NATURAL FEATURES REPORT

for

Iron Ridge
El Paso County, CO

PREPARED FOR:

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1.0 INTRODUCTION

Atticus Land, LLC ("Applicant") has retained Bristlecone Ecology, LLC ("B.E." or "Agent") to perform field assessments and prepare a Natural Features Report for the proposed Iron Ridge development ("Project"), located in unincorporated El Paso County (EPC), Colorado.

1.1. Purpose and Goals

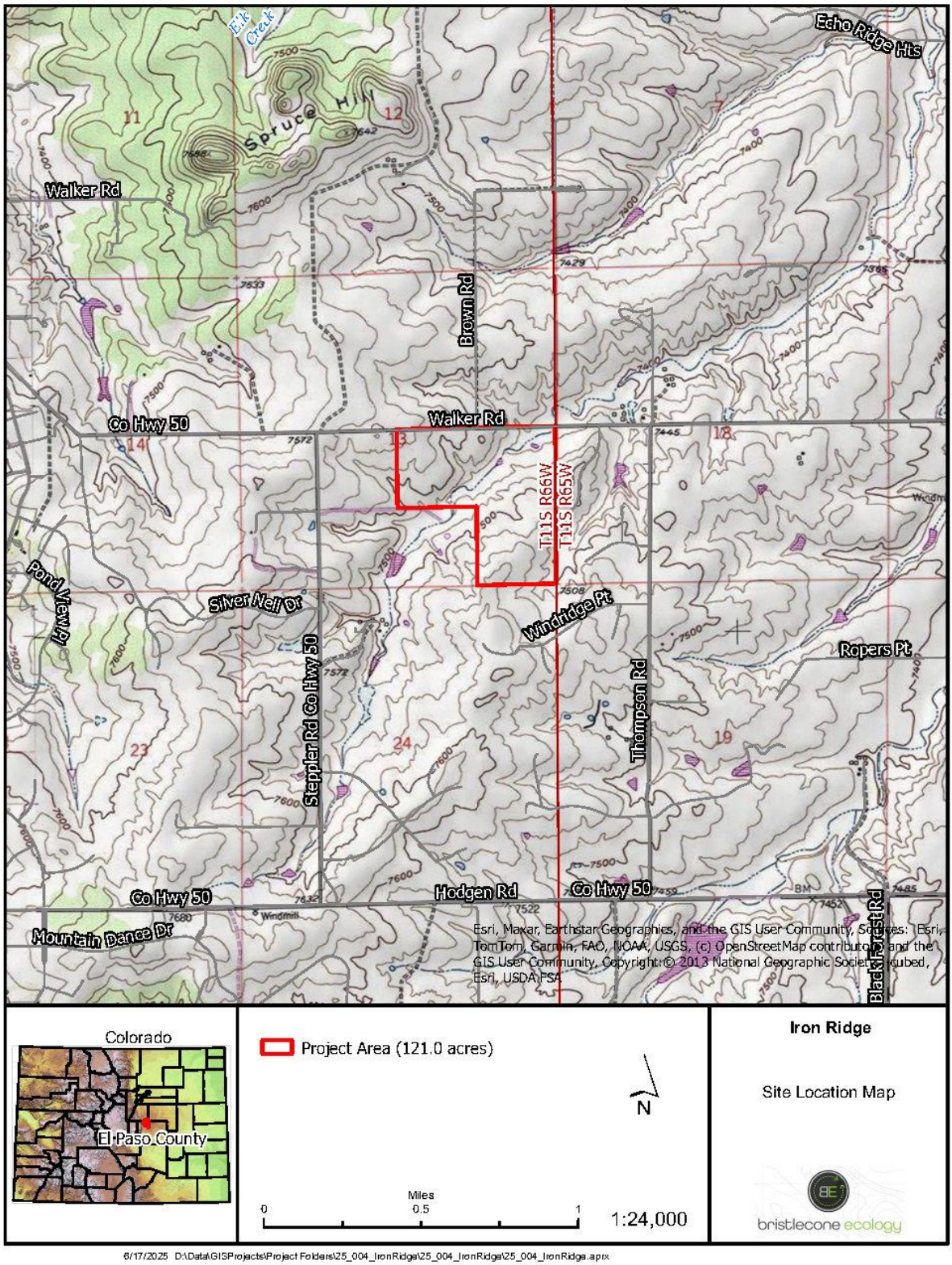
The purpose of this report is to document natural resources and existing site conditions in order to identify potential environmental constraints that may affect the development of the Project. In addition, a goal of this report is to provide guidance on regulatory issues that could influence site development in accordance with development planning and application submittals in EPC. EPC's Land Development Code requires the preservation of natural landscapes and identification of potential environmental constraints, including:

- Vegetation, including noxious weeds and riparian habitats
- Soil suitability
- Significant topographic features
- Aquatic resources, i.e., wetlands/Waters of the U.S. (WOTUS)
- Potential wildfire hazards
- Potential flood hazards
- Potential wildlife impacts
- Potential occurrence of federal and state-listed threatened and endangered (T&E) species

1.2. Project Description and Site Location

The Project will involve the development of approximately 121 acres of land within El Paso County Parcels No. 6100000457and No. 6100000439. The Project area is located south of the intersection of Walker Road and Brown Road; it is bounded on all sides by scattered rural residential development and agriculture/ranchlands (**Figure 1**: *Site Location Map)*. The Project will consist of single-family residential lots, local roads, utilities, and other associated facilities and infrastructure. The site is located on portions of Sections 13 in Township 11S, Range 66W, and can be found on the U.S. Geological Survey's (USGS) Black Forest 7.5-minute quadrangle (USGS 2020). Elevations of the Project site range between approximately 7,415 and 7,620 feet above mean sea level (AMSL).

Figure 1: Site Location Map



2.0 METHODOLOGY

B.E. performed a desktop review to gather background information about the environmental setting of the Project area. Publicly available data sources queried via desktop included:

- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) data
- USFWS Critical Habitat Portal
- Species profiles and spatial data from Colorado Parks and Wildlife (CPW)
- USGS topographic maps
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panels
- Google Earth current and historic aerial imagery
- Colorado State Forest Service (CSFS) Wildfire Hazard Maps
- National Resources Conservation Service (NRCS) county soil survey data
- Colorado Natural Heritage Program (CNHP) Survey of Critical Biological Resources

Following the desktop review of these resources, a site reconnaissance was conducted on June 13th, 2025, to field-verify results of the review and identify potential impacts to resources and constraints to development. The field reconnaissance focused on identifying significant topographic and geologic features, on classifying vegetation communities on the site, and on identifying suitable wildlife habitat, particularly that which could support T&E and sensitive species. Photographs of the site visit can be seen in **Appendix A:** *Photographic Log*.

3.0 ENVIRONMENTAL SETTING

The Project area is located within the Foothill Grasslands Level IV ecoregion in Colorado (Chapman et al. 2006). The Foothills Grasslands Ecoregion is composed of a mixture of tall and mid-grasses and isolated pine woodlands (Chapman et al. 2006). Dominant species in the ecoregion include little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virgatum*), and yellow Indiangrass (*Sorghastrum nutans*) (Chapman et al. 2006).

The topography of the Project consists mainly of gently rolling grasslands and some vegetation typical of grasslands within the Foothill Grasslands ecoregion predominates within the site. The majority of the site is moderately disturbed, healthy short- and mid-grass rolling grasslands. Diversity is moderate for this ecoregion, and the structure of vegetation in the uplands is graminoid-dominated but well developed. The site is surrounded by scattered rural residential development and agriculture/ranchlands.

The Project site contains no Colorado Natural Heritage Conservation Areas or Potential Conservation Areas according to the CNHP (2022), and according to the USFWS' Information for Planning and Consultation (IPaC; 2022), does not contain Wildlife Refuges or Hatcheries. The area has been used historically as rangeland, but residential and commercial development is increasing steadily.

3.1. Vegetation

An array of native and nonnative plants were observed during the site assessment. Gray goldenrod (*Solidago nemoralis*), buffalograss (*Bouteloua dactyloides*), smooth brome (*Bromus inermis*), and hairy false goldenaster (*Heterotheca villosa*) were the dominant species in uplands throughout the site. Other upland species present included soapweed yucca (*Yucca glauca*), fringed sage (*Artemisia frigida*), lambsquarters (*Chenopodium album*), and yarrow (*Achillea millefolium*), among others. Within wetter areas, Baltic rush (*Juncus balticus*), speedwell (*Veronica sp.*), Nebraska sedge (*Carex nebrascensis*), annual bluegrass (*Poa annua*), common spikerush (*Eleocharis palustris*), and Canada wildrye (*Elymus canadensis*) were the dominant species. The only tree present was a plains cottonwood (*Populus* deltoides) within a depression on the northeast corner of the site. The majority of the site is moderately disturbed, generally healthy short- and mid-grass rolling grasslands.

Within the Project site, wetland vegetation is associated with an unnamed tributary to East Cherry Creek in the center of the site, as well as a manmade stock pond at the center of the eastern side of the site. The tributary is best described as a broad, shallow upland swale that supports predominantly wetland plants in some locations and upland plants in others. In-channel vegetation included Baltic rush, Nebraska sedge, annual bluegrass, common spikerush, smooth brome, and Canada wildrye.

A few varieties of noxious weeds were present at the site, mostly scattered throughout the property in low densities. Noxious weed species observed included common mullein (*Verbascum thapsus*), downy brome/cheatgrass (*Bromus tectorum*), diffuse knapweed (*Centaurea diffusa*), and houndstongue (*Cynoglossum officinale*). The most prominent noxious weed species observed

was diffuse knapweed, a List B noxious weed in El Paso County. Noxious weeds are discussed further in **Section 3.4**.

