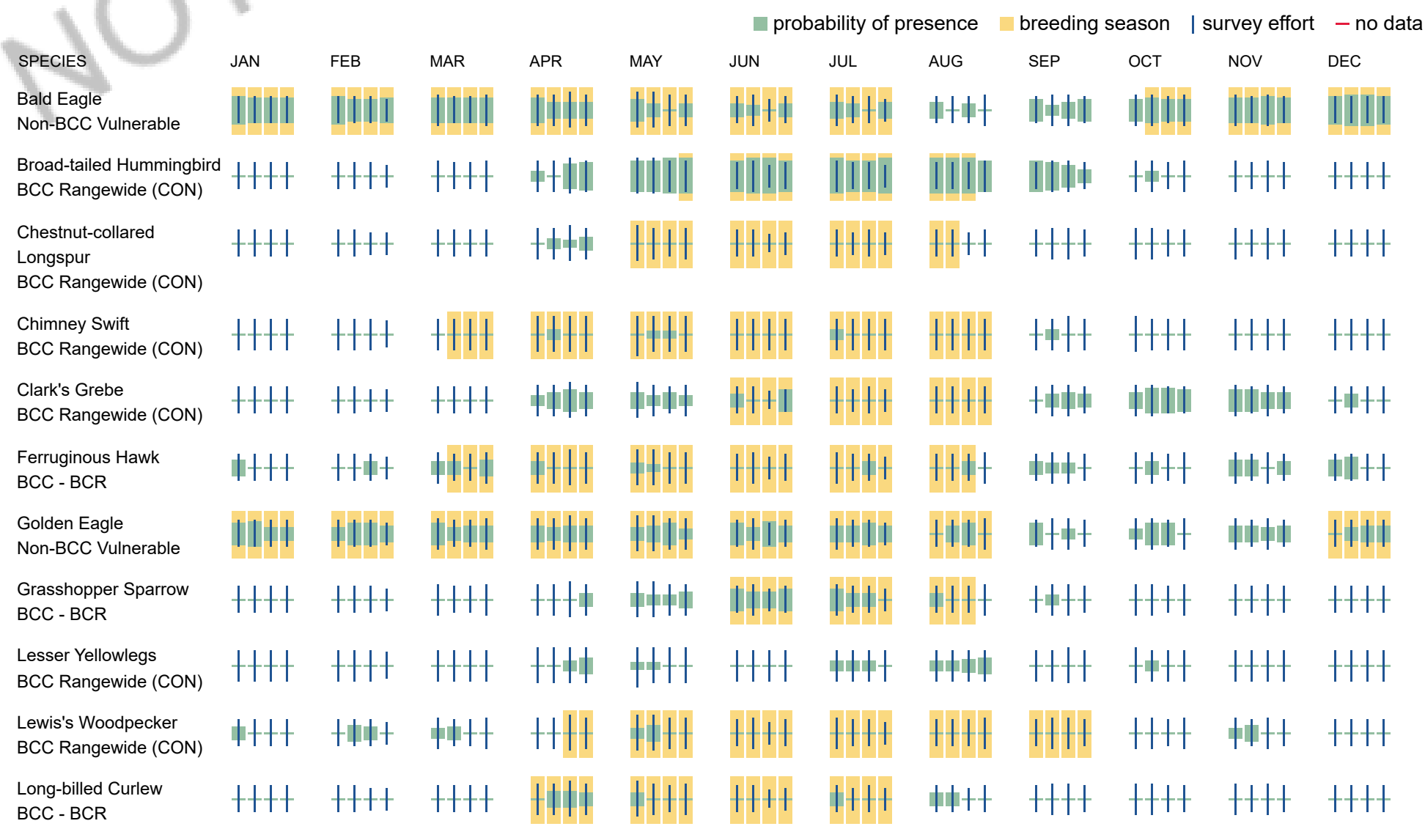
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

