



Consultants in Natural Resources and the Environment

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# Natural Resources Assessment Eagle Rising Subdivision El Paso County, Colorado

Prepared for—

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## Executive Summary

Stephen Jacobs retained ERO Resources Corporation (ERO) to provide a natural resources assessment for the Eagle Rising Subdivision east of Black Forest Road, south of Kurie Road, in El Paso County, Colorado (project area). ERO assessed the project area for potential wetlands and other waters of the U.S., threatened and endangered species habitat, and general wildlife use. Below is a summary of the resources found at the project area and recommendations or future actions necessary based on the current site conditions and federal, state, and local regulations.

The natural resources 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 Stephen Jacobs. 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.** – Cottonwood Creek, the ponds along Cottonwood Creek, and their abutting wetlands (Figure 2) would likely be considered jurisdictional waters of the U.S. because of their eventual connection to the Arkansas River, a river considered by the Army Corps of Engineers (Corps) as a Traditional Navigable Water. Two ponds (Ponds 1 and 2) and one additional wetland (Wetland 4) would also likely be considered jurisdictional because of their surface connection to Cottonwood Creek. Pond (Pond 3) and its associated wetlands (Wetland 5) do not appear to have a surface water connection to a known jurisdictional water of the U.S. and may be considered isolated and non-jurisdictional. ERO has recommended a “No Build Zone” for the project area and the project proponent has incorporated this recommendation in their preliminary plan and has established a “prudent line – no construction disturbance limit” that avoids and protects both wetlands and riparian vegetation, except for Pond 3 and its associated wetlands (Wetland 5). ERO recommends submitting a wetland delineation report to the Corps requesting a jurisdictional determination for Pond 3 and Wetland 5. If these areas are considered jurisdictional and work is planned in Pond 3 or Wetland 5, a Section 404 permit would be required from the Corps for the placement of dredged or fill material in wetlands or below the ordinary high-water mark. If no work is planned in any of these areas, no Corps action is necessary.

**Threatened and Endangered Species** – The site does not contain suitable habitat for a majority of the federally listed threatened or endangered species potentially occurring in El Paso County, Colorado. According to the U.S. Fish and Wildlife Service (2022), the project area is not within the range of the Preble’s meadow jumping mouse (Preble’s). Cottonwood Creek and the surrounding riparian vegetation has habitat attributes similar to those described as suitable habitat for Preble’s. Furthermore, all wetland and riparian areas will be buffered with “no construction zones” established to limit project activities will be limited to areas outside of riparian communities. ERO recommends submitting a habitat assessment to the Service requesting confirmation that the project would have no adverse impacts on any federally threatened or endangered species.

**Migratory Birds** – No bird nests were observed during the 2022 site visit; however, trees, shrubs, and upland grasslands in and around the project area provide potential nesting habitat. The best way to avoid impacting migratory birds is to conduct ground-clearing activities and construction activities during the non-nesting season. The Eastern Colorado Field Office of the Service (Service 2022c) and Colorado Department of Transportation (Colorado Department of Transportation 2011) have identified the primary nesting season for migratory birds in eastern Colorado as occurring from April 1 to August

31. However, some birds (e.g., eagles, owls and red-tailed hawks), can nest as early as February or March. Because of variability in the nesting seasons of various bird species, additional nest surveys during the nesting season may also be warranted. ***ERO recommends a nest survey be conducted within one week prior to construction*** to determine if any active nests are present in or near the project area so they can be avoided. If active nests are found, any work that would destroy the nests should not be conducted until the birds have vacated the nests.

