



Consultants in Natural Resources and the Environment

Natural Features and Wildlife Report Settlers Ranch Filing No. 3 Subdivision El Paso County, Colorado

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Executive Summary

Hodgen Settlers Ranch, LLC (HSR) retained ERO Resources Corporation (ERO) to provide a natural features report for the Settlers Ranch Filing No. 3 subdivision in El Paso County, Colorado (project areas; Figure 1). ERO assessed the North and South project areas for potential wetlands and waters of the U.S., federally listed threatened and endangered species, state-listed species, migratory birds, and other wildlife. Following is a summary of the features found at the project areas and recommendations for future actions necessary based on the current site conditions and regulations.

The natural features and associated regulations described in this report are valid as of the date of this report and may be relied upon for the specific use for which it was prepared by ERO under contract to HSR. Because of their dynamic natures, site conditions and regulations should be reconfirmed by a qualified consultant before relying on this report for a use other than that for which ERO was contracted.

Wetlands and Other Waters of the U.S.—No wetlands occur in the project areas. Two vegetated swales occur in each of the North project area and South project area, all of which are dominated by upland species.

Federally Threatened and Endangered Species—The project areas contain no habitat for any species on the federal threatened and endangered species list.

State Threatened and Endangered Species—The project areas contain potential habitat for black-tailed prairie dog, fringed myotis, little brown myotis, olive-backed pocket mouse, swift fox, brown-capped rosy finch, golden eagle, western burrowing owl, and northern leopard frog. No individual or suitable habitat was observed for any of the state-listed species during the 2023 site visits.

High Priority Habitats—The project areas are not located in any Colorado Parks and Wildlife-mapped high priority habitats, but do occur in elk overall range, elk resident population area, mule deer overall range, mule deer resident population area, and pronghorn overall range. ***Residents should be educated on wildlife interactions, and habitat management recommendations provided in this report should be observed.***

Migratory Birds—During the 2023 site visits, ERO observed no raptor or songbird nests in the project areas; however, the grasslands in the project areas potentially provide nesting habitat for many species of ground-nesting migratory birds. Both the Denver Field Office of the U.S. Fish and Wildlife Service (Service 2009) and Colorado Department of Transportation (CDOT 2011, 240) have identified the primary nesting season for migratory birds in eastern Colorado as occurring from April 1 to mid to late August. However, some birds, such as bald eagles, red-tailed hawks, and great horned owls, can occupy nests as early as December. Because of variability in breeding seasons of various bird species, ***ERO recommends, at a minimum, a nest survey be conducted within one week prior to construction to determine if any active nests are present in the project areas so they can be avoided.*** If active nests are found, any work that would destroy the nests could not be conducted until the birds have vacated the nests.

Natural Features and Wildlife Report Settlers Ranch Filing No. 3 Subdivision El Paso County, Colorado

May 18, 2023

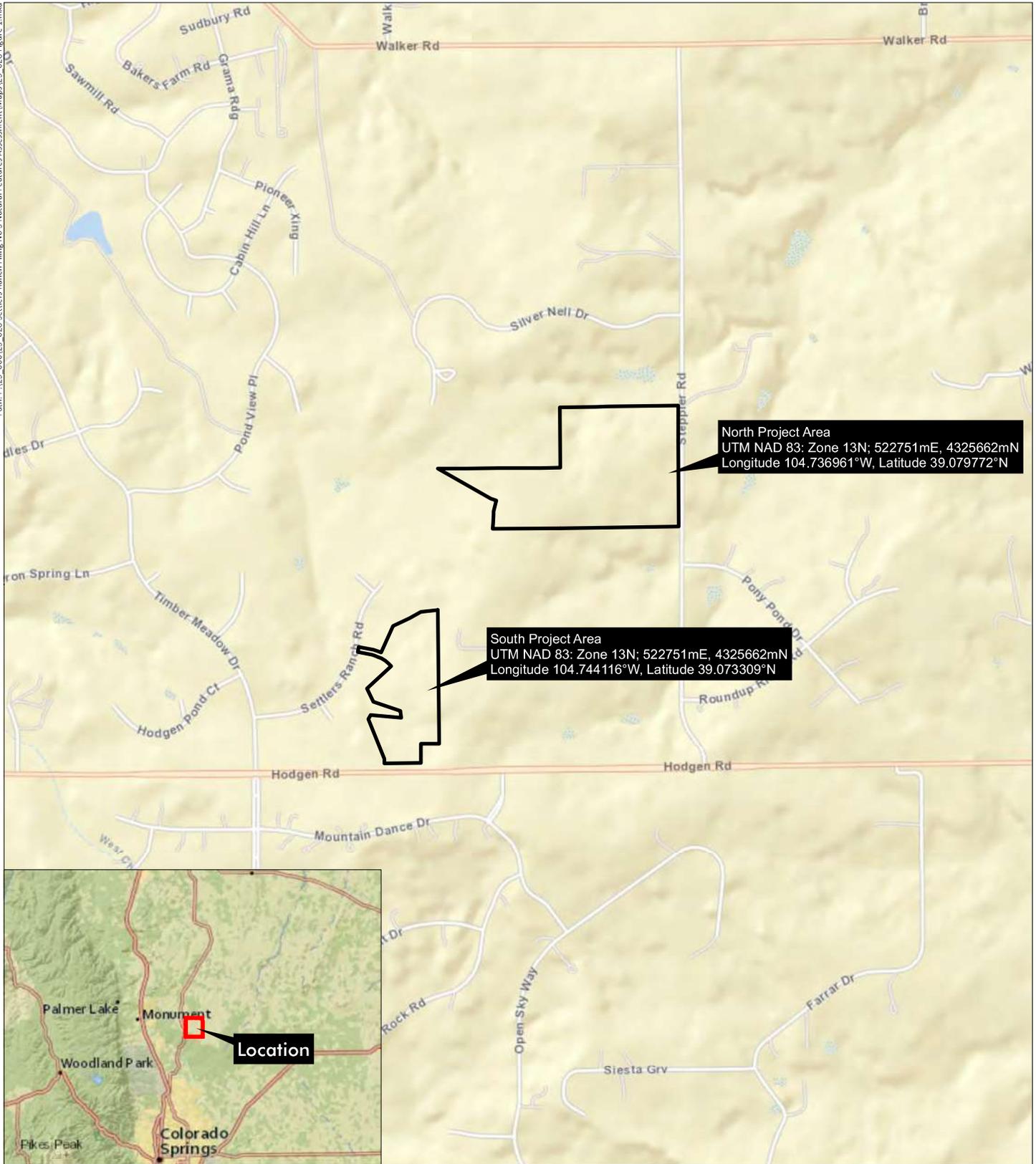
Project Description

Hodgen Settlers Ranch, LLC (HSR) retained ERO Resources Corporation (ERO) to provide a natural features and wildlife assessment report for the Settlers Ranch Filing No. 3 subdivision in El Paso County, Colorado. The Settlers Ranch Filing No. 3 subdivision includes two project areas (North project area and South project area), both of which are north of Hodgen Road and west of Stepler Road (Figure 1). A survey of the wildlife habitat and ecological conditions for the North project area was conducted by Heidi Gerstung, an ecologist with ERO, on March 1, 2023; the survey for the South project area was conducted by Courtney Marne and Isabel Mansour, biologists with ERO, on April 27, 2023 (2023 site visits). The purpose of the surveys was to identify areas where wildlife resources could occur, including habitat for federally listed threatened and endangered species and other species of special concern, raptor nests, important big game habitat and movement corridors, and other significant wildlife resources that might be affected by development in the project areas. The North project area is a 53.93-acre parcel in El Paso County, Colorado that is being subdivided into 16 lots (Figure 2a; see Appendix A for the Concept Plan for the North project area). The South project area is a 22.4-acre parcel in El Paso County, Colorado that is subdivided into eight lots (Figure 2b).

This report provides information on existing site conditions and resources, as well as current regulatory requirements related to those resources. ERO assumes the landowner or project proponent is responsible for obtaining all federal, state, and local permits for construction of the project.

Project Location and Site Description

The project areas are in Sections 23 and 24, Township 11 South, Range 66 West of the 6th Principal Meridian in El Paso County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project areas are NAD 83 522751mE, 4325662mN, Zone 13. The longitude/latitude of the North project area is 104.736961°W/39.079772°N, and the longitude/latitude of the South project area is 104.744116°W/39.073309°N. The elevation of the project areas ranges from 7,580 to 7,640 feet above sea level. The North project area is located approximately 0.5 mile north of the intersection of Hodgen Road and Stepler Road, and the South project area is located approximately 0.3 mile north of the intersection of Hodgen Road and Stepler Road (Figure 1, Figure 2a, and Figure 2b).