B.E. reviewed CNHP data for the Black Forest 7.5-minute quadrangle, which summarizes vegetation communities in the state by USGS quadrangle. Data were reviewed to determine the probability of the presence/absence of significant natural communities, rare plant areas, and riparian corridors that could be found within the Project area. Based on CNHP's data and the site reconnaissance, the probability of these plant communities being impacted by Project development is described below in **Table 1**: *Potentially Impacted Rare Vegetation Communities*.

Table 1. Potentially Impacted Rare Vegetation Communities (CNHP 2022)

Plant Community (Type)	Status[1]	Presence and Location	Probability of Impacts
Andropogon gerardii-Sporobolus heterolepis – Western Foothills Grassland (Xeric Tallgrass Prairie)	G2, S1	Mesic habitats of the Rocky Mountain foothills and riverine habitats. This type is a regional endemic found in eastern Colorado, western Oklahoma, and possibly elsewhere.	None. Community is not present in the Project area. Neither big bluestem nor dropseed were present at the site.
Pinus ponderosa / Schizachyrium scoparium Open Woodland –Foothills Ponderosa Pine Savannas	G3G4, S1	Dry woodland habitats in the Great Plains characterized by scattered bunchgrasses amid pumic gravel and litter, dominated by ponderosa pine and little bluestem.	None. Ponderosa pines were not observed in the Project Area. Little bluestem could occur but was not observed.
Pinus ponderosa / Carex inops ssp. *heliophila* Woodland – Foothills Ponderosa Pine Savannas	G3G4, S1	Mesic savanna habitats found in foothills along the Rocky Mountains dominated by bunchgrasses, sedges, and rocky outcroppings.	None. Ponderosa pines were not observed in the Project Area. Sun sedge could occur but was not observed.

1 = Critically Imperiled; 2 = Imperiled; 3 = Rare or Uncommon; 4 = Widespread, Abundant, and Apparently Secure; 5 = Demonstrably Widespread, Abundant, and Secure; NR = Not Ranked

3.2. Soils

Soil survey data and reports were reviewed to determine the potential for the presence of geologic hazards within the Project (NRCS 2022a). County soil survey data indicated that the site is composed primarily of Tomah-Crowfoot loamy sands (3 to 8 percent slopes; 53.2% of Project area) and Peyton sandy loam (5 to 9 percent slopes; 44.3% of Project area), with a few additional minor components (NRCS 2022a; **Figure 2:** *NRCS SSURGO Soils*). Additional soils comprising a smaller area included Peyton-Pring complex (8-15% slopes; 2.5% of Project area [**Figure 2**]). These soils were identified as the primary series occupying the Project area; there are also minor components (called "inclusions") within each series or consociation that could contribute to the overall soil composition at the site.

The NRCS provides information on soil properties that could influence the development of building sites for dwellings with and without basements, as well as small commercial buildings,

including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Qualitative soil ratings are assigned to each major soil group and include 'Not Limited,' 'Somewhat Limited,' and 'Very Limited.' 'Not Limited' indicates that the soil type has properties that are very favorable for the specified type of construction. 'Somewhat Limited' indicates that the soil type has properties that are moderately favorable for the specified type of construction, however these limitations can generally be overcome through planning and design considerations. 'Very Limited' indicates that the soil type has properties that cannot generally be overcome through design and planning considerations (NRCS 2022b). Based on the soils present, the majority of the site was rated 'Not Limited' for dwellings with or without basements (NRCS 2022b). The Peyton-Pring complex (2.5% of the site) was rated 'Somewhat Limited' for dwellings with or without basements (NRCS 2022b). For small commercial buildings, the majority of the site was rated 'Somewhat Limited', while the Peyton-Pring complex was rated 'Very Limited' for small commercial buildings (NRCS 2022b).

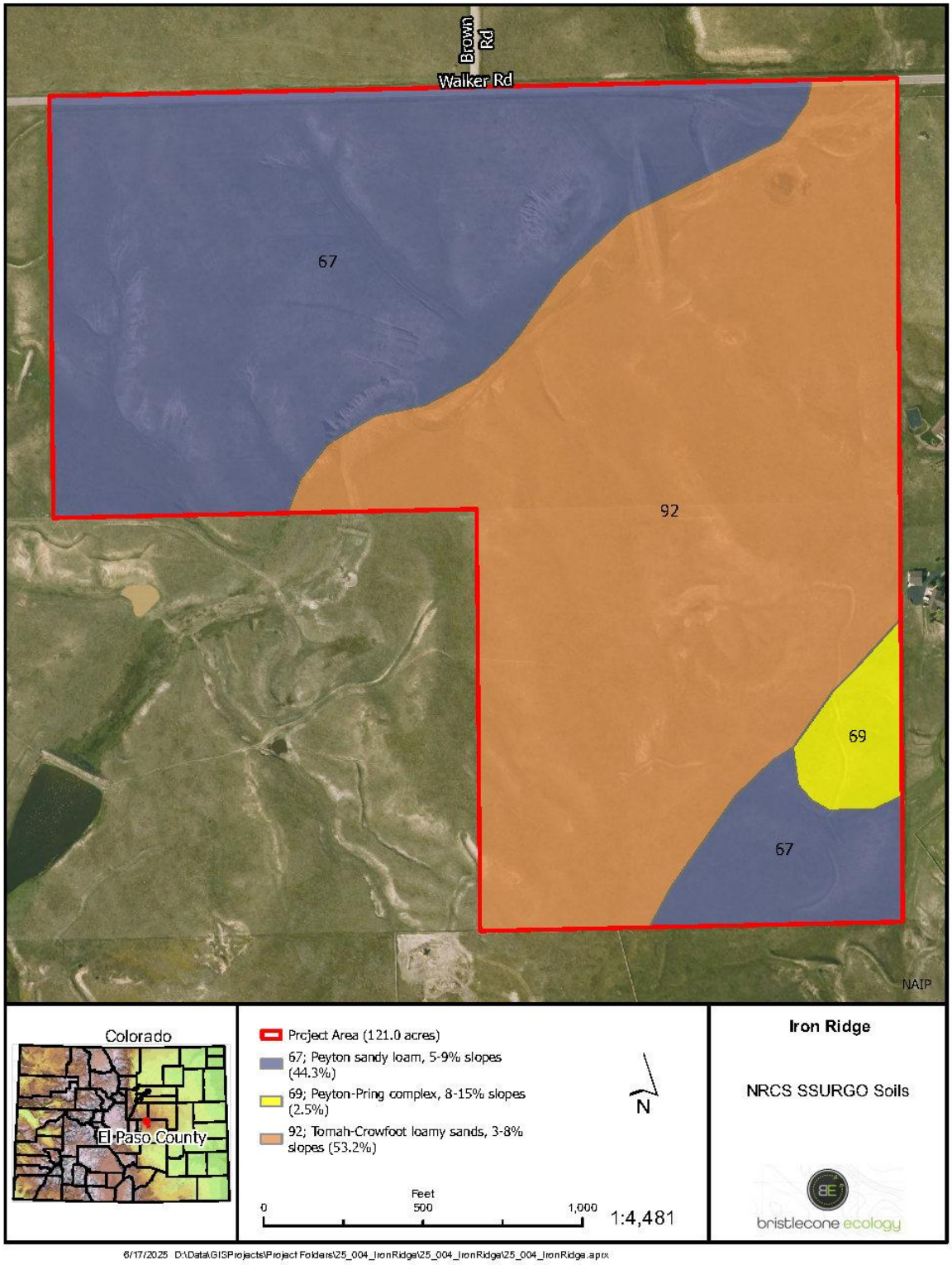
B.E. reviewed the hydric soil ratings for all soil components present on the Project site to aid in the identification of wetland habitats during the site reconnaissance. Hydric soils are those that form under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions, and their formation is required in order for wetlands to become established. All of the primary soil series occurring on the site were described as having a low hydric to nonhydric rating in El Paso County, with each series rated as follows:

- Peyton sandy loams (5 to 9 percent slopes) – hydric rating 5
- Peyton-Pring complex (8 to 15 percent slopes) – hydric rating 5
- Tomah-Crowfoot loamy sands (3 to 8 percent slopes) – hydric rating 5

Hydric ratings are on a scale of 1 to 100, with 100 having greater hydric components and zero having no hydric components (NRCS 2022a). The Pleasant soil series, a minor component of some of the primary series on the site, is rated as hydric in El Paso County and is typically found in depressions and drainages where ponding can regularly occur (NRCS 2022c). Pleasant soil is likely found in depressions, swales, and other wetter portions of the site where wetlands may occur. Based on these ratings, the overall suitability of the site to support the development of hydric soils, and thus the presence of wetlands, is moderate in depressions, swales, and wetter areas, and very low in other areas.

All of the soil series on site are grouped into Hydrologic Group B (NRCS 2022d). The 'B' grouping includes soils that have a moderate infiltration rate, which results in the soil having a corresponding moderate rate of surface and ground water transmission. Additional detailed soil data for the Project will be presented in a soils/geology/geotechnical report that will be submitted separately.