# **Natural Resources Assessment**

## **Eagle Rising Subdivision**

### **El Paso County, Colorado**

**June 23, 2022**

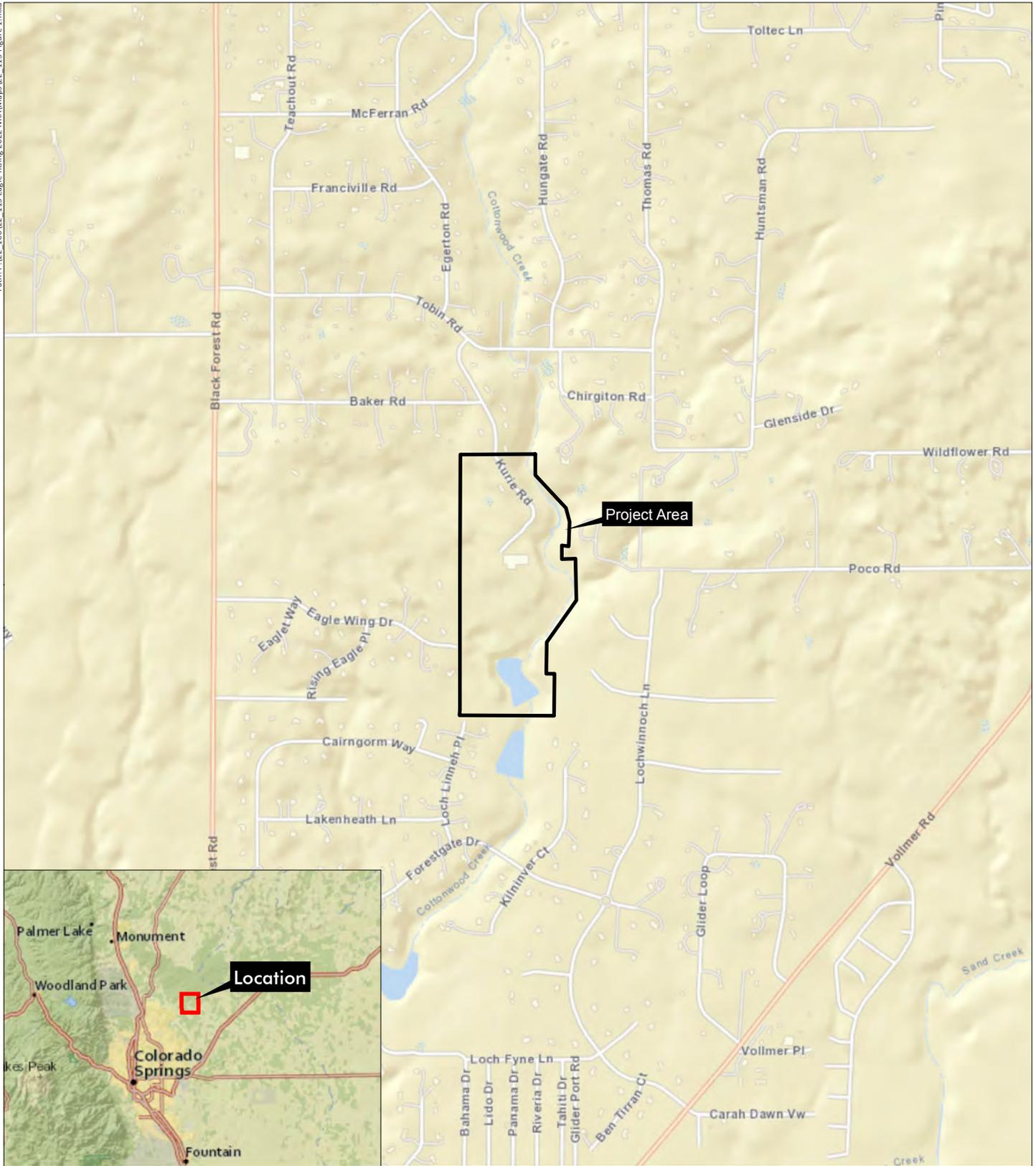
## **Introduction**

Stephen Jacobs retained ERO Resources Corporation (ERO) to provide a natural resources assessment for a proposed development at the Eagle Rising Subdivision east of Black Forest Road, south of Kurie Road, in El Paso County, Colorado (project area; Figure 1). On April 27, 2021, Ron Beane, a biologist with ERO, assessed the project area for natural resources (2022 site visits). Ron Beane and Courtney Marne conducted a follow up site visit on May 26, 2022. During this assessment, activities included a review of potential wetlands and other waters of the U.S. (WOTUS), identification of habitat for federally threatened and endangered species, and identification of other natural resources. This report provides information on existing site conditions and resources, as well as current regulatory guidelines related to those resources. ERO assumes the landowner is responsible for obtaining all federal, state, and local permits for construction of the project.

The natural resources 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 Stephen Jacobs. 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.

## **Project Location**

The project area is a 70.79-acre agricultural parcel in the eastern half of Section 29, Township 12 South, Range 65 West of the 6th Principal Meridian in El Paso County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project area are 526926mE, 4314192mN, Zone 13. The longitude/latitude of the project area is -104.689148°W/38.976294°N. The elevation of the project area is approximately 7,100 feet above sea level. Photo points of the project area are shown on Figure 2, and the photo log is in Appendix A.



### Eagle Rising 2022 Natural Resources Assessment

Section 29, T12S, R65W; 6th PM

UTM NAD 83: Zone 13N; 526926mE, 4314192mN

Longitude 104.689148°W, Latitude 38.976294°N

USGS Falcon NW, CO Quadrangle

El Paso County, Colorado

Figure 1  
Vicinity Map

Prepared for: Steve Jacobs  
File: 22\_113 Figure 1.mxd (GS)  
April 27, 2022



## Regulatory Framework

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

### Federal, State, and Local Regulations

#### Clean Water Act

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of waters of the U.S. 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 waters of the U.S. (streams, ponds, and other waterbodies). Findings regarding waters of the U.S. are addressed in the *Wetlands and Waters of the U.S.* section of this report.

#### Endangered Species Act

Federally threatened and endangered species are protected under the Endangered Species Act of 1973, as amended (ESA) (16 United States Code 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.

## Project Background and Environmental Baseline

ERO conducted a Natural Resources Assessment for the project area in 2012 (ERO 2012). This report provides an updated assessment of the project area to identify natural and wildlife resources that may

be impacted by development of the project area and to identify any significant changes in natural resources since the assessment conducted in 2012.

The project area has been continually influenced by human activities for more than 100 years. Timber was a major industry in the Black Forest in the late 1800's with numerous lumber mills scattered through the area. Grazing and agriculture dominated the land use in the early 1900's, eventually giving way to summer homes, and full-time residences (El Paso County Land Use Department 1987).