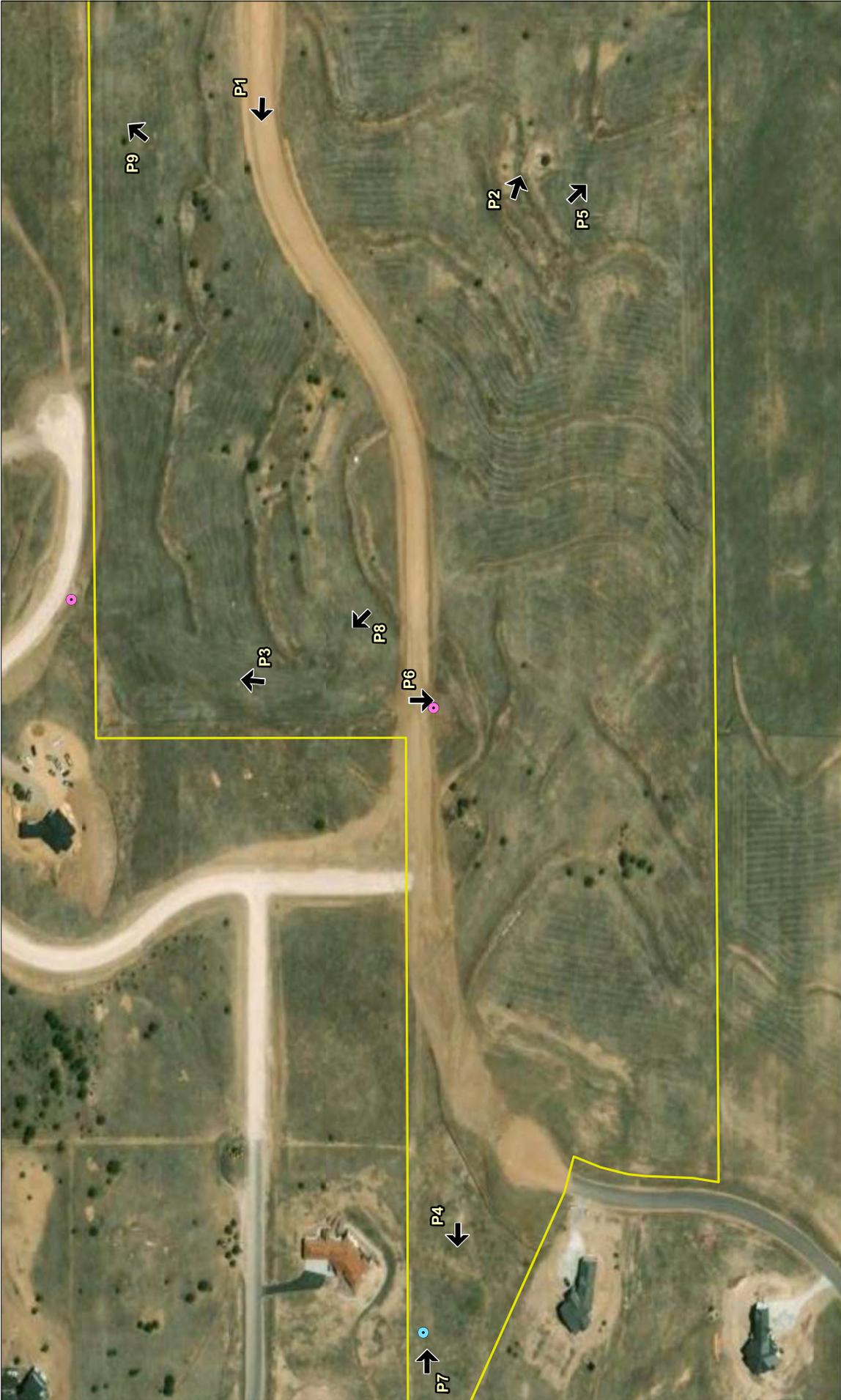
Settlers Ranch Filing No. 3

Sections 23 and 24, T11S, R66W; 6th PM
 UTM NAD 83: Zone 13N; 522135mE, 4324943mN
 Longitude 104.736961°W, Latitude 39.079772°N
 USGS Black Forest, CO Quadrangle
 El Paso County, Colorado

Figure 1 Vicinity Map

Prepared for: Hodgen
 Settler Ranch, LLC
 File: 23_028 Figure 1.mxd (GS)
 May 1, 2023





Path: P:\23_000\23_028 Settlers Ranch Filing No 3 Natural Features Assessment\Maps\23_028 Figures 2a & 2b.mxd

Settlers Ranch Filing No. 3

- Data Point
- Large Animal Burrow
- ➔ Photo Point
- Project Area Boundary
- Culvert

Image Source: Maxar Technologies©, April 15, 2022

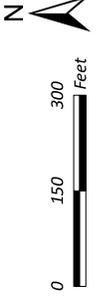


Figure 2a
North Project Area
Existing Conditions

Prepared for: Hodgen
 Settler Ranch, LLC
 File: 23_028 Figures 2a & 2b.mxd (GS)
 May 9, 2023





Settlers Ranch Filing No. 3

- Data Point
- Large Animal Burrow
- ➔ Photo Point
- Project Area Boundary
- Culvert

Image Source: Maxar Technologies©, April 15, 2022

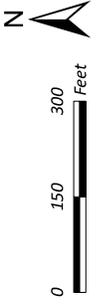


Figure 2b
South Project Area
Existing Conditions

Prepared for: Hodgen
 Settler Ranch, LLC
 File: 23_028 Figures 2a & 2b.mxd (GS)
 May 9, 2023



Regulatory Framework

Development in the project areas may be affected by several federal and state environmental regulations. One of the goals of this document is to provide information to assist HSR in addressing regulatory compliance issues. The environmental regulations most pertinent to the proposed development are described below.

Federal, State, and Local Regulations

Endangered Species Act

Federally threatened and endangered species are protected under the Endangered Species Act of 1973, as amended (ESA) (16 United States Code (USC) 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 or 10 of the ESA. No regulations require consultations for effects on candidate species; however, if a species were to become listed during project planning or construction, consultation with the Service would be required. Findings regarding federally threatened and endangered species are addressed in the *Federally Threatened, Endangered, and Candidate Species* section of this report.

Migratory Bird Treaty Act

Migratory birds, including raptors, and any active nests are protected under the Migratory Bird Treaty Act (MBTA). Removal of active nests that results in the loss of eggs or young is prohibited under the MBTA. In Colorado, most birds (except grouse species and nonnative Eurasian collared dove, European starling, house sparrow, and rock pigeon) are protected under the MBTA (§§ 703-712). Even species that tend to be present throughout the year, such as magpie and great horned owl, are protected under the MBTA. All nests are protected, including cavity (e.g., flicker), ground (e.g., killdeer), and subterranean (e.g., burrowing owl) nests. The MBTA does not contain any prohibition that applies to the destruction of a bird nest alone (without birds or eggs), provided that no possession occurs during the destruction. Findings regarding migratory birds are addressed in the *Other Raptors and Migratory Birds* section of this report.

Colorado State Statute 33

As directed by Colorado State Statute 33 (State Statute 33; Colorado Revised Statutes Ann. §§33-2 to 102-106), the Colorado Wildlife Commission issues regulations and develops management programs implemented by Colorado Parks and Wildlife (CPW) for wildlife species not federally listed as threatened or endangered. This includes maintaining a list of state threatened and endangered species. CPW also maintains a list of species of concern, but these species are not protected under State Statute 33. Although State Statute 33 prohibits the take, possession, and sale of state-listed species, it does not include protection of their habitat. Findings regarding state threatened and endangered species and other wildlife species are addressed in the *State Threatened and Endangered Species and Species of Special Concern* and *Other Species of Concern* sections of this report.

El Paso County Wildlife Protection Policies

The current El Paso County (County) Master Plan (EPCMP) was adopted in May 2021. As part of the EPCMP, the County has established guidance, goals, and policies to prioritize and protect the natural environment. Recommendations on compliance with the County's environment and natural resources goals are provided in the *Post-Construction Habitat Recommendations* section of this report.