Figure 2: NRCS SSURGO Soils Data



3.3. Significant Topography and Natural Landforms

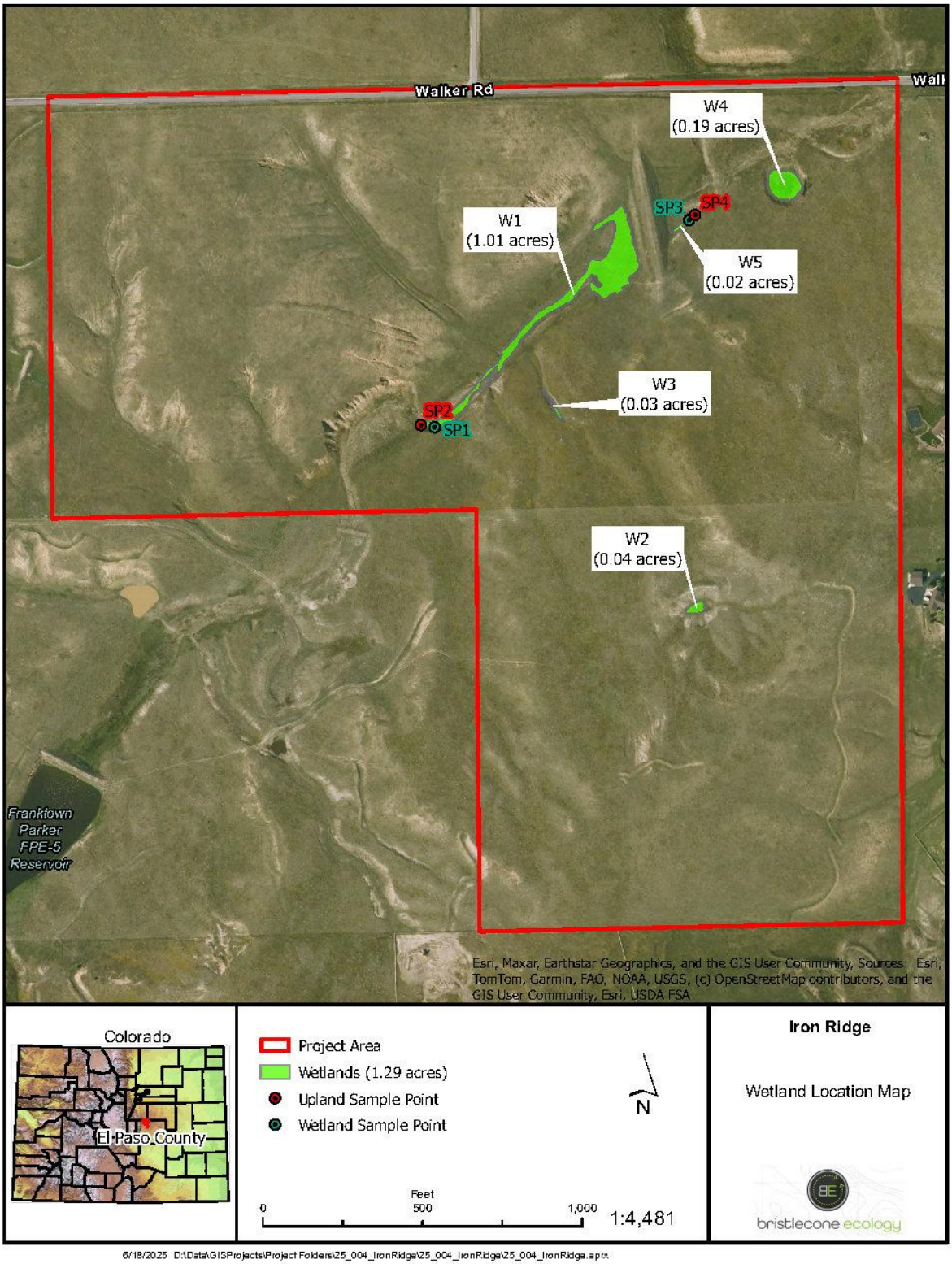
The topography of the site is characterized primarily by flat to rolling grasslands, as well as one large swale typical of foothill plains formation, flowing northeastward toward East Cherry Creek (off site). This main swale is the most significant natural feature on the site. There are two steep cutbanks on the north side of the main swale, which winds across the center of the site from southwest to northeast. In general, the main swale supports ephemeral flows, but is clearly visible in the topography throughout its reach within site. A dam interrupts the main swale in the northeast quadrant of the site. There are also smaller swales that feed into the main swale, which are less clearly defined and do not represent major topographic features. There are a few small depressions throughout the Project area, some of which may be natural and some which are clearly manmade. These swales and depressions contribute to the site's overall drainage pattern, channeling runoff from the site to the northeast and shaping localized hydrology. In addition, the cutbanks and other steep areas represent significant topographic constraints to development, and most likely contribute to determining some 'No Build' areas.

Besides the above-described features, there were few other natural landforms or significant topography on the site. There were no rock outcroppings, cliffs, or other significant geologic features on the site, no riparian corridors, and no streams.

3.4. Aquatic Resources

Aquatic resources include jurisdictional wetlands and other regulated WOTUS such as streams/rivers, ponds/lakes, and ditches, as well as non-regulated wetlands, streams/rivers, ponds/lakes, ditches, and other surface water features. A desktop review and formal wetland delineation was conducted on June 13th, 2025. The survey identified four wetlands in the northeast quadrant of the site along an unnamed tributary of East Cherry Creek; an additional isolated wetland associated with a manmade stock pond was mapped in the center of the eastern side of the site (**Figure 3:** *Wetland Location Map*). Further details about these features can be found in **Appendix B**: *Wetland Delineation Report.*

Figure 3: Wetland Location Map



3.5. Noxious Weeds

Noxious weeds are defined as those non-native plants that aggressively invade and are detrimental to native vegetation communities and ecosystems. The *Colorado State Noxious Weed Act* (Colorado Revised Statute 35-5.5-103) developed a list of plants considered noxious in the state of Colorado that should be targeted for control by various methods dependent upon list category (A, B, or C). In addition, requirements have been set forth by the El Paso County Noxious Weed Management Plan (EPC 2017), and the El Paso County Noxious Weeds and Control Methods report (EPC 2018a), which contain guidelines for the control and treatment of noxious weeds found in the County. EPC requires that residential, commercial, or industrial projects that include ground disturbing activities submit a project-specific noxious weed management plan.

B.E. noted various noxious weed populations on the site with few areas of concentration. List B species observed included diffuse knapweed and houndstongue, and List C species observed included downy brome (AKA cheatgrass) and great mullein. Diffuse knapweed was the most common noxious weed, with one moderate-sized swath in the center of the west side of the site. The remaining species were dispersed sporadically throughout the site and were not abundant. A site-specific plan has been developed to prevent and control the spread of noxious weeds at the site during construction and post-construction.

3.6. Wildfire Hazards

In the 2018 El Paso County Development Standards, the stated purpose and intent for fire protection and wildfire mitigation is to ensure that any proposed development is reviewed for wildfire risks and adequate fire protection (EPC 2018b). No permit associated with development, construction, or occupancy shall be approved or issued until the provisions of these standards are satisfied, and a Wildland Fire and Hazard Mitigation Plan may be required. The Project area is located within the Monument Fire District (MFD) coverage. The site is within MFD Response Polygon TRM-W3 and would be serviced primarily by Station 2. There are five fire stations within the MFD, located as follows:

- Station 1; 18650 Highway 105, Monument CO, 80132
- Station 2; 18460 Roller Coaster Road, Monument CO, 80132 – serves TRM-W3
- Station 3; 1855 Woodmoor Drive, Monument CO, 80132
- Station 4; 15415 Gleneagle Drive, Colorado Springs, CO 80921
- Station 5; 15055 Highway 83, Colorado Springs, CO 80908

In total, the MFD has the following operations equipment available:

- 3 fire engines
- 1 tower ladder
- 3 ambulances
- 3 brush trucks
- 2 water tenders
- 1 snowcat
- 1 side-by-side ATV
- Several command vehicles

Wildfire hazards for the Project site were evaluated using the Colorado State Forest Service's (CSFS) online Wildfire Risk Reduction Planner (WRRP; CSFS 2020). WRRP allows professionals, planners, and the public to access the best scientific information regarding wildfire risk and establish prevention and mitigation measures accordingly. According to WRRP, the Wildfire Risk to Assets at the site is about 5% "Low" risk and about 95% "Lowest" risk (CSFS 2020; **Figure 5**: *Wildfire Risk to Assets*). CSFS determines "Wildfire Risk to Assets" by combining the burn probability rating of a site with the values-at-risk rating. While the Project site has a low to very low rating of values and assets that would be adversely impacted by wildfire, the burn probability for about 15% of the site is rated Level 7 "High", with the remaining 85% rated "Moderately High" at Level 6 (CSFS 2020; **Figure 6:** *Wildfire Burn Probability*). The Fire Intensity rating – a measure of fire behavior based on available fuels, weather, and topography – is a mix of about 20% "Moderate Intensity", 20% "Low Intensity", 60% "Lowest Intensity", due primarily to the entire site being unforested (CSFS 2020; **Figure 7:** *Fire Intensity Rating*). The areas of "Moderate" fire intensity generally correspond to the southern half of the site, though based on B.E.'s examination of the site, available fuels are generally uniform GR1/GR2 low-load, dry climate grasslands.

3.7. Flood Hazards

Flood hazard maps from the Federal Emergency Management Agency (FEMA) were reviewed to determine the potential for flood hazard at the site. The entire site is within Zone X, meaning that the area is deemed by FEMA to have minimum flood hazard "above the 500-year flood zone". (**Figure 8**: *FEMA Flood Hazard Map*).

3.8. Slope

Slopes greater than 20 percent were mapped using topographic survey data and verified during the site reconnaissance (**Figure 8**: *Slope Analysis*). Slopes greater than 20% can affect developability as well as other factors such as fire spread and erosion potential. Based on the survey data, slopes greater than 20 percent are depicted in red in **Figure 8.** Ten-foot contour lines are included to depict topography over an aerial background. Areas of the site that were steep and rocky generally correspond to those portions of the site with slopes greater than 20 percent. These areas generally coincided with the cutbanks of the tributary to East Cherry Creek and depressions where wetlands occurred, as well as the dam in the northeast quadrant of the site, which has a steep downgradient slope (**Figure 8**). All other areas of the site had moderate to low slopes under 20% grade.