## Methods

During the 2022 site visits, ERO conducted an updated natural resources assessment of the project area. In addition to the information gathered during the 2022 site visits, natural resource information was obtained from existing databases and sources such as aerial photography, the Colorado Natural Diversity Information Source (NDIS), U.S. Fish and Wildlife Service (Service) National Wetlands Inventory database, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), and other sources ("Google, Inc." 2022; Natural Diversity Information Source 2021; U.S. Fish and Wildlife Service, n.d.; U.S. Geological Survey 2022). Based on the information gathered from existing sources and the initial site visit, ERO verified existing vegetation communities and identified important wildlife attributes of the project area.

## Project Area Description

The National Land Cover Database maps five land cover types in the project area (U.S. Geological Survey 2016). Grassland/Herbaceous is the most dominant and occurs throughout the majority of the western portion of the project area. The other land cover types in the project area include evergreen forest, scrub/shrub, open water, and barren land.

The project area is on the southern edge of the Black Forest, northeast of Colorado Springs (Figure 1). Vegetation in the project area consists of upland grasslands, patches of ponderosa pine (*Pinus ponderosa*) and upland shrubs, and wetland/riparian vegetation along drainages. Three tributaries to Cottonwood Creek converge at the eastern project area boundary. In the project area, Cottonwood Creek generally flows from north to south and primarily consists of wetlands throughout the channel (Figure 2; Photos 5a through 7a, 5b, 6b). Two ponds (Ponds 1 and 2) occur along Cottonwood Creek in the project area that are contained behind earthen dams (Photos 1a through 4a). As a result of water rights negotiations and drought, the wetlands along Cottonwood Creek and the two ponds were drier in 2022 than what was observed in 2012 (Photos 1b through 4b). A third pond (Pond 3), that was excavated in uplands occurs in the west, central portion of the project area (Figure 2; Photos 6a and 6b)). Wetlands occur in the channel and on benches and terraces along Cottonwood Creek and as small fringes along the ponds. A depression area and swale consisting of wetland vegetation (Wetland 4) occurs downstream of a culvert in the project area northwest of Pond 2 (Figure 2). Wetlands in the project area are dominated by Nebraska sedge (*Carex nebrascensis*), Baltic rush (*Juncus balticus*), redtop (*Agrostis gigantea*), broadleaf cattail (*Typha angustifolia*), sandbar willow (*Salix exigua*), strapleaf willow

(*Salix ligulifolia*), park willow (*Salix monticola*), and shining willow (*Salix lucida* subsp. *caudata*). The riparian overstory along Cottonwood Creek is dominated by peachleaf willow (*Salix amygdaloides*) and plains cottonwood (*Populus deltoides* subsp. *monilifera*) trees. Upland shrubs in the riparian corridor include snowberry (*Symphoricarpos occidentalis*), Woods' rose (*Rosa woodsii*), golden currant (*Ribes aureum*), and chokecherry (*Padus virginiana*) (Photo 10). The soils in the project area primarily consist of Pring coarse sandy loam, 3 to 8 percent slopes (Natural Resources Conservation Service 2022).

The project area is one of the last remaining nonresidential tracts of land along Cottonwood Creek. Rural residential development (2- to 5-acre lots) surrounds the entire project area. Two existing homes are located in the northwest corner of the project area and a large barn, corral, and disturbed area occurs in the north-central portion of the project area (Photo 8a). The uplands in the project area are a mixture of native grassland and disturbed areas (Photos 9a and 9b). The project area has historically been used for cattle grazing, and some limited grazing continues in the southeast corner of the project area. The native upland areas are dominated by blue grama (*Bouteloua gracilis*), sand dropseed (*Sporobolus cryptandrus*), threeawn (*Aristida* sp.), soapweed yucca (*Yucca glauca*), Canada wildrye (*Elymus canadensis*), intermediate wheatgrass (*Thinopyrum intermedium*), sideoats grama (*Bouteloua curtipendula*), muhly (*Muhlenbergia* sp.), and ponderosa pine (Photos 9a and 9b). The disturbed uplands are dominated by smooth brome (*Bromus inermis*), diffuse knapweed (*Centaurea diffusa*), Canada thistle (*Cirsium arvensis*), musk thistle (*Carduus nutans*), common mullein (*Verbascum thapsus*), common teasel (*Dipsacus fullonum*), and kochia (*Bassia scopara*).

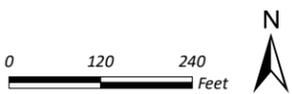


Eagle Rising 2022 Natural Resources Assessment

- Data Point
- Project Area Boundary
- ☁ Open Water
- ▨ Wetland

Image Source: Maxar Technologies©, May 24, 2021

Figure 2  
Existing Conditions



Prepared for: Steve Jacobs  
File: 22\_113 Figure 2.mxd (GS)  
June 21, 2022



## Wetlands and Waters of the U.S.

### Background

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of 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). 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 a TNW, 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.

### Methodology

During the 2022 site visits, ERO surveyed the project area for potential isolated wetlands, jurisdictional wetlands, and other WOTUS. A full jurisdictional wetland delineation following U.S. Army Corps of Engineers (Corps) guidelines was not conducted during the 2022 site visits; however, ERO followed the methods for routine on-site wetland determinations as described in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and methods in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (Corps 2010) to map existing wetlands and refine changes in wetland boundaries between the 2012 and 2022 site visits. In the rest of the project area, ERO verified the 2012 delineation boundaries of wetlands, stream channels, and open water in the project area. Before the 2022 site visits, ERO reviewed U.S. Geological Survey quadrangle topographic maps and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or WOTUS. ERO also reviewed

the proximity and potential surface water connection of wetlands to known jurisdictional WOTUS using aerial photo interpretation, landowner information, and information from the 2022 site visit.