Methods

ERO conducted a natural features and wildlife assessment of the project areas to identify natural and wildlife resources that may be impacted by development of the project areas. In addition to the information gathered during the 2023 site visits, wildlife and natural resource information was obtained from existing sources such as aerial photography (Google, Inc. 2023), CPW's Species Activity Data (CPW 2021a), and the Service and Colorado's Conservation Data Explorer (USDA, NRCS 2023). Based on the information gathered from existing sources and the 2023 site visits, ERO identified existing vegetation communities and important wildlife attributes of the project area both within the project area boundaries and in a regional context.

Project Area Description

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) has mapped the project areas within the Southern Rocky Mountains Major Land Resource Area, which is mainly characterized by rugged mountains with some broad valleys and remnants of high plateaus (USDA, NRCS 2006). The climate of the area is typical of midcontinental semiarid temperate zones, but the strong rain shadow effect of the Southern Rocky Mountains makes the area somewhat drier. The average annual precipitation is between 9 inches in certain valleys and 63 inches on some mountain peaks (USDA, NRCS 2006).

The project areas are located in the East Cherry Creek watershed and are part of the South Platte River system, which is tributary to the Mississippi River. The U.S. Geological Survey (USGS) has mapped the project areas as being located in the Upper part of Dawson geologic formation (TKda₅) in Colorado ((U.S. Environmental Protection Agency 2020), which is dominated by thick beds of coarse-grained arkosic material that is generally permeable, well drained, and has good foundation characteristics (Thorson and Madole 2003).

The Natural Resources Conservation Service has mapped two dominant soil types in the project areas - Peyton sandy loam, 5 to 9 percent slopes, and Tomah-Crowfoot loamy sands, 3 to 8 percent slopes (USDA, NRCS 2023). Peyton sandy loam soils are typically found along hills as side slopes and consist of alluvium-derived sedimentary rock. The soil layers (to a depth of 60 inches) consist of sandy loam and are well drained. Tomah-Crowfoot loamy sand soils are typically found along alluvial fans and hills as side slopes and crests, and consist of alluvium. The soil layers (to a depth of 60 inches) consist of loamy sand and coarse sand, and are well drained with medium runoff potential.

The project areas consist of pasturelands, with a mixture of native and nonnative grassland species, that have been terraced to prevent erosion according to NRCS soil conservation purposes. New housing developments or homes currently under construction surround much of the project area (Figure 1, Figure 2a and Figure 2b; Photos 1 through 5 and Photos 10 through 13). Each project area is discussed in detail below. A list of plants observed during the 2023 site visits can be found in Appendix B, Appendix C lists wildlife species observed or potentially found in the project areas, and a photo log is provided in Appendix D.

North Project Area

The topography of the North project area generally slopes off in all directions from the highest portions near the road along the central portion of project area (Photo 1). During the March 2023 site visit, ERO documented vegetation in the North project area as being dominated by smooth brome (*Bromus inermis*) and blue grama (*Bouteloua gracilis*). A variety of other of native and nonnative grasses, forbs, and subshrubs were found in the North project area including crested wheatgrass (*Agropyron cristatum*), bearberry (*Arctostaphylos uva-ursi*), prairie sagewort (*Artemisia frigida*), kochia (*Bassia scoparia*), goosefoot (*Chenopodium* sp.), buckwheat (*Eriogonum* spp.), Junegrass (*Koeleria macrantha*), western wheatgrass (*Pascopyrum smithii*), Russian thistle (*Salsola* sp.), and common mullein (*Verbascum thapsus*). A few scattered trees and shrubs occur in the North project area including ponderosa pine trees (*Pinus ponderosa*), Engelmann spruce (*Picea engelmannii*), Woods' rose (*Rosa woodsii*), and sandbar willow (*Salix exigua*) (Photo 1, Photo 2, and Photo 9).

Two vegetated swales occur in the North project area and are dominated by upland species (Photo 3 and Photo 5). Neither swale contained a defined channel or evidence of flows during the March 2023 site visit, but a culvert and riprap occur along the northeast swale where it intersects the existing road (Figure 2a; Photo 6). No black-tailed prairie dog (*Cynomys ludovicianus*) colonies were observed in or adjacent to the North project area during the 2023 site visits, but one collapsed animal burrow (Photo 7) was observed in the western portion of the North project area adjacent to the northwest boundary, and mule deer scat was observed in the North project area (Photo 8).

South Project Area

The topography of the South project area slopes in all directions with the highest points in the northeastern portion of the South project area (Photo 11 and Photo 13). In the South project area, ERO documented vegetation as being dominated by Kentucky blue grass (*Poa pratensis*), smooth brome, and tall fescue (*Schedonorus arundinaceus*). Additional native and nonnative grasses, forbs, and subshrubs were documented at the South project area during the April 2023 site visit, including diffuse knapweed (*Centaurea diffusa*), pasqueflower (*Pulsatilla* sp.), bearberry, prairie sagewort, common mullein, and St. Andrew's Cross (*Hypericum hypericoides*). A few scattered trees and shrubs occur in the South project area including Woods' rose, and ponderosa pine (Photos 12 through 15).

Two vegetated swales occur in the South project area and are dominated by facultative and upland herbaceous species (Photos 11 and 12). There was no defined channel or evidence of flows during the

April 2023 site visit. No black-tailed prairie dog colonies were observed in or adjacent to the South project area, but one animal burrow was observed in the northern portion of the South project area, east of the swales (Figure 2a; Photo 16).

Wetlands and Other Waters of the U.S.

Background (WOTUS)

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of waters of the U.S. (WOTUS). The U.S. Army Corps of Engineers' (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and other WOTUS (streams, ponds, and other waterbodies). On June 22, 2020, the Environmental Protection Agency (EPA) and Corps' Navigable Waters Protection Rule (NWPR) (U.S. Environmental Protection Agency 2020) to define "waters of the United States" became effective in 49 states and in all U.S. territories. A preliminary injunction was granted for Colorado. On March 2, 2021, the United States Court of Appeals for the 10th Circuit vacated the stay on the NWPR in Colorado, thereby ruling the NWPR effective in Colorado. After April 23, 2021, jurisdiction of wetlands and other potential WOTUS in Colorado was to be determined using the NWPR. However, on August 30, 2021, the Arizona District Court remanded and vacated the NWPR. In response, the EPA and Corps have halted implementation of the NWPR and, until further notice, are interpreting WOTUS consistent with the pre-2015 regulatory regime (also referred to as the "Rapanos" guidelines). On January 18, 2023, the EPA and Corps published a final rule to define WOTUS (new rule). The new rule will codify the pre-2015 approach to WOTUS, with some changes to the definition of "adjacency" and "significantly affect" that could expand jurisdiction of certain streams or wetlands. The new rule went into effect on March 20, 2023; however, there is a strong potential it will be challenged in court, affecting its implementation. As such, the identification of WOTUS in this report follows the Rapanos guidelines. Potential rulings and guidance in the future could change the results of this report regarding the jurisdictional status of waters and wetlands in the project area. While ERO may provide its opinion on the likely jurisdictional status of wetlands and waters, the Corps will make the final determination of jurisdiction based on the current rulings.

Under the Rapanos guidelines, the Corps considers traditionally navigable waters (TNWs), wetlands adjacent to TNWs, and tributaries to TNWs that are relatively permanent waters (RPWs) and their abutting wetlands jurisdictional waters. Other wetlands and waters that are not TNWs or RPWs will require a significant nexus evaluation to determine their jurisdiction. A significant nexus evaluation assesses the flow characteristics and functions of a tributary and its adjacent wetlands to determine if they significantly affect the chemical, physical, or biological integrity of downstream TNWs.

Methods

Wetland Delineation

During the 2023 site visits, ERO surveyed the project areas for potential isolated wetlands, jurisdictional wetlands, and other WOTUS. Before the 2023 site visits, ERO reviewed USGS quadrangle topographic maps and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or WOTUS.

ERO conducted the wetland delineation following the methods for routine on-site wetland determinations as described in the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and used methods in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010) to determine wetland boundaries. The Corps defines wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 Code of Federal Regulations (CFR) 328.2(c)). Wetland boundaries were determined by a visible change in vegetation community, soils, topographic changes, and other visible distinctions between wetlands and uplands.

The wetland indicator status of plant species was identified using the *National Wetland Plant List* (U.S. Army Corps of Engineers 2020), taxonomy was determined using *Flora of Colorado* (Ackerfield 2015), and nomenclature was determined using the *PLANTS Database* (USDA, NRCS 2023b).