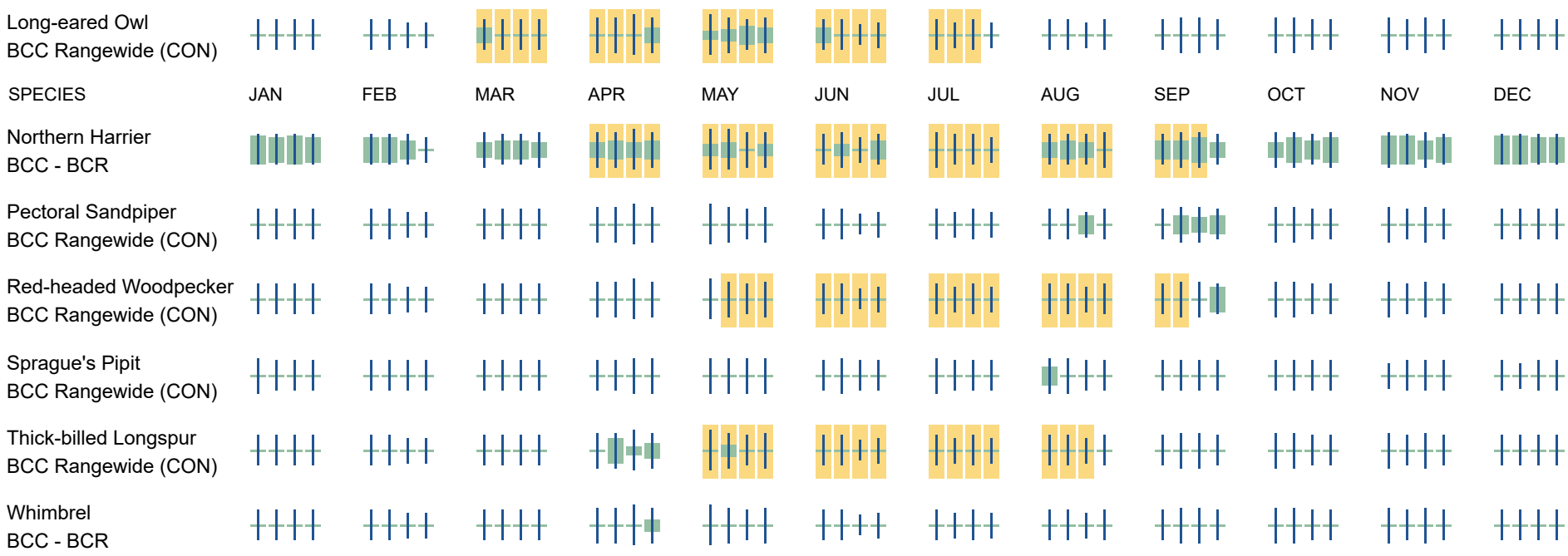
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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.





Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures 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 list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

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) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection 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, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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 to 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, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), 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 Bald and Golden Eagle Protection 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 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 BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

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.

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 look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). 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 does not represent all birds present in your project area. 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 and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
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 taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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.

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.

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 (NWI)

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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND
PUBF

RIVERINE
R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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 tuberficid 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.

Appendix D
CPW Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors

COLORADO
Parks and Wildlife
Department of Natural Resources

RECOMMENDED BUFFER ZONES AND SEASONAL RESTRICTIONS FOR COLORADO RAPTORS (2020)

OVERVIEW

Colorado Parks and Wildlife (CPW) is routinely asked for recommendations on ways to avoid and minimize disturbance to nesting, wintering, and resident raptors in Colorado. These guidelines were originally developed by Colorado Division of Wildlife in 2002 and updated in 2008. We recently (2020) undertook a periodic review of our guidelines to ensure that they are the most up to date based on the best available science and professional judgement. Further revisions of this document may become necessary as additional information is published or becomes available.