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* (Corps 2020), taxonomy was determined using *Flora of Colorado* (Ackerfield 2015), and nomenclature was determined using the *PLANTS Database* (USDA, NRCS 2022).

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.”

The boundaries of identified wetlands and other characteristics of potential WOTUS were refined 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 aerials and then digitized.

### **Wetland Classification**

Delineated wetlands were classified according to the U.S. Fish and Wildlife Service’s (Service) Cowardin classification system (Cowardin et al. 1979) combined with a hydrogeomorphic (HGM) approach (Brinson 1993). The HGM approach assesses the chemical, physical, and biological functions of wetlands based on its geomorphic setting, water source, and hydrodynamics. HGM classes found in Colorado are mineral soil flats, organic soil flats, riverine, lacustrine fringe, slope, and depressional. The Cowardin classification uses a hierarchical structure of systems, subsystems, and classes to classify both wetlands and deepwater habitats. Wetlands with persistent or nonpersistent vegetation are classified in the Cowardin system as palustrine, which typically includes wetlands referred to as marshes, fens, wet meadows, and sloughs. The palustrine system also includes small, shallow, permanent, or intermittent water bodies such as ponds. Palustrine wetlands may be situated shoreward of lakes and river channels, on river floodplains, in isolated catchments, or on slopes (Cowardin et al. 1979). Under the palustrine

system, wetlands are classified as emergent (erect, rooted, herbaceous, and usually perennial hydrophytes that remain standing until at least the next growing season); scrub-shrub (woody vegetation less than 20 feet tall); or forested (woody vegetation 20 feet or taller). In wetlands where more than one wetland type occurs, the wetland type of the largest area is used. For example, an area that is predominantly palustrine emergent (PEM) wetlands but also contains a small amount of palustrine scrub-shrub (PSS) wetlands would be categorized as PEM wetlands. Because of the limited occurrence of the smaller sized wetland types within the larger wetland polygons, these areas were not separated out within the delineated polygons.

The Cowardin riverine system includes wetlands and deepwater habitats contained in a channel, with the exception of wetlands dominated by trees, shrubs, and emergent vegetation. The riverine system usually contains flowing water and is bounded on the landward side by uplands, channel banks, or other wetlands. Within the riverine system, wetlands are divided into the tidal lower perennial (low gradient and slow water), upper perennial (high gradient and fast water), and intermittent subsystems. Within these subsystems, riverine wetlands are further classified as unconsolidated bottom, aquatic bed, streambed, rocky shore, unconsolidated shore, and emergent wetland (nonpersistent). During the wetland assessment, ERO classified the wetlands in the project area as PEM. Open waters/drainages were classified as intermittent in defined areas along Cottonwood Creek and as Palustrine unconsolidated bottom in Ponds 1, 2, and 3.

### **Jurisdictional Assessment**

To assist the Corps in making a preliminary jurisdictional determination, ERO reviewed the proximity and potential surface water connection of wetlands to known jurisdictional waters of the U.S. using aerial photo interpretation and information from the wetland assessment. Within the project area, wetlands were distinguished as isolated, abutting or adjacent to a TNW, or as abutting or adjacent to a tributary to a TNW. Abutting wetlands are not separated from a TNW or tributary by uplands, a berm, a dike, or similar feature. Adjacent wetlands are bordering, contiguous, or neighboring a TNW or tributary, and may be separated from a TNW or tributary by uplands, a berm, a dike, or similar feature. Wetlands or waters that have a surface water connection to the South Platte River may provide more than a speculative or insubstantial effect on the chemical, physical, and/or biological integrity of a TNW. 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. The following sections contain information on potential surface water connections of wetlands and other waters in the project area.

### **Description of Wetlands and Other Waters**

ERO assessed the project area for wetlands and other waters as described below. Data were collected in locations in the project area to document and verify the characteristics of uplands and wetlands, and the transition areas between them. Each data point (DP) was given a label that corresponds to a location shown on Figure 2 and routine wetland determination forms in Appendix B. The following sections contain information on potential surface water connections of wetlands and other waters in the project area. Table 1 provides a summary of the mapped areas, including Cowardin classification and

HGM for each wetland. During the 2022 site visit, ERO mapped approximately 1.29 acre of stream channel and open water and 5.47 acres of wetlands in the project area (Figure 2; Table 1).