Intermittent, ephemeral, and perennial drainages with characteristics of a defined streambed, streambank, ordinary high water mark (OHWM), and other erosional features also were identified. The OHWM identifies the lateral jurisdictional limits of nonwetland WOTUS. Federal jurisdiction over nonwetland WOTUS extends to the OHWM, defined in 33 CFR 328.3 as “the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” The Corps defines “stream bed” as “the substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders.”

Natural hydrology was established for potential WOTUS consistent with the criteria under the NWPR and pre-2015 rules, including that a surface water connection is present in a typical year and not only in response to storm events. Artificial hydrology including ditches, drains, and other constructed drainage features are excluded from qualifying hydrology under the NWPR.

The boundaries of identified wetlands and other characteristics of potential WOTUS were mapped using a Trimble Global Positioning System (GPS) unit. Data were differentially corrected using the CompassCom base station. All differential correction was completed using Trimble Pathfinder Office 5.9

software. GPS data were incorporated using ESRI® ArcGIS Desktop software. Additionally, where appropriate, wetlands were drawn on georectified aeriels and then digitized.

Description of Wetlands and Other Waters

ERO assessed the project areas for wetlands and other waters as described below. Data was collected from one location within the South project area to document the characteristics of uplands and potential wetlands. The data point (DP) was given a label that corresponds to a location shown on Figure 2b and routine wetland determination form in Appendix E.

No wetlands occur in the project areas and no drainages are shown on the USGS Black Forest, Colorado topographic quadrangle or National Hydrography Dataset as occurring in the project areas. Two vegetated swales occur in each of the North project area and South project area. The swales in the North project area are dominated solely by upland species (Photo 3 and Photo 5). Because one of the swales in the South project area had some hydrophytic vegetation present, a data point (DP) was collected (DP1; Figure 2b; Appendix E). The conditions at DP1 are described in more detail below.

Vegetation

The vegetation at DP1 in the South project area was dominated by a mixture of facultative and upland herbaceous species with patches of Kentucky blue grass and Woods' rose. The vegetation at DP1 met the dominance test for hydrophytic soil.

Soils

At DP1, field observations revealed that the soil primarily consisted of clay loam within 16 inches of the soil surface. The soil contained a matrix color of 10YR 2/2 within 14 inches of the soil surface and a matrix color of 10YR 4/3 from 14 to 16 inches with no redox concentrations. DP1 did not meet any indicators for hydrophytic vegetation.

Hydrology

No primary or secondary hydrology indicators were observed at DP1. The swales in the South project area lack wetlands and characteristics of a defined channel bed and bank. As such, these features would likely be considered nonjurisdictional.

Recommendations

Based on the 2023 site visits, no wetlands or WOTUS occur in the project areas and, therefore, no further action is necessary regarding impacts on wetlands and other potential WOTUS in the project areas.

Federally Threatened, Endangered, and Candidate Species

ERO assessed the project areas for habitat for threatened, endangered, and candidate species protected under the ESA. Adverse effects on a federally listed species or their habitat require consultation with the Service under Section 7 or 10 of the ESA. The Service lists several threatened and endangered

species with potential habitat in the project areas or that would be potentially affected by the project (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in the project area or potentially affected by the project.

Common Name	Scientific Name	Listing Status ¹	Habitat	Suitable Habitat Present or Potential to Be Affected by Project?
Birds				
Eastern black rail	<i>Laterallus jamaicensis</i>	T	Shallow cattail wetlands and wet sedge meadows with dense cover in southeastern Colorado	No
Piping plover ²	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches and river sandbars	No habitat, no depletions anticipated
Whooping crane ²	<i>Grus americana</i>	E	Mudflats around reservoirs and in agricultural areas	No habitat, no depletions anticipated
Mammals				
Gray wolf	<i>Canis lupus</i>	T	Wolves thrive in a variety of habitats; highly adaptable as a species and occurs in temperate forests, mountains, and grasslands	No, gray wolves are not known to currently occur in El Paso County and project activities would not result in appreciable take
Preble's meadow jumping mouse ³	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	No
Fish				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	T	Gravelly headwater streams or mountain lakes	No
Pallid sturgeon ²	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravelly or sandy substrate	No habitat, no potential to affect
Invertebrates				
Monarch butterfly	<i>Danaus plexippus plexippus</i>	C	Dependent on milkweeds (<i>Asclepiadoideae</i>) as host plants and forage on blooming flowers; a summer resident	No
Plants				
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	No
Western prairie-fringed orchid ²	<i>Platanthera praeclara</i>	T	Mesic and wet prairies, sedge meadows	No habitat, no depletions anticipated

¹ T = Threatened Species, E = Endangered Species, C = Candidate Species.

² Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches.

³ There is critical habitat for the species in El Paso County.

Source: (Service 2023)

Federal Species Eliminated from Further Consideration

The proposed project would not affect the gray wolf because the project areas are outside of the current range of the species and project activities would not result in appreciable take. The proposed project would also not affect the eastern black rail or greenback cutthroat trout because the project areas are outside of the known range of the species and lacks suitable habitat. The piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by continued or ongoing water depletions to the Platte River system. Based on ERO's knowledge of the types of activities likely to be implemented as part of the development of the project areas, there would be no depletions to the South Platte River. If the project includes activities that deplete water in the South Platte River, such as diverting water from a stream or developing new water supplies, these species could be affected by the project, and consultation with the Service may be required.

Monarch butterflies migrate through Colorado in the summer, although the project areas are not within a designated migration corridor or breeding or overwintering area for this species (Service 2019). Monarch butterflies are dependent on milkweeds (primarily *Asclepias* spp.) as a host plant for egg laying and larval development (Service 2021a). No milkweeds were observed in the project areas during the 2023 site visits. This species may occasionally travel through the project areas but are not likely to lay eggs because host plants appear to be lacking. Additionally, as a candidate species, monarch butterflies are not under federal regulation at this time.

During the 2023 site visits, ERO assessed the project areas for potential Ute ladies'-tresses orchid (ULTO) habitat. Because the project areas are outside of the 100-year floodplain of the South Platte River and perennial tributaries, the sites do not fall within the Service's guidelines for areas requiring ULTO surveys (Service 1992). In addition, the project areas are near the upper elevation range for the species and lacks moist to wet alluvial meadows and the mesic vegetation communities typically associated with ULTO.

Potential habitat for Preble's meadow jumping mouse (Preble's) is generally more prevalent in areas across the Front Range. As such, a more detailed discussion for this species is provided below.

Threatened and Endangered Species Habitat

Preble's Meadow Jumping Mouse

Species Background

Preble's was listed as a threatened species on May 13, 1998. Several petitions to delist Preble's have been filed with the Service since 2011. On March 30, 2017, a petition to delist Preble's was filed; the Service found that the petition did not present substantial scientific or commercial information indicating that delisting Preble's may be warranted (Service 2018a). The Service refers to this finding as a "not substantial" petition finding (Service 2018b). On August 10, 2018, the Service announced the initiation of a 5-year status review for Preble's (Service 2018a). Until the completion of this 5-year finding, Preble's remains protected under the ESA. Preble's is found along the foothills of southeastern Wyoming and southward along the eastern edge of the Colorado Front Range to Colorado Springs (Clark

and Stromberg 1987); (Fitzgerald, Armstrong, and Meaney 1998). The semiarid climate in southeastern Wyoming and eastern Colorado limits the extent of riparian corridors and therefore restricts Preble's range, which is associated with these corridors.

Along Colorado's Front Range, Preble's is found below 7,800 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams. Preble's prefers riparian areas featuring well-developed, multistoried, and horizontal cover with an understory of grasses and forbs (Armstrong et al. 1997). Preble's typically inhabits areas characterized by plains riparian vegetation with relatively undisturbed grassland and a water source nearby (Armstrong, Fitzgerald, and Meaney 2011). High-use areas for Preble's tend to be close to creeks and are associated with a high percentage of shrubs, grasses, and woody debris (Trainor, Shenk, and Wilson 2007). Previous studies have suggested that Preble's may have a wider ecological tolerance than previously thought and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted by CPW have documented Preble's using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). Additional research by CPW has suggested that habitat quality for Preble's can be predicted by the amount of shrub cover available at a site (White and Shenk 2000). Mountain riparian sites may be surrounded by dense forest vegetation (such as ponderosa pine in Colorado), and sites on the plains have less woody vegetation.