Background on Disturbance

The term "disturbance" is ambiguous and experts disagree on what actually constitutes a disturbance. Reactions may be as subtle as elevated pulse rate or as obvious as vigorous defense or abandonment of a nest site. Impacts of disturbance may not be immediately evident. A pair of raptors may respond to human intrusion by defending the nest, but well after the disturbance has passed, the male may remain in the vicinity for protection rather than forage to feed the nestlings. Golden eagles rarely defend their nests, but merely fly a half mile or more away and perch and watch. Chilling and overheating of eggs or chicks and starvation of nestlings can result from human activities that appeared not to have caused an immediate response.

Tolerance limits to disturbance vary among as well as within raptor species. As a general rule, Ferruginous Hawks and Golden Eagles respond to human activities at greater distances than do Ospreys and American Kestrels. Some individuals within a species also habituate and tolerate human activity at a proximity that would cause the majority of the group to abandon their nests. Other individuals can become sensitized to repeated encroachment and react at greater distances. The tolerance of a particular pair may change when a mate is replaced with a less tolerant individual and this may cause the pair to react to activities that were previously ignored. Responses will also vary depending upon the reproductive stage. Although the level of stress is the same, the pair may be more secretive during egg laying and incubation and more demonstrative when the chicks hatch. Recognizing that there is individual variability, the buffer areas and seasonal restrictions suggested here reflect an informed opinion that if implemented, should assure that the majority of individuals within a species will continue to occupy the area. Also, in order to allow for individual variability and renesting pairs, CPW recommends seasonal restrictions continue to be implemented until the chicks have fledged. Other factors such as intervening terrain, vegetation screens, and the existing cumulative impacts of activities should also be considered.

A ‘holistic’ approach is recommended when protecting raptor habitats. While it is important for land managers to focus on protecting nest sites, attention should also focus on defining important foraging areas that support the pair's nesting effort. Hunting habitats of many raptor species are extensive and may necessitate interagency cooperation to assure continued nest occupancy. Unfortunately, basic knowledge of habitat use for individual nesting pairs is often lacking.

RECOMMENDED BUFFER ZONES AND SEASONAL RESTRICTIONS

CPW recommends consultation with local CPW staff early in the planning phase of project proposals in order to assess and develop site-specific recommendations based on pre-existing conditions (e.g. existing development, topography, vegetation, and line-of-sight to nest). CPW maintains a leadership role with respect to raptor management in Colorado; however it is important to keep in mind that the primary authority for the regulation of take and the ultimate jurisdiction for most of these species rests with the U. S. Fish and Wildlife Service (USFWS) under the Migratory Bird Treaty Act (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). Therefore, CPW also recommends early consultation with the U.S. Fish and Wildlife Service to comply with the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and the 2016 U.S. Fish and Wildlife Service Eagle Permits Rules as applicable (USFWS 2016).

BALD EAGLE

Nest Site: No Surface Occupancy (NSO) beyond that which historically occurred, within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nest sites from December 1 through July 31. The majority of bald eagle chicks in Colorado have fledged by July 31; however, for late-nesting or potential re-nesting bald eagles, CPW recommends seasonal restrictions beyond July 31 if chicks are still present in the nest. CPW's recommended buffer is more extensive than the National Bald Eagle Management Guidelines (USFWS 2007) due to the generally open habitat used by Colorado's nesting bald eagles.

If surface occupancy cannot be avoided within ¼ mile of the nest AND the nest is located within a Highly Developed Area, then the recommended NSO extends ⅛ mile (660 feet, 200 meters) from the nest site. No permitted, authorized, or human encroachment activities within ¼ mile radius of active nests from December 1 through July 31. This buffer recommendation matches the USFWS 2007 Guidelines in the instances where eagles have demonstrated the ability to tolerate previous levels of human encroachment and surface occupancy.

Winter Night Roost and/or Communal Roost: No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius of an active night and/or communal roost from November 15 through March 15 if there is no direct line of sight between the roost and the activity. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of an active night or communal roost from November 15 through March 15 if there is a direct line of sight between the roost and the activity.