**Table 1. Wetland area, Cowardin classification and HGM.**

Water/Wetland ID	Longitude	Latitude	Feature Size (acre)	Cowardin Classification	HGM
<i>Streambed and Open Water</i>					
Pond 1 (Cottonwood Creek)	-104.687376	38.978183	0.86	Palustrine	Riverine/Depression
Pond 2 (Cottonwood Creek)	-104.688763	38.973141	0.28	Palustrine	Riverine/Depression
Pond 3 (Isolated)	-104.689824	38.976631	0.15	Palustrine	Depression
<i>Total Streambed and Open Water</i>			1.29	-	-
<i>Wetlands</i>					
Wetland 1	-104.687513	38.978655	0.54	Palustrine Emergent	Riverine
Wetland 2	-104.688002	38.975189	4.18	Palustrine Emergent	Riverine
Wetland 3	-104.688288	38.972562	0.43	Palustrine Emergent	Riverine
Wetland 4	-104.690057	38.974356	0.11	Palustrine Emergent	Slope
Wetland 5	-104.689908	38.976630	0.21	Palustrine Emergent	Depression
<i>Total Streambed and Open Water</i>			5.47	-	-
<b>Total</b>			<b>6.76</b>	-	-

## Streams, Open Water, and Wetlands

### ***Cottonwood Creek and Ponds 1 and 2***

Cottonwood Creek is shown as an intermittent stream on the U.S. Geological Survey (USGS) Falcon NW topographic quadrangle and NHD (Figure 1). Cottonwood Creek is a tributary to Fountain Creek which flows to the Arkansas River, a TNW, and therefore, is likely a water of the U.S. The Cottonwood Creek channel is 1 to 3 feet wide and almost completely vegetated in the project area. In 2012, ERO mapped wetlands nearly throughout Cottonwood Creek and along the pond fringes in the project area; however, based on conditions during the 2022 field survey, approximately 375 feet of Cottonwood Creek upstream of Pond 1 appear to have transitioned to uplands. During the 2022 site visit, no defined channel bed and bank, surface flows, or wetlands were observed along this reach of Cottonwood Creek. Two man-made ponds (Ponds 1 and 2) occur along Cottonwood Creek in the project area. Both ponds are bounded by earthen dams but appear to be connected downstream to Cottonwood Creek via culverts.

### ***Wetlands 1 through 3***

As discussed above, the Cottonwood Creek channel consists of wetlands (Wetlands 1, 2, and 3) throughout most of the project area in fringes around Ponds 1 and 2 (Figure 2). Compared to what was mapped in 2012, less open water in Ponds 1 and 2 and wetland fringes surrounding the ponds were observed in 2022. Additionally, in 2012, wetlands were mapped further upstream in the project area along Cottonwood Creek and its tributaries; however, during the 2022 site visit, ERO collected data along these areas to verify they had transitioned to uplands (DP1 through DP3, and DP5).

### ***Vegetation***

Cottonwood Creek is almost completely vegetated with emergent wetland species throughout the project area. Wetlands also occur as fringes along Ponds 1 and 2. Wetland vegetation is dominated by

sandbar willow (facultative wetland); Baltic rush (facultative wetland); Nebraska sedge (obligate wetland), and broadleaf cattail (obligate wetland). Other common species observed include softstem bulrush (obligate wetland), reed canarygrass (*Phalaris arundinacea*; facultative wetland), watercress (*Nasturtium officinale*; obligate wetland), and redtop (facultative). At DP4, in Wetland 2, the vegetation met the dominance test for hydrophytic vegetation.

The vegetation along the tributaries were transitioning from hydrophytic species to mesic or upland species, and there was a noticeably loss of hydrology. These areas were dominated by redtop, Kentucky bluegrass (*Poa pratensis*; facultative), Canada thistle (facultative), Canada wildrye (facultative), and yellow toadflax (*Linaria vulgaris*; upland). At DP1, DP2, and DP3 met the dominance test for hydrophytic vegetation; however, these data points then lacked either hydric soils or hydrology indicators and, therefore, were not wetlands. DP5 consisted primarily of upland species and did not meet the dominance test for hydrophytic vegetation.

### *Soils*

Soil types in the project area had been identified by the NRCS Soil Surveys for El Paso County, Colorado. The NRCS mapped the primary soil in the project area as Pring coarse sandy loam (3 to 8 percent slopes) (USDA, NRCS 2022b). These soils are mostly coarse sandy loam or gravelly sandy loam, which are well-drained soils typically found on hills and side slopes.

Field observations revealed that soils primarily consisted of clay loam and sandy or gravelly clay loam within 16 inches of the ground surface. At DP1, the soils contained matrix colors of 10YR 2/2 and 10YR 2/2 with redox features of 7.5YR 4/6. At DP1, soils met the redox depressions soil indicator. No hydric soil indicators were observed at DP2 or DP3. Soils at DP4 were assumed hydric based on the presence of hydrophytic vegetation and hydrology indicators. Nonhydric soils were assumed at DP5 due to a lack of hydrophytic vegetation and wetland hydrology indicators. See Appendix B for additional details on soils for each DP.

### *Hydrology*

Hydrology indicators were observed at DP3 and DP4. Two secondary hydrologic indicators including a successful FAC-neutral test and geomorphic position were observed at DP3. At DP4, the surface water primary hydrologic indicator was observed, as well as the secondary indicators of a successful FAC-neutral test and geomorphic position. Geomorphic position, a secondary indicator, was observed at DP1, DP2, and DP5; however, no other hydrology indicators were present; therefore, these areas were determined not to be a wetland.