Potential Habitat and Effects

During the 2023 site visits, ERO assessed the project areas for potential Preble's habitat. ERO determined that both the North and South project areas do not contain suitable habitat based on the following:

- The project areas lack the riparian or wetland habitat required by Preble's.
- The project areas lack the lush herbaceous understory and adequate shrub cover by sandbar willows or other riparian shrubs typically associated with Preble's.
- The closest known Preble's populations are located in mapped critical habitat approximately 2.9 miles southwest of the project area along Black Squirrel Creek (DaTiMbi Environmental 2001), and 5 miles northeast of the project area along a tributary to East Cherry Creek (Bio Resources Inc. 2001); however, no riparian movement corridors connect the project areas to these populations and substantial human development exists between the project areas and the known populations.
- The project areas are near the typical elevational limit for the species' distribution.

Recommendations

Because of the reasons listed above, ERO determined that the project areas are not suitable Preble's habitat, Preble's is unlikely to be present in the project areas, and proposed development in the project areas would have no effect on Preble's.

State Threatened and Endangered Species and Species of Special Concern

During the 2023 site visits, ERO assessed the project areas for potential habitat for threatened and endangered species and species of special concern protected under State Statute 33. Although State Statute 33 prohibits the take, possession, and sale of state-listed species, it does not include protection of their habitat. ERO also assessed the project areas for habitat for Tier 1 species designated in the Colorado State Wildlife Action Plan (SWAP). SWAP was developed by CPW to document the status of knowledge about the wildlife species of conservation need in the state. SWAP determines the state’s Species of Greatest Conservation Need (SGCN), documents threats to the species and habitats, and articulates strategies that can be employed to lessen those threats. SGCN do not require protection via federal or state listing regulation under SWAP, although some of the SGCN are also listed or protected by other statutes. SWAP prioritizes 55 of those species into Tier 1 SGCN (CPW 2015).

The project areas lack habitat for the majority of the species protected under State Statute 33 and of the SGCN listed as Tier 1 in the SWAP; however, there is potential habitat or documented occurrences within 1 mile of the project areas for several of these species (Table 2).

Table 2. State-listed species and state species of concern potentially occurring in the project area.

Common Name	Scientific Name	State Status ¹	Habitat	Potential to be Affected by Project?
Mammals				
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	SC	Eastern plains/urban	No prairie dog colonies were observed in the project areas or vicinity.
Fringed myotis	<i>Myotis thysanodes</i>	Tier 1	Woodlands, caves, and in or under buildings and bridges in urban areas	No, project areas are unlikely to support. Impacts on this species are not anticipated.
Little brown myotis	<i>Myotis lucifugus</i>	Tier 1	Woodlands, caves, and in or under buildings and bridges in urban areas	No, project areas are unlikely to support. Impacts on this species are not anticipated.
Olive-backed pocket mouse	<i>Perognathus fasciatus</i>	Tier 1	Arid and semiarid upland grasslands and prairies that contain loose soils	No, project areas are unlikely to support. Impacts on this species are not anticipated.
Townsend’s big-eared bat	<i>Corynorhinus townsendii</i>	SC	Coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types	No, project areas are unlikely to support. Impacts on this species are not anticipated.
Swift fox	<i>Vulpes velox</i>	SC	Eastern Colorado	No, project areas are unlikely to support. Impacts on this species are not anticipated.

Common Name	Scientific Name	State Status ¹	Habitat	Potential to be Affected by Project?
Birds				
American peregrine falcon	<i>Falco peregrinus anatum</i>	SC	Open spaces associated with high cliffs and bluffs overlooking rivers and coasts	No habitat and no known nesting areas nearby.
Bald eagle	<i>Haliaeetus leucocephalus</i>	SC	Open water and rivers; large trees for nesting and roosting	No known nests, roosts, concentration areas, or forage areas occur in the vicinity.
Brown-capped rosy finch	<i>Leucosticte australis</i>	Tier 1	Rocky summits, snowfields, and alpine cirques; winters in open country at lower and mid elevations	No, project areas are unlikely to support. Impacts on this species are not anticipated.
Ferruginous hawk	<i>Buteo regalis</i>	SC	Northwestern and eastern Colorado; open grasslands and shrub steppe communities	No, outside of CPW-mapped breeding range.
Golden eagle	<i>Aquila chrysaetos</i>	Tier 1	Open mountains, foothills, plains, deserts, and open country	Potential foraging habitat occurs in the project areas, but unlikely to support. Impacts on this species are not anticipated.
Greater sandhill crane	<i>Grus canadensis tabida</i>	SC/Tier 1	Eastern Colorado; Grand Valley	No
Long-billed curlew	<i>Numenius americanus</i>	SC	Shortgrass and mixed-grass prairies of southeastern Colorado	No, outside of CPW-mapped breeding range.
Mountain plover	<i>Charadrius montanus</i>	Tier 1	Shortgrass in eastern plains and mountain valleys	No, outside of CPW-mapped breeding range.
Western burrowing owl	<i>Athene cunicularia</i>	ST/Tier 1	Rangeland and shortgrass prairie with prairie dogs	No, no prairie dog colonies were observed in the project areas or vicinity.
Western snowy plover	<i>Charadrius alexandrinus</i>	SC	Southeastern Colorado, South Park	No, outside of CPW-mapped breeding range.
Fishes				
(state-listed fish species were not reviewed in detail due to lack of potential habitat in the project areas)				
Not Applicable (NA)	NA	NA	NA	NA
Reptiles and Amphibians				
Common garter snake	<i>Thamnophis sirtalis</i>	SC	Eastern base of the Front Range in floodplains and near streams	No.
Northern leopard frog	<i>Lithobates pipiens</i>	SC/Tier 1	Wet meadows and shallows of marshes, ponds, lakes, reservoirs, streams, and irrigation ditches up to 11,000 feet in elevation	No.

¹SE = Endangered Species, ST = Threatened Species, SC = Species of Special Concern.
 Source: (Colorado Natural Heritage Program 2023).

State Species Eliminated from Further Consideration

The American peregrine falcon, bald eagle, ferruginous hawk, greater sandhill crane, long-billed curlew, mountain plover, and western snowy plover would not be affected by the proposed project because the project areas are outside of the known breeding range of these species, or habitat is not present, and, therefore, these species are not discussed in the following sections. Because no wetland or aquatic habitat occurs in the project areas, there is no suitable habitat for state-listed fish species, common garter snake, or northern leopard frog; and these species would not be affected by project activities.

No prairie dog burrows were observed in the project areas during the 2023 site visits. If prairie dogs move into the project area, CPW recommends conducting burrowing owl clearance surveys in prairie

dog towns that are subject to poisoning or construction projects during the period from March 15 through October 31 (CPW 2021c). Currently, El Paso County does not have any regulations or policies in place pertaining to prairie dogs. Construction occurring from November 1 through March 14 would not require clearance surveys for burrowing owl.

The project areas occur in the overall range for fringed myotis, little brown myotis, and Townsend's big-eared bat (CPW 2021a), and these species may occasionally use project areas for foraging, but there are no potential breeding or hibernation roosts in the project areas. For these reasons, it is unlikely that these species are present in the project areas or would be affected by project activities.

Olive-backed pocket mice occur in Colorado in grasslands along the western margin of the plains and in shrub grasslands of the northwestern part of the state (Armstrong 1972). The majority of the nonnative pasture grassland in the project areas is unlikely to support the olive-backed pocket mouse and the project would not adversely affect the species.

The project areas are outside of the overall range for swift fox and no swift foxes or den sites were observed during the 2023 site visits. Two abandoned large animal burrows were found in the project areas but these lacked sufficient size to support swift fox (Photo 7 and Photo 16; Figure 2a and Figure 2b). The project areas are within the overall range of the swift fox (CPW 2021a); however, due to past disturbance and agricultural activity, the project areas generally lack the habitat components necessary to support the swift fox.

The brown-capped rosy finch is found in barren, rocky, or grassy areas and cliffs among glaciers or beyond timberline. In migration and winter, it is also found in fields, cultivated lands, brushy areas, and around human habitation (American Ornithologists' Union 1983). The project areas do not contain any potential breeding habitat for brown-capped rosy finches; however, it is possible that brown-capped rosy finches sporadically forage in the project areas during winter.