Figure 4: Wildfire Risk to Assets

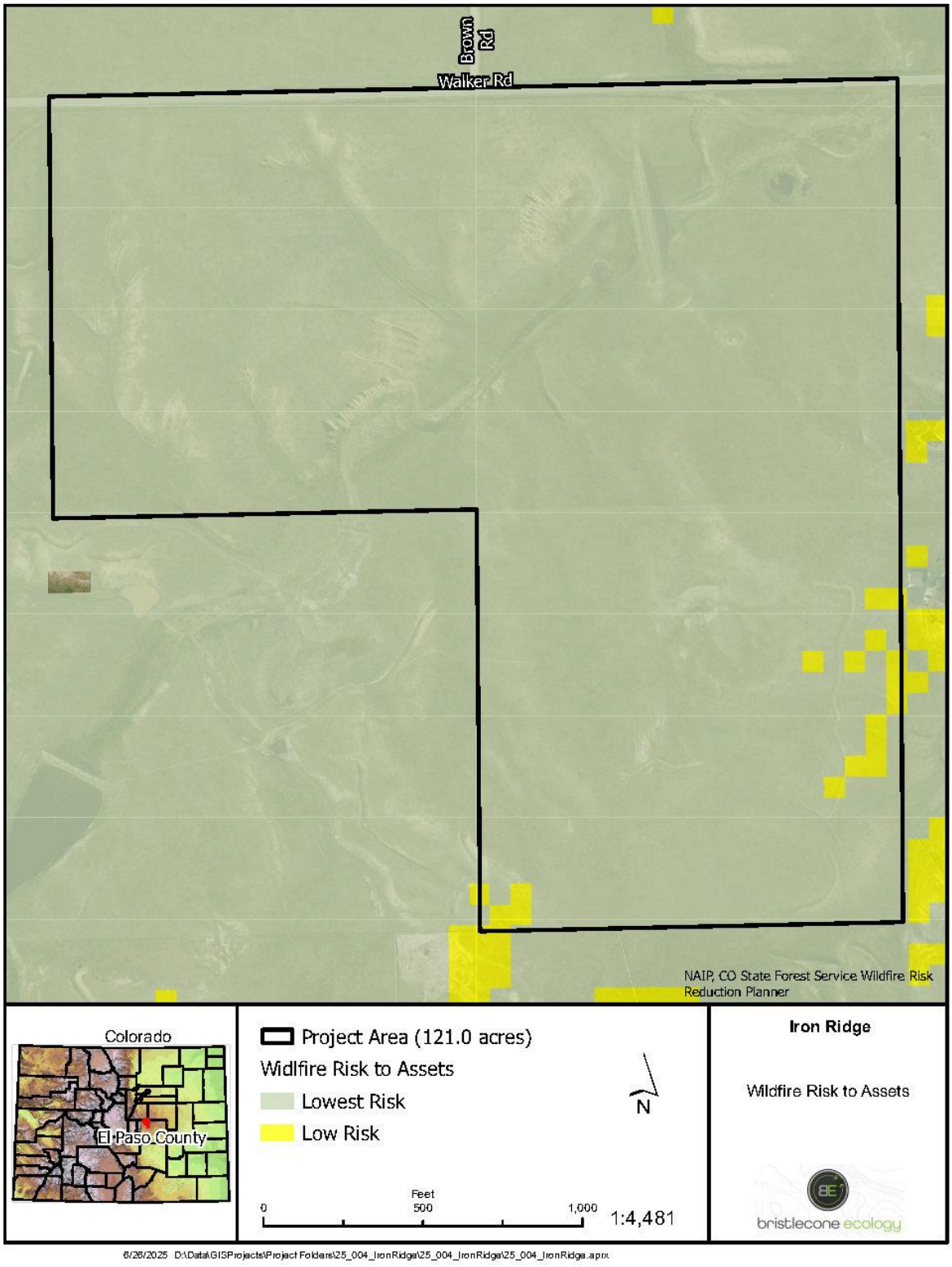


Figure 5: Wildfire Burn Probability

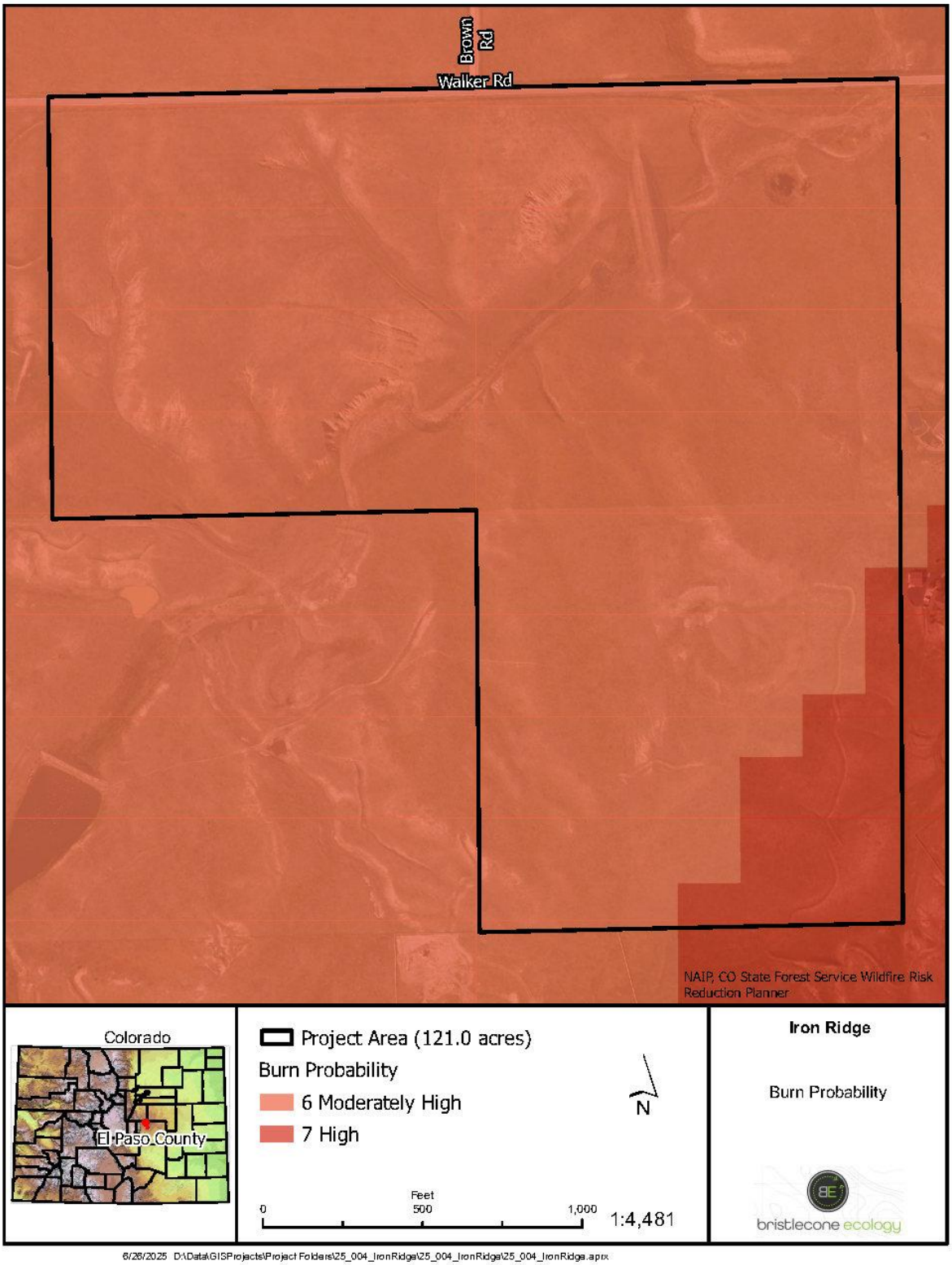


Figure 6: Fire Intensity Scale

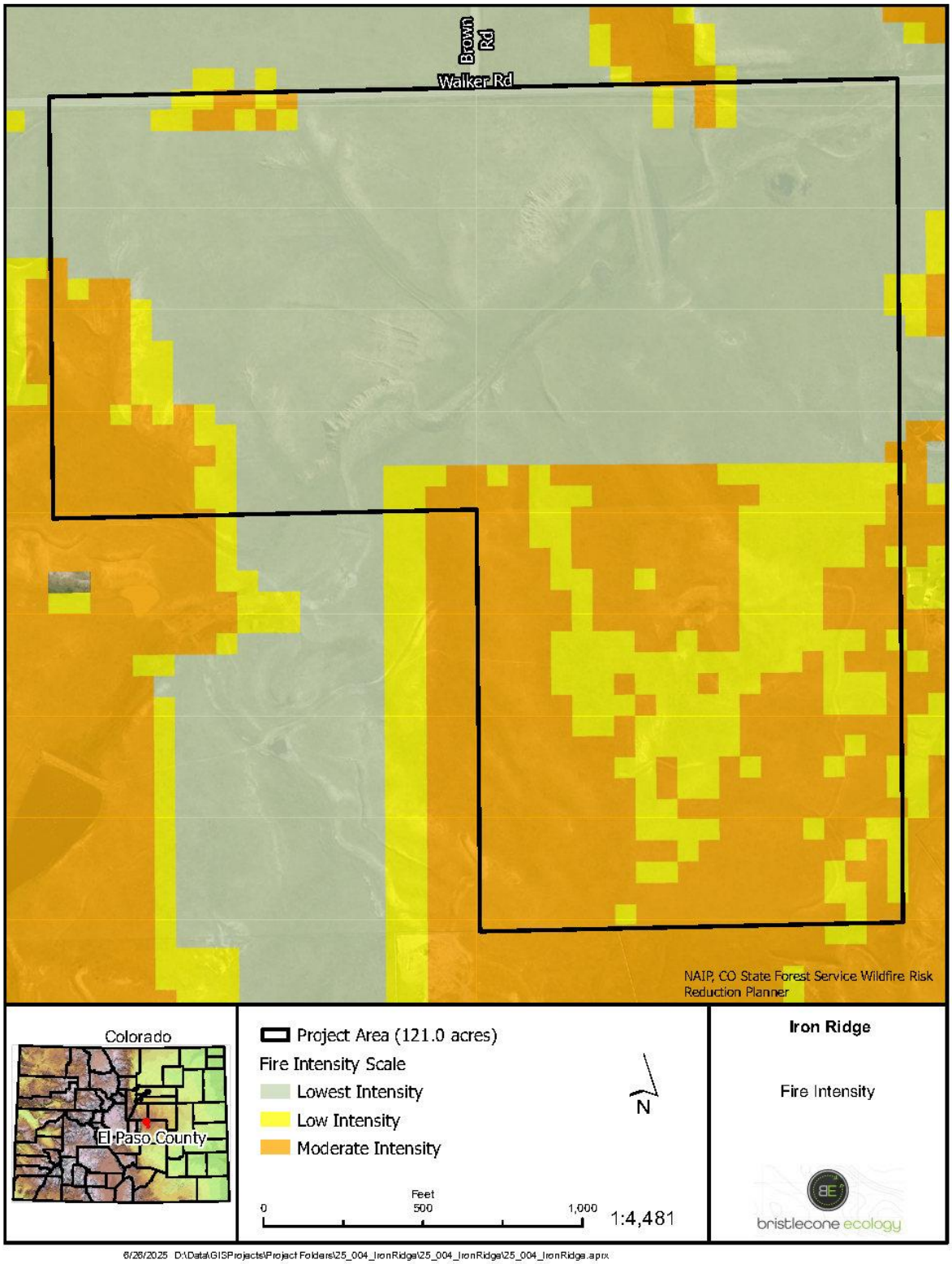


Figure 7: FEMA Flood Hazard Layer

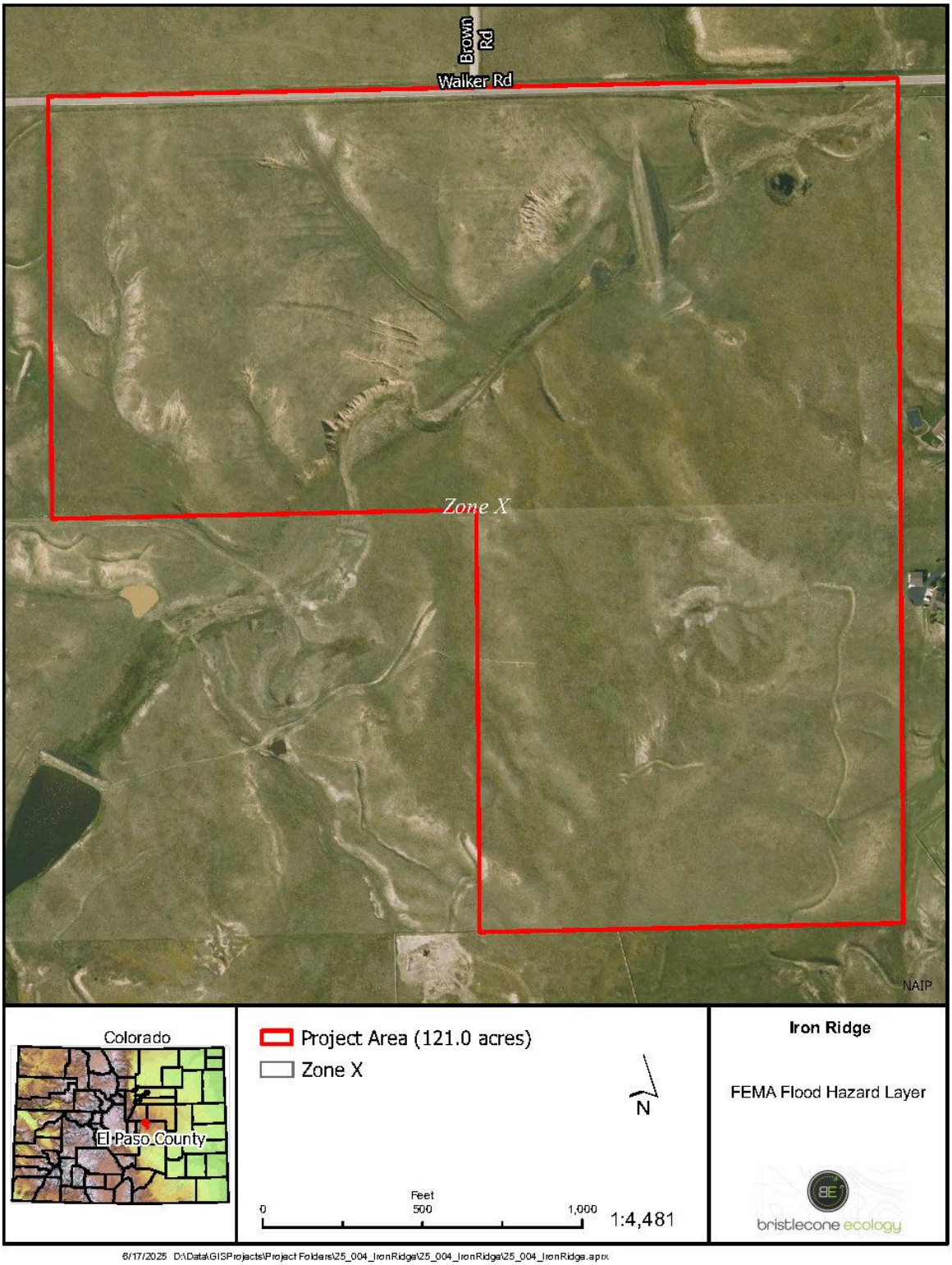
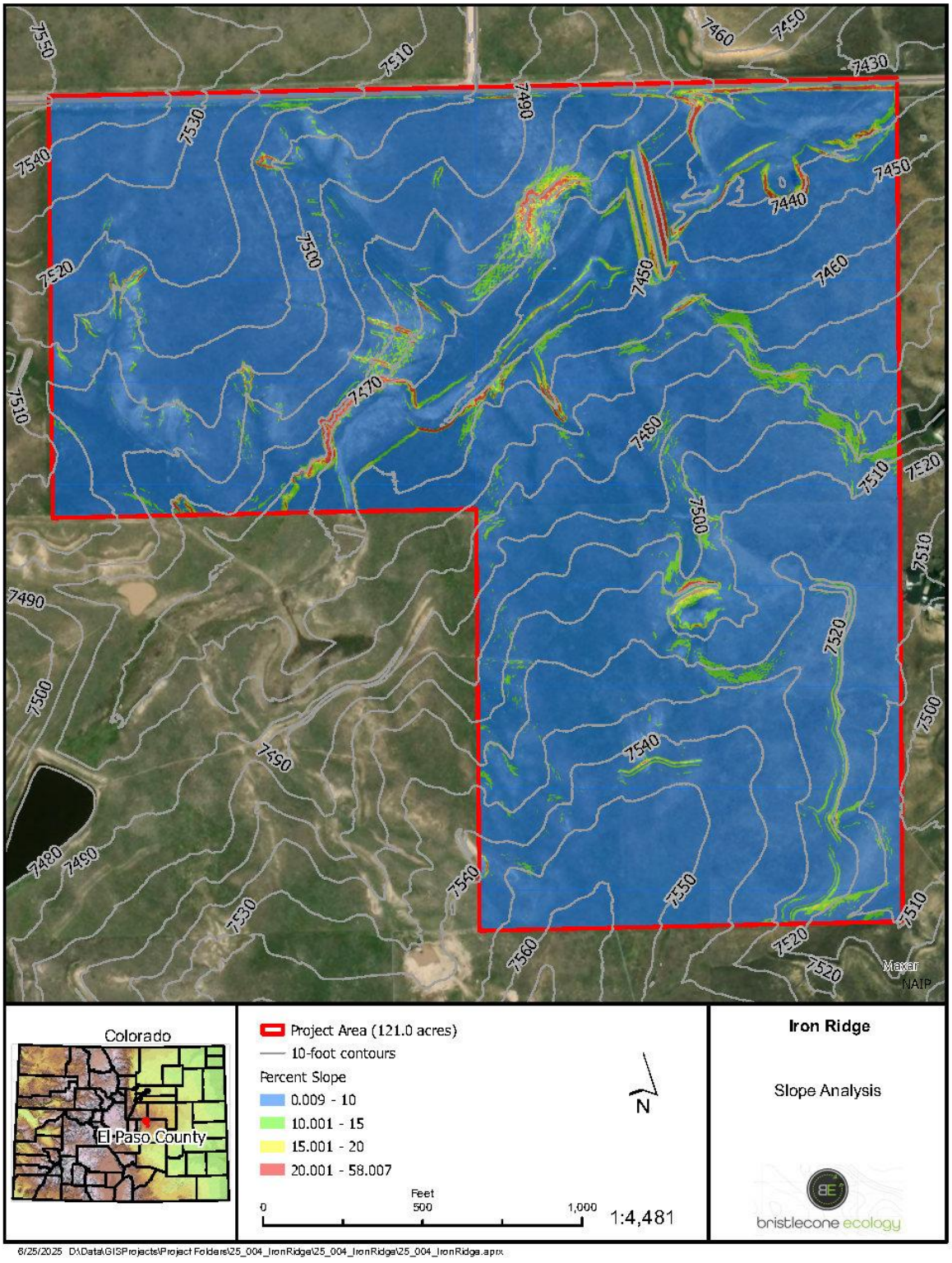


Figure 8: Slope Analysis



3.9. Federally Listed T&E Species

The USFWS IPaC database (USFWS 2025) was used to determine the likelihood of occurrence for federally listed T&E species within the Project area. The IPaC query listed nine species, including one mammal, three birds, two fishes, one insect, and two flowering plants with the potential to occur within, or be affected by, development of the Project Area (**Table 2:** *Federally Listed T&E Species Potentially Impacted by the Project*). B.E. has provided our professional opinion regarding the probability of occurrence of T&E species at the Project site and their probability of being impacted by Project development. A concurrence letter for a determination of 'No Concerns' was requested from USFWS on July 7th, 2025.