If an active winter night roost is located within a Highly Developed Area, then no permitted, authorized, or human encroachment activities within ⅛ mile (660 feet, 200 meters) radius from November 15 through March 15 if there is no direct line of sight between the roost and the activity. No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius from November 15 through March 15 if there is a direct line of sight between the roost and the activity. Note: Communal roosts are relatively rare in Colorado and have disproportionately high biological value. Therefore a reduced buffer within a Highly Developed Area does not apply to communal roosts.

If periodic visits (such as oil well maintenance work) to preexisting facilities are required within the buffer zones described above, activity should be restricted to the period between 1000 and 1400 hours from November 15 to March 15.

GOLDEN EAGLE

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from December 15 through July 15.

FERRUGINOUS HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from February 1 through July 15. This species is especially prone to nest abandonment during incubation if disturbed.

RED-TAILED HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ⅓ mile radius of active nests. No permitted, authorized, or human encroachment activities within ⅓ mile radius of active nests from February 15 through July 15. Some individuals of this species have adapted to urbanization and may exhibit a high tolerance to human habitation and activities within 100 yards of their nest. Development that encroaches on rural nest sites is more likely to cause abandonment.

SWAINSON'S HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius of active nests from April 1 through July 31. Some members of this species have adapted to urbanization and may tolerate human habitation to within 100 yards of their nest.

PEREGRINE FALCON

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) mile of the nest cliff(s) from March 15 to July 31. Due to propensity to relocate nest sites, sometimes up to ½ mile (2640 feet, 800 meters) along cliff faces, it is more appropriate to designate 'Nesting Areas' that encompass the cliff system and a ½ mile (2640 feet, 800 meters) buffer around the cliff complex.

PRAIRIE FALCON

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from March 15 through July 15.

NORTHERN GOSHAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from March 1 through September 15.

OSPREY

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ¼ mile

(1320 feet, 400 meters) radius of active nests from March 15 through August 15. Some osprey populations have habituated and are tolerant to human activity in the immediate vicinity of their nests.

MEXICAN SPOTTED OWL

No surface occupancy (beyond that which historically occurred in the area) within USFWS designated Critical Habitat and within Protected Activity Center (PAC). No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800m) buffer of Protected Activity Center from March 1 through August 31.

BURROWING OWL

Nest Site: No permitted, authorized, or human encroachment activities within ⅛ mile (660 feet, 200 meters) of the nest site during the nesting season March 15 through August 31. For large industrial disturbances (drilling rig, residential construction, etc.), no permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) of the nest site during the nesting season March 15 through August 31. Although Burrowing Owls may not be actively nesting during this entire period, they may be present at burrows up to a month before egg laying and several months after young have fledged. Therefore, it is recommended that efforts to eradicate prairie dogs or destroy abandoned towns not occur between March 15 and October 31 when owls may be present. Because nesting Burrowing Owls may not be easily visible, it is recommended that targeted surveys be implemented to determine if burrows are occupied. More detailed recommendations are available in a document entitled "Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls," which is available from the CPW.

DEFINITIONS

Active nest – Any nest that is frequented or occupied by a raptor during the breeding season, or which has been occupied in any of the five previous breeding seasons. Many raptors use alternate nests in various years. Thus, a nest site may be active even if a particular structure is not occupied in a given year.

Winter night roost and/or communal roost – Areas where bald eagles and sometimes golden eagles perch overnight or gather to perch or forage. Individuals, pairs, and groups of eagles demonstrate site fidelity to winter night roosts and communal roosts throughout the winter season and year after year. Communal roost sites have more than 15 eagles for the majority of the roosting season and are usually in large trees (live or dead) that are relatively sheltered from wind and are generally in close proximity to foraging areas. Winter night roost and communal roosts may also serve a social purpose for pair bond formation and communication among eagles.

Permitted, authorized, or human encroachment activities- Any activity that brings humans in the area. Examples include construction activities, oil and gas development and production, driving, facilities maintenance, boating, trail access (e.g., hiking, biking), etc.