The project areas occur within CPW mapped breeding range for golden eagle, but no known golden eagle nest or roost sites occur in the project areas or within a 0.5-mile radius of the project areas (the CPW-recommended buffer). The closest known nest is approximately 30 miles from the project areas to the northwest (CPW 2022). No golden eagles were observed during the 2023 site visits; however, golden eagles may forage on the open country in the vicinity of the project areas. No golden eagle nests were observed or are known to occur within a 0.5-mile radius of the project areas; therefore, the project is unlikely to adversely affect golden eagles.

In general, burrowing owls are found in grasslands with vegetation less than 4 inches high and a relatively large proportion of bare ground. In Colorado, burrowing owls are usually associated with black-tailed prairie dog colonies (Colorado Bird Atlas Partnership 2016). For residential developments, CPW has a recommended buffer of 0.25 mile (1,320 feet) surrounding active burrowing owl nests during the March 15 through August 31 nesting season (CPW 2021c). The project areas do not contain habitat for burrowing owls, and there are no active or inactive prairie dog colonies in or within 1,320 feet of the project areas.

None of the species discussed above were observed during the 2023 site visits. Furthermore, for the reasons discussed above, it is unlikely that black-tailed prairie dog, fringed myotis, little brown myotis, Townsend's big-eared bat, olive-backed pocket mouse, swift fox, brown-capped rosy finch, golden eagle, or western burrowing owl are present in the project areas or would be affected by the project. If any of these species are found foraging in the project areas, attempts should be made to avoid disturbing the animals until all individuals have left the area. Operations near the individuals should temporarily cease until the animals have vacated the project areas.

Other Species of Concern

In 2021, CPW released a High Priority Habitat (HPH) table that identifies species and habitats, as well as recommendations to avoid and minimize impacts on wildlife from land use development (CPW 2021b). ERO reviewed data from CPW map databases and determined that no HPH areas overlap the project area (CPW 2021a). Although no HPH occurs in the project areas, ERO assessed the project areas for potential habitat for species and habitats listed in the HPH table during the 2023 site visits. Because the project areas are located in elk overall range, elk resident population area, mule deer overall range, mule deer resident population area, and pronghorn overall range, these species are discussed in more detail below.

Big Game

Elk

Species Background

Elk once occurred over much of central and western North America from Alaska south through Canada and further south through much of the United States (Peek 1999). In Colorado, elk primarily occupy the western two-thirds of the state but can also be found on the eastern plains (Fitzgerald, Meaney, and Armstrong 1994). The statewide estimate for elk in 2004 post-hunt was 274,570 (Watkins 2005) and CPW's long-term objective for the elk population in Colorado is about 228,000 (Kahn 2006).

Elk once occupied the eastern plains of Colorado, but today they are mostly associated with semi-open forests or forest edges adjacent to parks, meadows, and alpine areas (Fitzgerald, Meaney, and Armstrong 1994). Elk are considered generalist feeders, grazers, and browsers, foraging on a variety of grasses, forbs, and shrubs throughout the year, with grasses, shrubs, and even conifers such as Douglas fir as winter forage (Fitzgerald, Meaney, and Armstrong 1994; Peek 1999; Stewart et al. 2002). Most elk herds migrate between summer and winter ranges, with winter ranges typically occurring at lower elevations; however, some herds are relatively sedentary (Fitzgerald, Meaney, and Armstrong 1994).

Potential Habitat and Possible Effects

The entirety of both project areas are located within the overall range for elk in Colorado, as well as an elk resident population area, and elk may occasionally forage in the project areas; however, no HPH for this species (including migration corridors, production areas, severe winter range, or winter concentration areas) occurs in the project areas (CPW 2021a). An elk production area and elk winter

range area is mapped 6 miles northeast of the project areas, and an elk migration corridor has been mapped 7.2 miles northwest of the project areas on Interstate 25 (CPW 2021a). No elk were observed during the 2023 site visits.

Mule Deer

Species Background

Mule deer are found in all ecosystems in Colorado from grasslands to alpine tundra. Spring and summer ranges are typically mosaics of meadows, aspen woodlands, alpine tundra-subalpine forest edges, or montane forest edges (Fitzgerald, Meaney, and Armstrong 1994). Seasonally, mule deer are relatively sedentary, although most will spend the summer at higher elevations and migrate to lower elevations in the winter. Mule deer diets vary seasonally but generally consist of browsing trees and shrubs, forbs, and grasses.

Potential Habitat and Possible Effects

The entirety of both project areas is within mule deer overall range and resident population area, and a mule deer concentration area is located adjacent to the project areas; however, there is no HPH for this species in the project areas. No mule deer were observed in the project areas during the 2023 site visits; however, signs of mule deer were observed in the North project area (Photo 8) and it is likely that mule deer frequently forage and migrate through the North project area.

Pronghorn

Species Background

The American pronghorn inhabits grasslands and semidesert shrublands on rolling topography that provides good visibility (Fitzgerald, Meaney, and Armstrong 1994). Pronghorn tend to favor vast expanses of open areas and are typically sensitive to human presence, including residential and commercial development and habitat loss (Sawyer and Lindzey 2000). Pronghorns primarily occupy grasslands, sagebrush plains, deserts, and foothills. In Colorado, pronghorns occur on the eastern plains, in large mountain parks and valleys, and in shrublands on the West Slope (Fitzgerald, Meaney, and Armstrong 1994; NatureServe 2022).

Pronghorns are considered browsers, typically feeding on sagebrush throughout the year, in addition to leafy forage in summer (CPW 2017). They eat several plants that are unpalatable or toxic to livestock, which allows them to coincide in areas alongside cattle. Pronghorns generally live in social groups throughout the year (Byers 1997). Pronghorns typically mate in the fall from mid-September to mid-October, but in the south may start breeding as early as late July (CPW 2017; NatureServe 2022). In Colorado, pronghorns typically give birth in the first half of June (NatureServe 2022).

Potential Habitat and Effects

Although the project areas are located within pronghorn overall range, no pronghorn HPH areas, including migration corridors or winter concentration areas, are located in the project areas (CPW 2021a). The closest pronghorn HPH (pronghorn winter concentration area) is located approximately 19

miles northeast of the project areas. During the 2023 site visits, no pronghorns were observed in project areas, but pronghorns may occur in the area and could be temporarily displaced from the project areas during construction.

Big Game Recommendations

Because no HPH for elk, mule deer, or pronghorn occurs in the project areas, no action is necessary. Residents should be educated on wildlife interactions and provided with links to CPW's educational websites for "Living with Wildlife" and "Avoid Wildlife Conflicts." Additional recommendations are provided in the *Habitat Management Guidelines* section of this report.

Other Raptors and Migratory Birds

Species Background

Migratory birds, as well as their eggs and nests, are protected under the MBTA. The MBTA does not contain any prohibition that applies to the destruction of a bird nest alone (without birds or eggs), provided that no possession occurs during the destruction. While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal and fully prosecutable under the MBTA (Service 2003). The regulatory definition of a take is to pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12).

Under the MBTA, the Service may issue nest depredation permits, which allow a permittee to remove an active nest. The Service, however, issues few permits and only under specific circumstances, usually related to human health and safety. Obtaining a nest depredation permit is unlikely and involves a process that takes, at a minimum, 8 to 12 weeks. The best way to avoid a violation of the MBTA is to remove vegetation outside of the active breeding season, which typically falls between March and August, depending on the species. MBTA enforcement actions are typically the result of a concerned member of the community reporting a violation.

CPW maintains a leadership role with respect to raptor management in Colorado; however, the primary authority for the regulation of take and the ultimate jurisdiction for most of these species rests with the Service under the MBTA and the Bald and Golden Eagle Protection Act (16 USC 668-668c).

Potential Habitat and Possible Effects

During the 2023 site visits, ERO did not observe any active or inactive raptor or songbird nests in the project areas; however, the native grasses and trees in and adjacent to the project areas are potential nesting habitat for migratory birds. A wide variety of bird species may use different vegetation in the project areas for shelter, breeding, wintering, and foraging at various times during the year. Several migratory birds were observed in or adjacent to the North project area during the March 2023 site visit, including the ground-nesting western meadowlark (*Sturnella neglecta*), Canada goose (*Branta canadensis*), and a red-tailed hawk (*Buteo jamaicensis*). During the April 2023 site visit, two red-tailed

hawks were observed. The breeding season for most birds in Colorado is March through August, with the exception of a few species that begin breeding in February, such as great horned owls.