Table 2. Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2025)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status[1]
Mammals			
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	Inhabits well-developed riparian corridors with a nearby water source and adjacent, relatively undisturbed grassland communities. Riparian habitat includes a dense combination of grasses, forbs, and shrubs; a taller shrub and tree canopy may be present. Has been found to regularly use uplands at least as far out as 300 feet beyond the 100-year floodplain. The site does not contain any Critical Habitat for Preble's, nor does it contain any habitat suitable for Preble's. They require perennial flowing water, riparian shrubs or saplings, a dense riparian understory, and adjacent relatively undisturbed uplands. **Likelihood of impacts: None, the site is not within Critical Habitat for the species, nor is there suitable habitat available within the site. Downstream populations are unlikely to be affected by the development of the site.**	FT, ST
Birds			
Piping plover	*Charadrius melodus*	Listed under a conditional effects analysis for water depletions in the N. Platte, S. Platte and Laramie River Basins, which may affect listed species in Nebraska. **Likelihood of impacts: Unlikely, the Project will not involve water depletions.**	FT
Eastern black rail	*Laterallus jamaicensis* ssp. *jamaicensis*	Subspecies of black rail that occurs east of the Rocky Mountains in North America. Black rails are small, cryptic marsh/wetland specialists, and depend entirely upon these habitats to support their resource needs. Requires dense overhead cover (usually cattails [*Typha* spp.] or bulrushes [*Schoenoplectus* / *Scirpus* spp.]) and moist to saturated soils. Eastern black rails have been expanding their range in Colorado. **Likelihood of impacts: None, no suitable habitat available.**	FT

[1]FE= Federally Endangered; FT=Federally Threatened; ST=State Threatened; C=Candidate for Listing

Table 2. Federally Listed T&E Species Potentially Impacted by the Project, cont. (USFWS 2022)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status[1]
Birds (continued)			
Whooping crane	*Grus americana*	Listed under a conditional effects analysis for water depletions in the N. Platte, S. Platte and Laramie River Basins, which may affect listed species in Nebraska. **Likelihood of impacts: Unlikely, the Project will not involve water depletions.**	FE
Fish			
Pallid sturgeon	*Scaphirhynchus albus*	Listed under a conditional effects analysis for water depletions in the N. Platte, S. Platte and Laramie River Basins, which may affect listed species in Nebraska. **Likelihood of impacts: Unlikely, the Project will not involve water depletions.**	FE
Insects			
Monarch butterfly	*Danaus plexippus*	Monarch butterflies require milkweeds (*Asclepias* spp.) as a host plant. Caterpillars consume the plant, and adults lay their eggs on milkweed. Monarch butterfly is a Proposed Threatened species for listing under the ESA. While there are no requirements until a listing decision is made, a 4(d) Rule has been proposed and due diligence is encouraged. **Likelihood of impacts: Unlikely, there are no milkweed plants on site.**	P
Suckley's Cuckoo Bumble Bee	*Bombus suckleyi*	Suckley's cuckoo bumblebee is a social parasite that relies entirely on other species of bumblebees as hosts. The last confirmed sighting in the U.S. was in 2016 in Oregon (USFWS 2024). May be found anywhere robust bumblebee colonies are present. While there are no requirements until a listing decision is made, due diligence is encouraged. **Likelihood of impacts: Very Unlikely, site development is unlikely to affect bumblebee host colonies.**	P
Flowering Plants			
Ute ladies'-tresses orchid	*Spiranthes diluvialis*	Primarily occurs along seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels, and lakeshores. May also occur along irrigation canals, berms, levees, irrigated meadows, gravel pits, borrow pits, and other human-modified wetlands. There are no known populations in El Paso County. **Likelihood of impacts: Unlikely, there are no known populations in El Paso County and the entire site is well above the elevation threshold where the species occurs (7,000 feet). Surveys are not required above this threshold.**	FT

[1]FE= Federally Endangered; FT=Federally Threatened; ST=State Threatened; C=Candidate for Listing

Table 2. Federally Listed T&E Species Potentially Impacted by the Project, cont. (USFWS 2022)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status[1]
Flowering Plants (continued)			
Western prairie fringed orchid	*Platanthera praeclara*	Found on unplowed, calcareous prairies and sedge meadows. It requires moist soil, and its persistence is dependent on periodic fire, mowing, and grazing disturbance. Occurs in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and Oklahoma. Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. **Likelihood of impacts: Unlikely, the Project will not involve water depletions.**	FT

[1]FE= Federally Endangered; FT=Federally Threatened; ST=State Threatened; C=Candidate for Listing

3.10. Wildlife Communities

The Project site provides moderate quality habitat for some grassland wildlife, including birds, mammals, reptiles, and amphibians, as well as low-to-moderate quality wetland habitat for these species. Development of the site would inevitably affect some habitat for wildlife. Wildlife that could be affected were identified first by referencing CPW's Species Activity Mapping (SAM) spatial data to assess the likelihood of occurrence for state T&E species, state species of concern (SC), and other general wildlife, including big game species (CPW 2023). The Colorado Natural Heritage Program (2024) also provides species status data from tracked natural animal and plant communities in the state. The review indicated that there is potential for the occurrence of 18 mammals, 14 reptiles and 17 birds, and, including one SC mammal, one state threatened bird, and one federally protected bird (**Table 3:** *SAM Wildlife Potential for Occurrence*).

In general, sensitive wildlife species and Colorado SC species do not receive statutory protections. Some of the species listed in the SAM data have additional designations that may afford them additional protections. The Project area does not intersect with big game migratory routes, though it does intersect with mountain lion (*Puma concolor*) and black bear (*Ursus americanus*) human conflict areas, and an elk (*Cervus canadensis*) concentration area and resident population area (CPW 2023). Development of residential properties has the potential to attract black bears and mountain lions if trash or pets are readily available for forage/as prey animals. The Project Area is within the overall range of black-tailed prairie dog (*Cynomys ludovicianus*), which is a Colorado SC and provides nesting and roosting habitat for the state threatened burrowing owl (*Athene cunicularia*). The Project Area is also within the breeding range of burrowing owls (CPW 2023) and of many additional sensitive bird species, as well as overall range for sensitive bats, lizards, snakes, turtles, and other wildlife (**Table 3**).

Table 3. SAM Wildlife Potential for Occurrence (CPW 2023; CNHP 2024)

Common Name	Scientific Name	Type of Occurrence (CPW 2023)	Status[1,2]
Mammals			
Big brown bat	*Eptesicus fuscus*	Overall range	n/a
Black bear	*Ursa americanus*	Overall range Human conflict area Summer concentration area	n/a
Black-tailed prairie dog	*Cynomys ludovicianus*	Low occurrence	SC, S3
Elk	*Cervus canadensis*	Overall Range Resident population area	n/a
Fringed myotis	*Myotis thysanodes*	Overall range	G4, S3
Hoary bat	*Lasiurus cinereus*	Overall range	n/a
Little brown myotis	*Myotis lucifugus*	Overall range	n/a
Long eared myotis	*Myotis evotis*	Overall range	n/a
Mountain lion	*Puma concolor*	Overall range Human conflict area Peripheral Range	n/a
Mule deer	*Odocoileus hemionus*	Overall range Resident population area	n/a
Olive-backed pocket mouse	*Perognathus fasciatus*	Overall range	G5, S3
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	Overall range	FT, ST
Pronghorn	*Antilocapra americana*	Overall range	n/a
Red bat	*Lasiurus borealis*	Overall range	G3G4, S2S3B
Silver-haired bat	*Lasionycteris noctivagans*	Overall range	n/a
Townsend's big-eared bat	*Corynorhinus townsendii*	Overall range	n/a
White-tailed deer	*Odocoileus virginianus*	Overall range	n/a
White-tailed jackrabbit	*Lepus townsendii*	Overall range	n/a
Reptiles and Amphibians			
Bullsnake	*Pituophis catenifer sayi*	Overall range	n/a
Hernandez short-horned lizard	*Phrynosoma hernadesi*	Overall range	n/a
Milksnake	*Lampropeltis elapsoides*	Overall range	n/a
Ornate box turtle	*Terrapene ornata ornata*	Overall range	n/a
Painted turtle	*Chrysemys picta*	Overall range	n/a
Plains garter snake	*Thamnophis radix*	Overall range	n/a
Prairie lizard	*Sceloporus consobrinus*	Overall range	n/a
Prairie rattlesnake	*Crotalus viridis*	Overall range	n/a
Plateau fence lizard	*Sceloporus tristichus*	Overall range	n/a

[1]FT=Federally Threatened; ST=State Threatened; SC=State Species of Concern; BGEPA=Bald and Golden Eagle Protection Act

[2]State (S) or Global (G) CNHP Status: 1=Critically Imperiled; 2=Imperiled; 3=Vulnerable; 4=Apparently Secure, but Cause for Long Term Concern; 5=Demonstrably Secure; B=Breeding; N=Non-breeding

Table 3. SAM Wildlife Potential for Occurrence (CPW 2023; CNHP 2024)

Common Name	Scientific Name	Type of Occurrence (CPW 2023)	Status[1,2]
Reptiles and Amphibians (continued)			
Six-lined Racerunner	*Aspidoscelis sexlineata*	Overall range	n/a
Smooth greensnake	*Opheodrys vernalis*	Overall range	n/a
Terrestrial garter snake	*Thamnophis elegance*	Overall range	n/a
Variable skink / many lined skink	*Plestiodon multivirgatus*	Overall range	n/a
Western rattlesnake	*Crotalus oreganus*	Overall range	n/a
Birds			
Band-tailed pigeon	*Patagioenas fasciata*	Breeding range	n/a
Bobolink	*Dolichonyx oryzivorus*	Breeding range	G5S3B
Brewer's sparrow	*Spizella breweri*	Breeding range	S4B
Brown-capped rosy finch	*Leucosticte australis*	Breeding range	n/a
Burrowing owl	*Athene cunicularia*	Breeding range	ST
Cassin's sparrow	*Peucaea cassinii*	Breeding range	n/a
Golden eagle	*Aquila chrysaetos*	Breeding range	BGEPA, S3S4B
Grasshopper sparrow	*Ammodramus savannarum*	Breeding range	S3S4B
Lark bunting	*Calamospiza melanocorys*	Breeding range	S4
Lazuli bunting	*Passerina amoena*	Breeding range	S5B
Lesser sandhill crane	*Antigone canadensis ssp. canadensis*	Breeding range	n/a
Lewis' woodpecker	*Melanerpes lewis*	Breeding range	G4S4
Northern harrier	*Circus hudsonius*	Breeding range	S3B
Prairie falcon	*Falco mexicanus*	Breeding range	S4B, S4N
Rufous hummingbird	*Selasphorus rufus*	Migration range	n/a
Swainson's hawk	*Buteo swainsoni*	Breeding range	S5B
Virginia warbler	*Leiothlypis virginiae*	Breeding range	n/a