Surface Occupancy – Any physical object that is intended to remain on the landscape permanently or for a significant amount of time. Examples include houses, oil and gas wells, tanks, wind turbines, solar developments, roads, tracks, trails, etc.

Highly Developed Area – An area where existing density from the cumulative development of oil and gas facilities, home sites, subdivisions, commercial buildings, malls, apartment complexes, gravel pit operations, etc. exceed 10 or more daily occupied facilities within a ¼ mile (1320 feet, 400 meters) radius of the nest. Determination of whether or not a nest site is within a highly developed area will be done in consultation with CPW.

Mexican Spotted Owl Critical Habitat – Critical habitat is defined as areas of land and water with physical and biological features that are essential to the conservation of a threatened or endangered species, and that may require special management considerations or protection. Defined by U.S. FWS Final Rule 2004.

Mexican Spotted Owl Protected Activity Center (PAC) – An area established around an owl nest (or sometimes roost) site, for the purpose of protecting that area. Management of these areas is largely restricted to managing for forest-health objectives.

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REFERENCES

Bechard, M.J., and J.K. Schmutz. 1995. Ferruginous Hawk (*Buteo regalis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/172

Buehler, D.A. 2000. Bald Eagle (*Haliaeetus leucocephalus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/506

Call, M. 1979. Habitat management guides for birds of prey. Technical Note No.338, U.S. Bureau of Land Management, Denver Service Center, Denver, CO. 69pp. Energy Research and Development Administration (ERDA). 1977. EIA for CUI Venture application for geothermal loan guarantee (Beryl and Lund, Utah). EIA/GE/77-8. Washington, D.C. 109pp.

England, A.S., M.J. Bechard, and C.S. Houston. 1997. Swainson's Hawk (*Buteo swainsoni*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/265

Greater Yellowstone Bald Eagle Working Group. 1996. Greater Yellowstone bald eagle management plan: 1995 update. Greater Yellowstone Bald Eagle Working Group, Wyoming Game & Fish Dept., Lander WY 82520. 47pp.

Grier, J.W., F.J. Gramlich, J. Mattisson, J.E. Mathisen, J.V. Kussman, J.B. Elder, and N.F. Green. 1983. The bald eagle in the northern United States. Bird Cons. 144-66.

Haug, E.A., B.A. Millsap, and M.S. Martell. 1993. Burrowing Owl (*Athene cunicularia*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/061

Holmes, Tamara L. 1993. Behavioral responses of grassland raptors to human disturbance. MS Thesis. Colorado State University, Fort Collins. 62pp.

Holthuijzen, A.M.A., W.G. Eastland, A.R. Ansell, M.N. Kochert, R.D. Williams, and L.S. Young. 1990. Effects of blasting on behavior and productivity of nesting prairie falcons. Wildl. Soc. Bull. 18:270-281.

Kochert, M. N., K. Steenhof, C. L. Mcintyre, and E. H. Craig. 2002. Golden Eagle (*Aquila chrysaetos*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/684

Martin, D.J. 1973. Selected aspects of burrowing owl ecology and behavior. Condor 75:446-456.

Northern States Bald Eagle Recovery Team. 1983. Northern States Bald Eagle Recovery Plan. U.S. Fish and Wildlife Service. 75pp.

Olendorff, R. R., and W.D. Zeedyk. 1978. Land management for the conservation of endangered birds. Pages 419-428 in S.A. Temple, ed. *Endangered birds*. University of Wisconsin Press, Madison, Wisconsin.

Poole, A.F., R.O. Bierregaard, and M.S. Martell. 2002. Osprey (*Pandion haliaetus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/683

Preston, C.R., and R.D. Beane. 1993. Red-tailed Hawk (*Buteo jamaicensis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/052

Reynolds, R., R.T. Graham, H.M. Reiser. 1992. Management recommendations for the northern goshawk in the southwestern United States. Gen. Tech. Rep. RM-217. Fort Collins, CO. U.S. Dept. of Agri., Forest Service, Rocky Mountain Forest and Range Experiment Station. 90pp.