Recommendations

Although no nests were observed during the March 2023 site visit, the site visit was conducted outside of the breeding season. No nests were observed during the April 2023 site visit, and the site visit was conducted in the primary breeding season timeframe. To avoid destruction of potential migratory bird nests, vegetation removal should be conducted outside of the April 1 through August 31 breeding season.

Both the Service's Eastern Colorado Field Office (CPW 2021b) and the Colorado Department of Transportation (CDOT 2011, 240) have identified the primary nesting season for migratory birds in eastern Colorado as occurring from April 1 through August 31. However, a few species such as bald eagles, great horned owls, and red-tailed hawks can nest as early as December (eagles) or late February (owls and red-tailed hawks). Because of variability in the breeding seasons, ERO recommends that a nest survey be conducted within one week prior to construction to determine if any active nests are present in the project areas so that they can be avoided. Additional nest surveys during the nesting season may also be warranted to identify active nesting species that may present additional development timing restrictions (e.g., eagles or red-tailed hawks).

If active nests are identified in or near the project areas, activities that would directly affect the nests should be restricted. Habitat-disturbing activities (e.g., tree removal, grading, scraping, and grubbing) should be conducted during the nonbreeding season to avoid disturbing active nests or to avoid a "take" of the migratory bird nests in the project areas. Nests can be removed during the September 1 through March 31 nonbreeding season to preclude future nesting and avoid violations of the MBTA. There is no process for removing nests during the nonbreeding season; however, nests may not be collected under MBTA regulations. If the construction schedule does not allow vegetation removal outside of the breeding season, a nest survey should be conducted immediately prior to vegetation removal to determine if the nests are active and by which species. If active nests are found, any work that would destroy the nests or cause the birds to abandon young in the nest could not be conducted until the birds have vacated the nests.

Other Wildlife

In addition to the species described above, the project areas provide habitat for a variety of small mammals such as cottontail rabbits (*Sylvilagus* spp.), deer mice (*Peromyscus maniculatus*), and voles (*Cricetidae*). Predators such as coyotes (*Canis latrans*), raccoons (*Procyon lotor*), red foxes (*Vulpes vulpes*), striped skunks (*Mephitis mephitis*), and short-tailed weasels (*Mustela ermine*) also have the potential to occur in the project areas. The project areas are mapped as black bear overall range, black bear summer concentration area, and black bear human conflict area (CPW 2021a); however, ERO did not observe any signs of bear or bear scat during the 2023 site visits.

Any residential or commercial development will need to implement programs using best management practices to avoid human/wildlife (predator) conflicts. As discussed in the elk and mule deer sections above, residents should be educated on wildlife interactions and provided with links to CPW's educational websites for "Living with Wildlife" and "Avoid Wildlife Conflicts." Additional recommendations are provided in the *Habitat Management Guidelines* section of this report.

Post-Construction Habitat Recommendations

It is likely that a diverse wildlife community would be found in the project areas after development, including many of the wildlife species that likely use the project areas such as elk, mule deer, pronghorn, black bear, and western meadowlark. In addition, some raptors, such as great horned owls and red-tailed hawks, are known to inhabit areas of human disturbance.

Habitat Management Guidelines

To maximize the continued use of the area by native wildlife, ERO recommends implementing the following strategic planning principles:

- Preserve, to the greatest extent feasible, native grassland species, which provides valuable forage for many wildlife species, including elk and mule deer, and potential nesting habitat for western meadowlark.
- Conduct nest surveys prior to construction of the development to avoid the inadvertent take of raptor or migratory bird nests, which are protected under federal and state laws. No active nests were identified in the project areas during the 2023 site visits, but the March 2023 site visit was conducted outside of the nesting season. If an active nest is found, follow CPW recommendations and implement buffers restricting disturbance and construction activities around nests to the extent they remain active (CPW 2020). If possible, conduct habitat-disturbing activities such as tree removal, grading, scraping, and grubbing during the nonbreeding season (September through March for most songbirds) to avoid disturbance (or take) of an active migratory bird nest, including nests of ground-nesting species.
- Where feasible, leave trees in place to provide habitat and cover for avian species.
- Develop and implement a noxious weed plan and management recommendations to control weeds on-site and maintain foraging habitat for big game and other wildlife. Prevalent noxious weed species include common mullein and cheatgrass (*Bromus tectorum*).
- Contain and control noxious weeds in areas not slated for development or that will not be developed until later phases as required by the El Paso County Weed Management Plan.
- Reclaim temporarily disturbed areas that will not be landscaped with a mix of native species that are found on-site or that are highly compatible with site conditions.
- Educate residents on wildlife interactions. All wildlife, particularly big game, predators, and human commensal species such as raccoons, can cause nuisance problems in residential developments. Contact information and resources from CPW and El Paso County should be provided to residents that describe how to minimize conflicts and ways to enjoy the natural resources in the area. Residents should also be made aware that feeding wildlife, with the exception of birds, is against state law.

- To minimize impacts on soils, identify topsoil depth and salvage topsoil from areas in the development and then revegetate.
- Revegetate as soon as practicable after construction activities have been completed in accordance with the recommended seasons for revegetation and use practices conducive to success.
- Implement best management practices to minimize the risk of a spill of hazardous materials and waste in the construction area.

Conclusions

The existing vegetation community and topographical features in the North and South project areas provide habitat for various wildlife species. In particular, the native grassland species contribute to the overall diversity of the project area and provide wildlife forage opportunities for big game and nesting habitat for migratory birds. Preservation and planting of native grassland species would help maintain and conserve the wildlife values of the project area.

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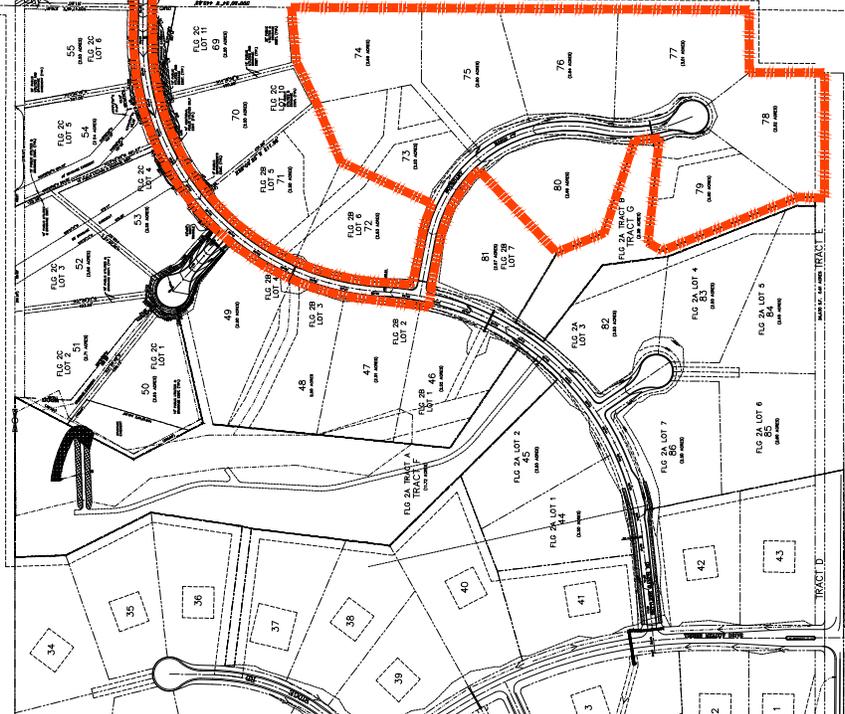
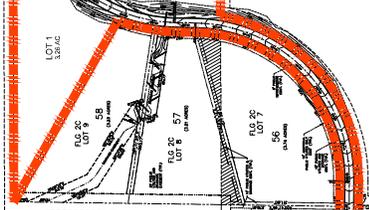
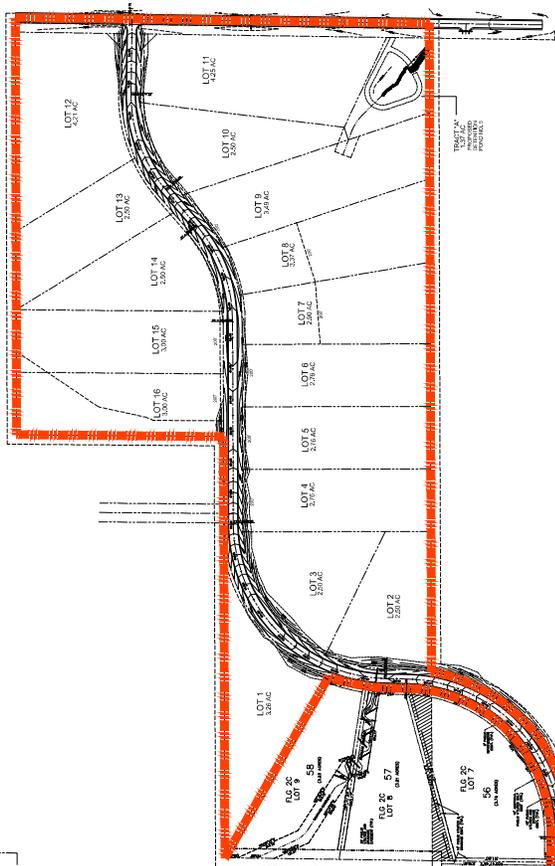
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Appendix A Concept Plan