[1]FT=Federally Threatened; ST=State Threatened; SC=State Species of Concern; BGEPA=Bald and Golden Eagle Protection Act

[2]State (S) or Global (G) CNHP Status: 1=Critically Imperiled; 2=Imperiled; 3=Vulnerable; 4=Apparently Secure, but Cause for Long Term Concern; 5=Demonstrably Secure; B=Breeding; N=Non-breeding

Following the review of the SAM data, a site reconnaissance was performed to field-verify the information provided in the data and to conduct a general wildlife survey. The proposed development may have varying impacts on wildlife depending on habitat quality across the site. Generally, the grasslands provide moderate quality upland habitat, and the wetlands associated with the tributary of East Cherry Creek provide low-to-moderate quality wetland habitat. Based on B.E.'s observations, the wetlands likely do not support a greater diversity of wildlife species than the uplands.

In terms of sensitive species, some of the species listed in the SAM data are likely to occur on the site, though few of the species listed were observed. The majority are either not expected to occur or may occur only infrequently based on available habitat. Pronghorn (*Antilocapra americana*) and grasshopper sparrow (*Ammodramus savannarum*) were the only sensitive species for which CPW has mapped ranges and High Priority Habitats that were observed in the Project area. Other species such as big brown bat (*Eptesicus fuscus*), common lesser earless lizard (*Holbrookia maculata*), plains garter snake (*Thamnophis radix*), prairie lizard (*Sceloporus consobrinus*), lark bunting (*Calamospiza melanocorys*), Swainson's hawk (*Buteo swainsoni*), and Northern harrier (*Circus hudsonius*) are species in the SAM data that could reasonably be expected to occur on-site in the appropriate seasons and in the appropriate habitats.

Golden eagles (*Aquila chrysaetos*), which nest mostly on cliffs in mountainous areas, and bald eagles (*Haliaeetus leucocephalus*), which are typically associated with large bodies of water, receive federal protection under the Bald and Golden Eagle Protection Act (BGEPA). Golden eagles may occasionally nest in large trees (primarily cottonwoods) on Colorado's eastern plains. No cliffs or large cottonwoods are within the Project area and no eagle-sized nests were observed in the single medium-sized cottonwood on the site. There are also no large bodies of water within the vicinity of the site, so it is unlikely that bald eagles would occur except accidentally. Raptor species may utilize the site for hunting. Nests were not observed in any of the trees on or surrounding the site during the site visit.

The Project area also provides habitat for additional mammals, including rodents, ungulates, and carnivores. Other than pronghorn, mammals were not observed during the site reconnaissance, but other species may be expected to occur, including coyotes (*Canis latrans*), cottontails (*Sylvilagus* sp.), mule deer (*Odocoileus hemionus*), gray foxes (*Urocyon cinereoargenteus*), red foxes (*Vulpes vulpes*), and small fossorial mammals (*Geomidae* family).

No prairie dog (*Cynomys* spp.) colonies were present within the Project Area, and no other burrows or dens were observed that would suggest nesting or roosting habitat for the state threatened burrowing owls exists. The Project Area is within burrowing owl breeding range, and thus, burrowing owls could migrate through the area. However, the lack of nesting and roosting resources suggest burrowing owls are unlikely to use the site even in migration.

Several species of birds were observed during the site visit, including horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), vesper sparrow (*Pooecetes gramineus*), barn swallow (*Hirundo rustica*), rock wren (*Salpinctes obsoletus*), broad-tailed hummingbird (*Selasphorus platycerscus*), brown-headed cowbird (*Molothrus ater*), red-tailed hawk (*Buteo jamaicensis*), red-winged blackbird (*Agelaius phoeniceus*), American robin (*Turdus migratorius*), and Brewer's blackbird (*Euphagus cyanocephalus*). Additional migratory bird species may occur during the spring, summer, and fall, but the species observed are a good general representation of the expected avian occupancy of the site.

No amphibians were observed during the survey, and it is unlikely any would occur except in the vicinity of W4, which was the only wet area on the site despite significant antecedent rains.

4.0 SUMMARY OF IMPACTS

4.1. Vegetation

Development of the Project site will unavoidably disturb existing vegetation within the Level IV Foothill Grasslands ecoregion, with up to 121 acres of grasslands potentially affected by the installation of roadways, detention ponds, and drainage infrastructure, as well as future residential development by lot owners. Based on the site survey completed in June 2025, it is unlikely that any sensitive plant communities will be impacted.

Additionally, wetland vegetation is not expected to be disturbed, as construction is currently planned to avoid all areas containing wetlands except the stock pond containing W2, which is not jurisdictional. Wetland vegetation observed during the wetland determination included sedges, rushes, and grasses, representing a moderately developed and minimally diverse community in the wetlands throughout the site. Further information about the wetlands on the site can be found in in the report in **Appendix B.**

4.2. Soils

Soils at the site included sandy loams belonging predominantly to the Pring series, loamy sands belonging to the Tomah-Crowfoot series, and the minor Pleasant component. These soils are all rated 'Not Limited' for the development of residential buildings, with or without basements. The other, less prominent soil type found on the site was the Peyton-Pring complex, which is 'Somewhat Limited' for the development of residential buildings, with or without basements. Soils do not represent a significant constraint to development.

4.3. Significant Topography and Natural Landforms

Surveys of the site identified one main swale playing the most significant role in irregular hydrologic conveyance. Evidence of this function included the presence of positive indicators of wetland hydrology, indicating periodic, ephemera water flow through the site in response to very large storms. Project development will not alter the hydrology of this swale and will continue to use it as a natural drainageway and 'No Build' area. Changes in surface runoff are expected based on increases in impervious surfaces, which could reduce groundwater infiltration, alter sediment transport, increase erosions, and affect wetland habitat quality in the main swale. The smaller swales that feed into this main swale are more ephemeral, contributing minimally to overall site hydrology. The rest of the site consists of rolling foothill grasslands, lacking any other significant geologic features that could be affected by site development.

4.4. Aquatic Resources

There are five aquatic resources on the Project site, including wetlands associated with the unnamed tributary to East Cherry Creek (the main swale) and a small manmade stock pond. Further information about the aquatic features present on the site can be found in the report in **Appendix B**. A Section 404 permit and jurisdictional determination are not expected to be needed because construction is not planned to impact any of the wetlands other than the one isolated, manmade stock pond, which is a non-jurisdictional feature by definition.

4.5. Noxious Weeds

Noxious weeds are present on the Project site in several areas but in limited quantities. List A Species, which require reporting and eradication by Colorado law (Colorado Department of Agriculture [CDA] 2006), were not detected. List B Species require either eradication, containment, or suppression; List C Species require control through either public education or chemical control. List B and List C noxious weeds that were detected during the site reconnaissance included:

List B:

- Diffuse knapweed
- Houndstongue

List C:

- Downy brome
- Common mullein

It is possible that additional noxious weed populations may be present on the site. A site inventory to identify and map noxious weeds during the growing season would be required to accurately catalogue all populations. In accordance with EPC requirements, a separate Noxious Weed Management Plan has been developed detailing recommendations for identifying and controlling the spread of noxious weeds prior to, during, and following construction.

4.6. Wildfire Hazard

Approximately 95% of the Project area is mapped as 'Lowest' wildfire risk to assets while the remaining 5% is mapped as 'Low' risk. The site is rated around 85% Level 6 'Moderately High' and 50% Level 7 'High' in terms of burn probability based on the available fuels at the site, which includes disturbed and undisturbed grasslands. Fire intensity varies across the site, with ratings from 'Lowest' to 'Moderate', although most of the site is rated as 'Lowest'. The northern half of the site is rated entirely as 'Lowest', while the southern portion is rated as 'Low' to 'Moderate'. The site is within the Monument Fire District, and the nearest fire response is Station 2, which is located about 6 miles west of the site.

Development of the site would result in a reduction of the available fuels for wildfires, and would potentially reduce fire intensity through the removal of grasslands, while simultaneously increasing the values and assets present on the site, as well as increasing potential ignition sources. As such, the overall wildfire risk index for the Project is expected to be somewhat higher after development.

4.7. Wildlife

Similar to the impacts for vegetation, some wildlife will inevitably be affected by development of the Project area. Some species that prefer suburban habitats, including some species of birds, are expected to benefit from an increase in planted trees and bird feeders in yards. Any designated open spaces, such as the planned drainage easement containing the main swale, may also

conserve some of the grassland and wetland habitats that are currently available, but open, undisturbed grasslands are expected to be reduced overall.

Since grasslands are the most dominant habitat type, grassland species are expected to experience the greatest adverse impacts. Deer, foxes, bears, and coyotes may experience adverse effects from the increase in urbanization in close proximity to wildland areas. Bears in the nearby forested areas in particular may be affected by the increase in available anthropogenic food sources. Few sensitive species were present and only in small numbers and thus are not expected to be affected any more than other species. State SC black-tailed prairie dogs were not present, and thus the state-threatened burrowing owl is also not anticipated to use the Project site.

Implementation of a stormwater management plan will assist in protecting water quality downstream, which will provide some benefits to aquatic species including invertebrates. Detention facilities may add seasonal water features that could support additional wildlife such as waterfowl and amphibians.