## **Wetland 4**

In the project area, a slope wetland (Wetland 4) occurs west of Cottonwood Creek, northwest of Pond 2 (Figure 2). The wetland occurs downstream of a stormwater culvert that outlets under a gravel road. Water was also observed seeping into the wetland from a leaking waterline pipe spout. The wetland slopes to the southeast toward Cottonwood Creek; there is an approximately 180 feet break between Wetland 4 and Pond 2 that consists of an upland vegetated swale with intermittent riprap. Wetland 4 is

not shown on the USGS Falcon NW topographic quadrangle or the NHD. During the 2022 site visit, no surface flows or wetlands were observed connecting Wetland 4 to Cottonwood Creek or its adjacent wetlands; however, there may be a significant nexus between these features. As such, ERO believes Wetland 4 would likely be considered jurisdictional.

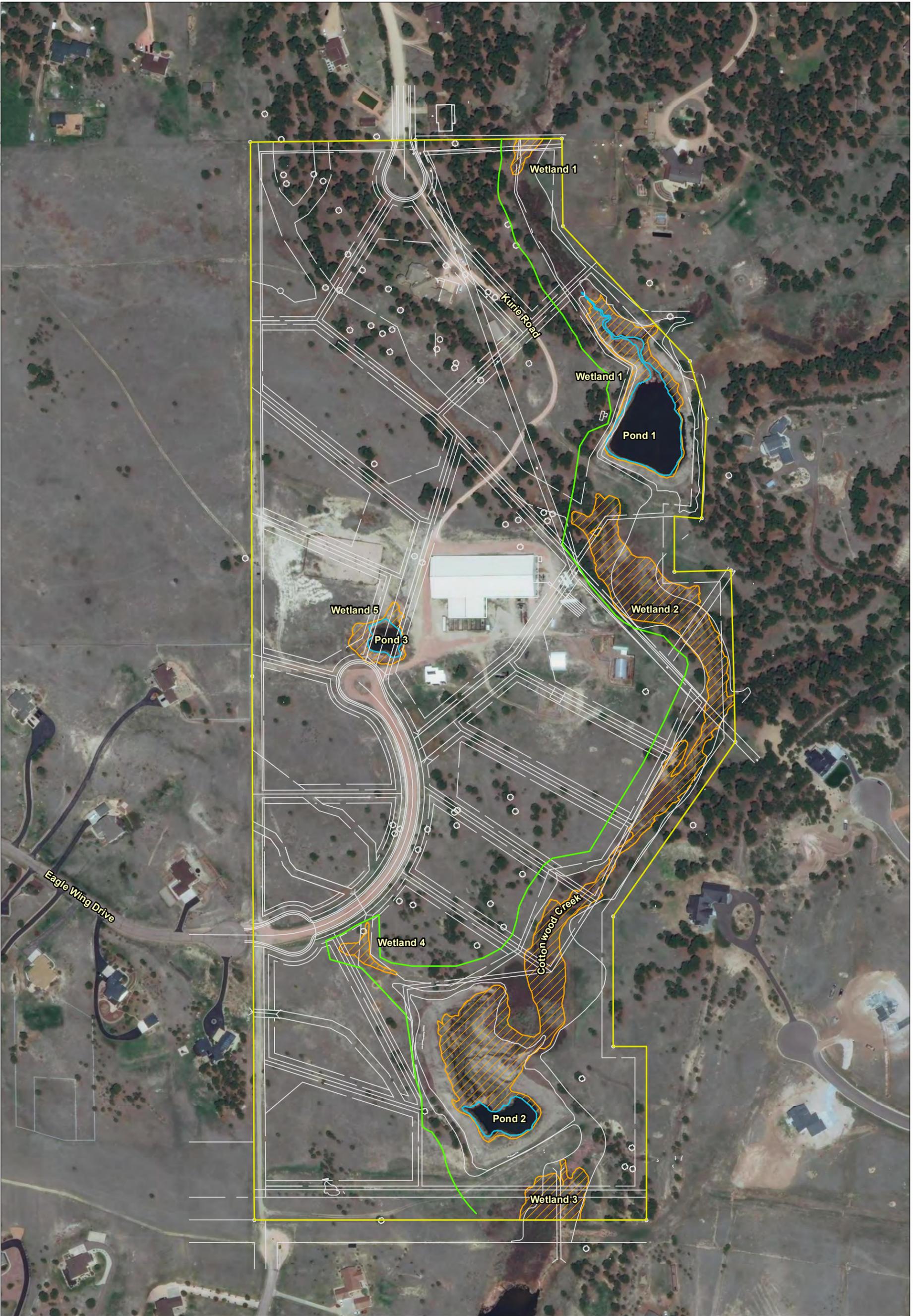
Vegetation in Wetland 4 is similar to the wetland vegetation observed along portions of Cottonwood Creek in the project area and consisted primarily of Baltic rush with some sandbar willow. Wetland boundaries were identified by abrupt vegetation changes from the wetland community to areas dominated by upland species.

### **Pond 3 and Wetland 5**

A small pond (Pond 3) occurs within the disturbed uplands in the project area. The pond is not shown on the USGS Falcon NW topographic quadrangle or the NHD. Pond 3 is man-made and excavated in uplands and no culvert outlet is present. Wetland vegetation (Wetland 5), dominated by broadleaf cattail, occurs along the pond margins. Because Pond 3 and adjoining Wetland 5 appear to be isolated without a significant nexus to known waters of the U.S., ERO believes these features would be considered nonjurisdictional.