Richardson, C.T. and C.K. Miller. 1997. Recommendations for protecting raptors from human disturbance: a review. Wildl. Soc. Bull. 25(3):634-638.

Rocky Mountain/Southwest Peregrine Falcon Recovery Team. 1984. American peregrine falcon Rocky /Southwest population recovery plan. U.S. Fish and Wildlife Serv. 105pp.

Squires, J.R., S.H. Anderson, and R. Oakleaf. 1993. Home range size and habitat-use patterns of nesting prairie falcons near oil developments in northeastern Wyoming. J. Field Ornithol. 64:1-10.

Steenhof, Karen. 1998. Prairie Falcon (*Falco mexicanus*), The Birds of North America Online Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/346

Squires, J.R., and R.T. Reynolds. 1997. Northern Goshawk (*Accipiter gentilis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/298

Suter, G.W. and J.L. Joness. 1981. Criteria for Golden Eagle, Ferruginous Hawk, and Prairie Falcon nest site protection. J. Raptor Res. 15(1):12-18.

Swenson, J.E. 1979. Factors affecting status and reproduction of ospreys in Yellowstone National Park. J. Wildl. Manage. 43:595-601.

Thomsen, L. 1971. Behavior and ecology of burrowing owls on the Oakland Municipal Airport. Condor 73:177-192.

U.S. Fish and Wildlife Service. 2004. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl. 50 CFR Part 17. Federal Register Vol. 69, No. 168 August 31, 2004.

U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf

U.S. Fish and Wildlife Service. 2012. Final Recovery Plan for the Mexican Spotted Owl (*Strix occidentalis lucida*), First Revision. U.S. Fish and Wildlife Service, Albuquerque, New Mexico, USA. 413 pp.

U.S. Fish and Wildlife Service. 2016. Eagle Permits; Revisions to Regulations for Eagle Incidental Take and Take of Eagle Nests. 50 CFR Parts 13 and 22. Federal Register Vol. 81 No. 242, December 16, 2016.

White, C.M., N.J. Clum, T.J. Cade, and W.G. Hunt. 2002. Peregrine Falcon (*Falco peregrinus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/660

COLORADO
Parks and Wildlife
Department of Natural Resources

Recommended Buffer Zones and Seasonal Restrictions Around Raptor Use Sites

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bald Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■					■
ACTIVE NEST HIGHLY DEVELOPED AREA – No Surface Occupancy	⅛ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST HIGHLY DEVELOPED AREA – No Human Encroachment	¼ Mile	■	■	■	■	■	■	■					■
ACTIVE WINTER NIGHT ROOST without a direct line of sight- No Human Encroachment	¼ Mile	■	■	■								■	■
ACTIVE WINTER NIGHT ROOST with a direct line of sight - No Human Encroachment	½ Mile	■	■	■								■	■

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Golden Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■					■
Osprey													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	¼ Mile			■	■	■	■	■	■				
Ferruginous Hawk													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile		■	■	■	■	■	■					
Red-tailed Hawk													
ACTIVE NEST - No Surface Occupancy	⅓ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	⅓ Mile		■	■	■	■	■	■					
Swainson's Hawk													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	¼ Mile				■	■	■	■					

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Peregrine Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Prairie Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Northern Goshawk													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Burrowing Owl													
ACTIVE NEST - No Human Encroachment	⅛ Mile												
ACTIVE NEST INDUSTRIAL ACTIVITIES – No Human Encroachment	¼ Mile												
Recommend against prairie-dog eradication or conduct surveys													

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Mexican Spotted Owl													
Critical Habitat and Protected Activity Center (PAC) – No Surface Occupancy													
Critical Habitat and Protected Activity Center (PAC) – No Human Encroachment	½ Mile												
		= time period for which seasonal restrictions are in place.											