Appendix B Prevalent Plant Species Observed in the Project Area

Scientific Name	Common Name
<i>Agropyron cristatum</i>	Crested wheatgrass
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Artemisia frigida</i>	Prairie sagewort
<i>Bouteloua gracilis</i>	Blue grama
<i>Bromus inermis</i>	Smooth brome
<i>Bromus techorum</i>	Cheatgrass
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Chenopodium sp.</i>	Goosefoot
<i>Cirsium arvense</i>	Canada thistle
<i>Hesperostipa comata</i>	Needle-and-thread grass
<i>Hypericum hypericoides</i>	St. Andrew's Cross
<i>Bassia scoparia</i>	Kochia
<i>Koeleria macrantha</i>	Prairie junegrass
<i>Picea engelmannii</i>	Engelmann spruce
<i>Pinus ponderosa</i>	Ponderosa pine
<i>Poa pratensis</i>	Kentucky bluegrass
<i>Pseudotsuga menziesii</i>	Douglas fir
<i>Pulsatilla sp</i>	Pasqueflower
<i>Rosa woodsii</i>	Woods' rose
<i>Schedonorus arundinaceus</i>	Tall fescue
<i>Verbascum thapsus</i>	Common mullein

Appendix C Wildlife Potentially Found in the Project Area

Scientific Name	Common Name
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Accipiter striatus</i>	Sharp-shinned hawk
<i>Ammodramus savannarum</i>	Grasshopper sparrow
<i>Antilocapra americana</i>	Pronghorn antelope
<i>Aquila chrysaetos</i>	Golden eagle
<i>Athene cunicularia</i>	Burrowing owl
<i>Bubo virginianus</i>	Great horned owl
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Buteo swainsoni</i>	Swainson's hawk
<i>Calamospiza melanocorys</i>	Lark bunting
<i>Canis latrans</i>	Coyote
<i>Carduelis tristis</i>	American goldfinch
<i>Cervus canadensis</i>	Elk
<i>Chordeiles minor</i>	Common nighthawk
<i>Circus hudsonius</i>	Northern harrier
<i>Colaptes auratus</i>	Common flicker
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Cyanocitta stelleri</i>	Steller's jay
<i>Eptesicus fuscus</i>	Big brown bat
<i>Erethizon dorsatum</i>	American porcupine
<i>Falco mexicanus</i>	Prairie falcon
<i>Falco sparverius</i>	American kestrel
<i>Haliaeetus leucocephalus</i>	Bald eagle
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Lasionycteris noctivagans</i>	Silver-haired bat
<i>Lasiurus borealis</i>	Eastern red bat
<i>Lasiurus cinereus</i>	Hoary bat
<i>Melanerpes lewis</i>	Lewis's woodpecker
<i>Meleagris gallopavo</i>	Wild turkey
<i>Mephitis mephitis</i>	Striped skunk
<i>Myotis lucifungus</i>	Little brown myotis
<i>Myotis thysanodes</i>	Fringed myotis
<i>Neogale frenata</i>	Long-tailed weasel
<i>Odocoileus hemionus</i>	Mule deer
<i>Peromyscus maniculatus</i>	Deer mouse
<i>Peucaea cassinii</i>	Cassin's sparrow
<i>Pipilo maculatus</i>	Spotted towhee
<i>Pituophis catenifer</i>	Gopher snake
<i>Poecile atricapilla</i>	Black-capped chickadee
<i>Procyon lotor</i>	Raccoon
<i>Rana pipiens</i>	Northern leopard frog
<i>Sceloporus undulatus</i>	Fence lizard
<i>Seiurus aurocapilla</i>	Ovenbird
<i>Selasphorus platycercus</i>	Broad-tailed hummingbird
<i>Setophaga coronata</i>	Yellow-rumped warbler
<i>Setophaga petechia</i>	Yellow warbler
<i>Sialia mexicana</i>	Western bluebird
<i>Sitta carolinensis</i>	White-breasted nuthatch
<i>Sitta pygmaea</i>	Pygmy nuthatch
<i>Spizella passerina</i>	Chipping sparrow
<i>Sturnella neglecta</i>	Western meadowlark

Natural Features and Wildlife Report
Settlers Ranch Filing No. 3 Subdivision
El Paso County, Colorado

Scientific Name	Common Name
<i>Tamiasciurus hudsonicus</i>	American red squirrel
<i>Turdus migratorius</i>	American robin
<i>Ursus americanus</i>	American black bear
<i>Vermivora virginiae</i>	Virginia warbler
<i>Vulpes vulpes</i>	Red fox
<i>Zenaida macroura</i>	Mourning dove

Appendix D Photo Log

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 1 - Road bisecting the North project area. View is to the west.



Photo 2 - Terraces in the southeastern portion of the North project area, Stepler Road, and surrounding residential development. View is to the southeast.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 3 - Upland swale and surrounding residential development in the northwestern portion of the North project area. View is to the north.



Photo 4 - Western portion of the North project area and surrounding residential development. View is to the west.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 5 - Upland swale and terraces in the southeastern portion of the North project area.
View is to the southeast.



Photo 6 - Culvert along the road bisecting the North project area draining north to the upland swale.
View is to the south.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 7 - Large animal burrow in the western portion of the North project area. View is to the east.



Photo 8 - Scat in the central portion of the North project area east of the upland swale. View is to the northwest.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 9 - Riparian corridor along the drainage northeast of the North project area. View is to the northeast.



Photo 10 - Uplands along Stepler Road in the northwestern portion of the South project area with surrounding residential development. View is to the west.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 11 - Swale in the northwestern portion of the South project area consisting primarily of upland species. View is to the east.



Photo 12 - Facultative and upland swale in the northwestern portion of the South project area. View is to the northwest.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 13 - Northeastern portion of the South project area dominated by upland grasses with scattered ponderosa pine trees. View is to the south.



Photo 14 - Eastern portion of the South project area consisting of upland herbaceous grasslands. View is to the south.

PHOTO LOG
SETTLERS RANCH FILING NO. 3 NATURAL FEATURES AND WILDLIFE ASSESSMENT
MARCH 1 AND APRIL 27, 2023



Photo 15 - Southwestern portion of the South project area consisting of upland herbaceous grasslands. View is to the west.



Photo 16 - Animal burrow in the northern portion of the South project area. Burrow appeared inactive at the time of the 2023 site visit. View is to the northeast.

Appendix E Wetland Determination Data Form

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Settlers Ranch Filing No. 3 City/County: Black Forest/EI Paso Sampling Date: 4/27/23
 Applicant/Owner: Hodgen Settlers Ranch LLC State: CO Sampling Point: DP1
 Investigator(s): C. Marne, I. Mansour Section, Township, Range: Sections 23, T11S, R66W; 6th PM
 Landform (hillslope, terrace, etc.): Swale on hillslope Local relief (concave, convex, none): concave Slope (%): 30
 Subregion (LRR): G Lat: 39.074922° Long: -104.744600° Datum: NAD83
 Soil Map Unit Name: Tomah-Crowfoot loamy sands, 3 to 8 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Some berming along swale, upstream and downstream of data point. Two red-tailed hawks observed.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Rosa woodsii</u>	3	N	FACU	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
3 = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Poa pratensis</u>	85	Y	FAC	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Schedonorus arundinaceus</u>	8	N	FAC	
3. <u>Bouteloua gracilis</u>	10	N	UPL	
4. <u>Potentilla argentea</u>	1	N	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
104 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 2/2	100					Clay loam	
14-16	10YR 4/3	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:
Mixed in gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): _____
 Saturation Present? Yes _____ No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
no hydrology indicators observed