### **Recommendations**

Cottonwood Creek, Ponds 1 and 2, and their abutting wetlands would likely be considered jurisdictional waters of the U.S. because of their connection to the Arkansas River, a TNW. It is unclear if Wetland 4 would be considered isolated or if they have a significant nexus to Cottonwood Creek. Pond 3, and its associated Wetland 5, appear to lack a significant nexus to any known water of the U.S. and, therefore, may be considered isolated and nonjurisdictional. ERO has recommended a “No Build Zone” for the project area based on topography and vegetation and hydrology characteristics of the project area (Figure 3). The project proponent incorporated this recommendation in their preliminary plan and has established a “prudent line – no construction disturbance limit” that avoids and protects both wetlands and riparian vegetation, except for Pond 3 and its associated wetlands (Wetland 5). ERO recommends submitting a wetland delineation report to the Corps requesting confirmation of the delineation and a preliminary jurisdictional determination for Pond 3 and Wetland 5. If the wetlands and open waters are determined jurisdictional, any work that would require the placement of dredged or fill material into the waters or wetlands would require a Section 404 permit.



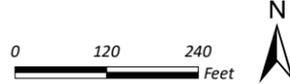
Eagle Rising 2022 Natural Resources Assessment

-  Open Water
-  Wetland
-  Construction/Disturbance Limit
-  Project Area Boundary

Image Source: Maxar Technologies©, May 24, 2021

Figure 3  
Proposed Subdivision

Prepared for: Steve Jacobs  
File: 22\_113 Figure 3.mxd (GS)  
June 21, 2022



## Threatened, Endangered, and Candidate Species

ERO assessed the project area for habitat for threatened, endangered, and candidate species under the Endangered Species Act (ESA). Federally threatened and endangered species are protected under the ESA of 1973, as amended (16 United States Code (U.S.C.) 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the Service under Section 7 or 10 of the ESA. The Service’s Information for Planning and Consultation (IPaC) resource list for the project area identifies several threatened and endangered species that could be potentially affected by the project (Table 2) (Service 2022a).

**Table 2. Federally threatened, endangered, and candidate species potentially found in in the project area or potentially affected by the project.**

Common Name	Scientific Name	Status <sup>1</sup>	Habitat	Suitable Habitat Present
<b>Mammals</b>				
Preble’s meadow jumping mouse <sup>2</sup>	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	No, not within Preble’s range.
Gray wolf	<i>Canis lupus</i>	E	Wolves can thrive in a wide range of habitats; a highly adaptable species that occurs in temperate forests, mountains, and grasslands	No - this species does not currently occur in Douglas County and project activities would not result in appreciable take
<b>Birds</b>				
Eastern black rail	<i>Laterallus jamaicensis</i>	T	Shallow cattail wetlands and wet sedge meadows with dense cover in the Arkansas River drainage in southeastern Colorado and the Republican River in east-central Colorado	Yes
Piping plover <sup>3</sup>	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches, river sandbars	No - not in South Platte River Basin
<b>Fish</b>				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	T	Cold, clear, gravel headwater streams and mountain lakes	No
Pallid sturgeon <sup>3</sup>	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravel/sand substrate	No - not in South Platte River Basin
<b>Invertebrates</b>				
Monarch butterfly	<i>Danaus plexippus</i>	C	Dependent on milkweeds ( <i>Asclepiadoideae</i> ) as host plants and forage on blooming flowers; a summer resident	No

Common Name	Scientific Name	Status <sup>1</sup>	Habitat	Suitable Habitat Present
<b>Plants</b>				
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 <sup>3</sup>	<i>Platanthera praeclara</i>	T	Moist to wet prairies and meadows	No - Not in So. Platte Basin

<sup>1</sup>T = Federally Threatened Species, E = Federally Endangered Species; C – Candidate for Federal Listing; EXPN = Experimental Population.

<sup>3</sup>\*\*Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other counties or states.

Source: (Service 2022a).

## Species Eliminated from Further Consideration

The proposed project would not affect the gray wolf, greenback cutthroat trout, or monarch butterfly because the project area is outside of the known range of the species and lacks suitable habitat. The piping plover, pallid sturgeon, and western prairie fringed orchid are species that are affected by continued or ongoing water depletions to the Platte River system. Cottonwood Creek is a tributary to the Arkansas River and therefore no action is necessary regarding these species. The project area is within the range of ULTO, but does not meet the 1992 survey requirements because the site is above the elevation range. Furthermore, Cottonwood Creek does not meet the 1992 survey requirements because it is an intermittent stream (only perennial tributaries in El Paso county need surveyed); therefore, no action is necessary regarding this species. Potential habitat for Preble’s and eastern black rail is present in the project area and a more detailed discussion is provided below.

## Threatened and Endangered Species Habitat

### Preble’s Meadow Jumping Mouse

#### *Species Background*

Preble’s is listed as a threatened species in Colorado. Under existing regulations, either a habitat assessment or a full presence/absence survey for Preble’s is required for any habitat-disturbing activity within areas determined to be potential Preble’s habitat (generally stream and riparian habitats along the Colorado Front Range). Typically, Preble’s occurs below 7,600 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams and canals (Meaney et al. 1997). Preble’s occurs in low undergrowth consisting of grasses and forbs, in open wet meadows, riparian corridors near forests, or where tall shrubs and low trees provide adequate cover (Service 1999; Meaney et al. 1997). Preble’s typically inhabits areas characterized by well-developed plains riparian vegetation with relatively undisturbed grassland and a water source nearby.