4.8. Federally Listed T&E Species

The IPaC identified seven federally listed T&E species within the project area, but the likelihood of impacts to any of these species is unlikely to nonexistent. All listed species are either precluded because the Project will not involve water depletions in the Platte River watershed (pallid sturgeon, western prairie fringe orchid, whooping crane, and piping plover) or because there is no suitable habitat present (Preble's, Eastern black rail, monarch butterflies, Suckley's cuckoo bumblebee).

5.0 RECOMMENDATIONS

Upon completion of a desktop review, site reconnaissance, and wetland assessment, B.E. finds that some environmental constraints are present within the Project area. Constraints are summarized below within the regulatory context that they apply, and recommendations are provided.

5.1. Clean Water Act

Section 404 of the Clean Water Act prohibits the discharge of dredge or fill material into WOTUS (including wetlands) without a valid permit. Regulated wetland habitats are presumed to be present on the site. A formal wetland delineation was performed on June 13th, 2025, finding a total of 1.29 acres of palustrine wetlands present on the site. All but one manmade stock pond, which is non-jurisdictional by definition, are presumed to be jurisdictional. An approved jurisdictional determination from the USACE would be necessary to determine if the aquatic resources observed on the site are considered non-jurisdictional officially, however, a Section 404 permit is not expected to be necessary since wetlands on the site are not expected to be impacted.

5.2. Endangered Species Act

Section 9(a)(1) of the Endangered Species Act prohibits the take of federally listed species and their habitats, and defines such take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C. § 1531). There is no suitable habitat for any of the listed species identified in the IPaC data (**Appendix C**). Other federally listed species occurring downstream of the Project area would not be affected because the Project will not involve water depletions from the river basins where these species occur. No impacts to any federally listed species are anticipated from site development. B.E. has requested concurrence from the USFWS for a determination of 'No Concerns', and confirmation will be provided when it is received.

5.3. Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Migratory birds, and the parts, nests, or eggs of such a bird receive statutory protection under the Migratory Bird Treaty Act, which prohibits the intentional take of migratory birds. Bald eagles and golden eagles receive additional statutory protection from accidental take and disturbance under the BGEPA. Both acts particularly apply to nesting birds and their nests. There were no nests observed on the site, and suitable nesting substrates for raptors were not available within the site. Nesting substrates for other migratory birds are present in the form of open grasslands, which are expected to be used by some migratory birds during the breeding season.

It is recommended that vegetation clearing/grubbing/grading of the site occur outside of the nesting season (March 15th to July 31st) to avoid disturbing nesting migratory birds. If such timing restrictions are not possible, B.E. recommends conducting a migratory bird nesting survey during the nesting season to ensure impacts to nesting birds do not occur. In particular, ground nesting songbirds are expected to use the available grasslands at the site and surveys should be conducted to avoid disturbance.

5.4. Colorado Noxious Weed Act

In order to ensure Project compliance with the Colorado Noxious Weed Act, and to comply with the requirements of El Paso County's Noxious Weed Management Plan, the Project has developed a site-specific Noxious Weed Management Plan, and site-specific weed management in accordance with this plan should be implemented on an ongoing basis. In particular, control of diffuse knapweed and houndstongue (or any other List B noxious weeds observed on the site) is required by Colorado law.

5.5. Non-Statutory Considerations

There is potential for other wildlife, including big game such as black bears and mule deer to occur within the site. However, no big game migratory routes traverse the Project. The site is listed as a mule deer concentration area by CPW, as well as an area of potential human conflict for black bears and mountain lions. Coordination with CPW is recommended to determine the appropriate avoidance measures to take during and after construction regarding general wildlife. Impacts to wildlife should be reduced as much as is practical through the implementation of typical covenants, such as using bear-resistant trash containers and fencing that allow safe passage for game animals.

Should you have any questions regarding the information or recommendations provided in this report, please feel free to contact Bristlecone Ecology at dmaynard@bristleconeecology.com.

Sincerely,

Bristlecone Ecology, LLC

Daniel Maynard
Owner/Ecologist

6.0 REFERENCES

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APPENDIX A

PHOTOGRAPHIC LOG

PHOTO 1 – Overview, facing NE, of the large swale feature in the middle of the site. Most of the swale is uplands with no evidence of regular flows (such as an OHWM); however, several wetlands, including W1, W3, and W5 exist within the confines of this main swale.

PHOTO 2 – View facing northeast of the steep cutbanks along the northern edge of the main swale. Slopes are greater than 20% at these locations, which likely represent significant topographic constraints to development.

PHOTO 3 – View facing ENE of an area within the main swale where wetlands within W1 are present. Nebraska sedge is visible in the foreground. The topography of the swale is shallow, broad, and gentle, with no clear transitions between the swale bottom and the upland slopes beyond – in short, the swale is clearly not a stream/tributary and does not convey regular flows.

PHOTO 4 – View facing SE of W2, an isolated wetland within a manmade stock pond. The darker vegetation and area covered in sand show the boundary of the wetland. It is entirely isolated in the stock pond depression, a manmade feature, and therefore non-jurisdictional.

PHOTO 5 – View facing north toward the northern parcel, taken from atop the stock pond impoundment in the southern parcel, showing the typical topography and vegetation of the site.

PHOTO 6 – View facing north of W3, a small wetland in a swale just south of the main swale. The main swale can be seen as a darker depression in the background of the photo.

PHOTO 7 – View facing south of W4, a small depressional wetland adjacent to the main swale. This wetland was partly filled with water from recent rains at the time of the site visit; it was the only wet area on the site despite significant precipitation throughout the preceding months. The only tree on the site is also pictured.

PHOTO 8 – Overview facing south from the north parcel showing typical vegetation and topography of the site.

PHOTO 9 – Photo facing northeast taken within the main swale downgradient of W4 and W5, showing a lack of bed, bank, or OHWM to indicate regular flows from the main swale and associated wetlands to downstream WOTUS offsite. The large culvert under Walker Road can be seen in the distance.

APPENDIX B

WETLAND DELINEATION REPORT

APPENDIX C

IPAC RESOURCE LIST

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

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
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
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
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

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

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 nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

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

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
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
Ferruginous Hawk Buteo regalis 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	Breeds Mar 15 to Aug 15
Northern Harrier Circus hudsonius 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	Breeds Apr 1 to Sep 15
Pinyon Jay Gymnorhinus cyanocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

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.

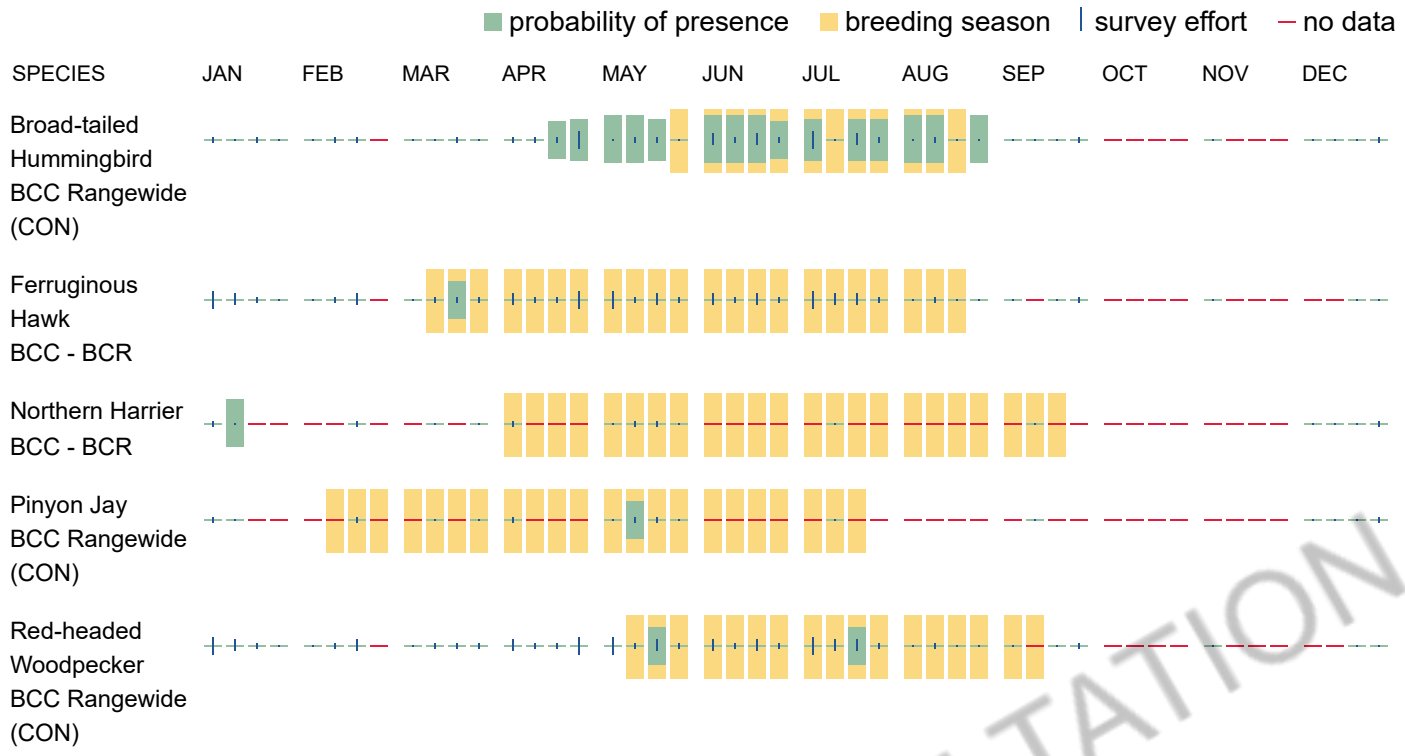
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

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 EMERGENT WETLAND
- PEM1C

FRESHWATER POND
- PABFh
- PABF
- PUSCh

RIVERINE

R4SBA
R5UBH

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.