#### *Potential Habitat and Possible Effects*

Although the project area is currently considered outside the range of Preble’s (Service 2022), ERO assessed the project area for vegetation characteristics similar to Preble’s habitat. Cottonwood Creek

and its adjacent wetlands and riparian corridor support vegetation with characteristics similar to those described as suitable Preble's habitat. This potentially suitable habitat was mapped during the 2012 and 2022 site visits (Figure 2). Most of the wetland areas described above and the adjacent uplands provide vegetation structure and composition that is characteristic of Preble's breeding, wintering, and foraging habitat. However, the project area is completely surrounded by suburban development and fragmented from other suitable habitat both upstream and downstream by human dwellings, roads, and small culverts. The habitat characteristics along this segment of Cottonwood Creek appears to have been influenced by a series of small earthen dams and ponds that hold water, raise ground water tables in the immediate vicinity, and provide the hydrology capable of supporting woody riparian vegetation. Less than 1.5 miles downstream, at Black Forest Road, Cottonwood Creek abruptly becomes incised and severely eroded with steep unvegetated banks incapable of supporting riparian vegetation or Preble's populations.

A trapping survey was conducted on the Highlands Property to the south and east of the project area and no Preble's were found (Service 2000). Several other habitat evaluations and a trapping survey have been conducted downstream of the project area along Cottonwood Creek with no Preble's or suitable habitat found (Feature Homes, Inc. 2002; Ensign Technical Services, Inc. 1999). In addition, the closest known population of Preble's is more than 6 stream miles downstream of the project area along Cottonwood Creek.

### *Recommendations*

Current guidelines recommend that projects within 300 feet of 100-year floodplains on drainages that are potential Preble's habitat be assessed as to their potential to impact Preble's and its habitat (Service 1999). ERO has determined that vegetation characteristic of suitable Preble's habitat is present in the project area, although the project area is unlikely to support a viable population of the species due to existing human disturbance in and surrounding the project area and isolation from other suitable habitat or known populations. ERO has recommended a "No Build Zone" for the project area based on topography and actual vegetation characteristics of the project area. The project proponent incorporated this recommendation in their preliminary plan and has established a "prudent line – no construction disturbance limit" that avoids and protects both wetlands and riparian vegetation (Figure 3).

Based on the information provided above the absence of nearby suitable habitat or existing Preble's populations and the designation of a no construction disturbance limit, ERO has determined that the proposed project is unlikely to adversely affect Preble's or its habitat.

ERO recommends submitting a habitat assessment letter to the Service requesting that the Service disqualify the Eagle Rising Subdivision for consideration under the provisions of the ESA.

## **Eastern Black Rail**

### *Species Background*

The eastern black rail was listed as a threatened species by the Service on October 8, 2020 under the ESA (see Federal Register Vol. 85, No. 196:63764-63803). The eastern black rail ranges throughout central and eastern North America and south through the Caribbean and Brazil. This species has been documented along the Arkansas River drainage in southeastern Colorado and the Republican River in east-central Colorado. Threats include habitat fragmentation and conversion resulting in the loss of wetland habitats; sea level rise and tidal flooding; land management practices (e.g., incompatible fire management practices, grazing, haying/mowing, and other mechanical treatment activities); and increasing storm intensity and frequency. There are no exact counts of eastern black rail populations at the present time, so analysis units based on habitat have been identified across the United States. Colorado is included in the Great Plains analysis unit (Service 2019).

The eastern black rail is dependent on wetland and marsh vegetation that contains a mix of wet, saturated, and some dry edges around the periphery. The subspecies requires dense overhead cover and soils that are moist to saturated (occasionally dry) and interspersed with or adjacent to very shallow water (Service 2019). In Colorado, this species has been documented in cattail/bullrush marshes and near pond edges. Along the Republican River in northeastern Colorado and western Kansas, the eastern black rail has been documented in riparian vegetation (U.S. Air Force Academy 2020).

### *Potential Habitat and Effects*

The project area contains herbaceous emergent wetland vegetation along Cottonwood Creek that may be considered suitable for the eastern black rail; however, ERO evaluated the project area and determined the proposed project would not likely adversely affect eastern black rail habitat because the project area is completely surrounded by residential development and the presence of emergent wetland vegetation is a relatively recent occurrence related to water rights negotiations.

### *Recommendations*

ERO has recommended a “No Build Zone” for the project area based on topography and actual vegetation characteristics of the project area. The project proponent incorporated this recommendation in their preliminary plan and has established a “prudent line – no construction disturbance limit” that avoids and protects both wetlands and riparian vegetation (Figure 3). ERO recommends submitting a habitat assessment letter to the Service requesting that the Service disqualify the Eagle Rising Subdivision for consideration under the provisions of the ESA.

## **Other Species and Habitats of Concern**

### **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 Eagle Act (16 United States Code 668-668c).

### ***Potential Habitat and Possible Effects***

ERO did not observe any active or inactive songbird nests in the project area; however, trees and shrubs in and adjacent to the project area are potential nesting habitat for migratory birds. Additionally, no raptor nests were observed in or near the project area during the 2012 or 2022 site visit. A wide variety of bird species may use different vegetation communities in the project area for shelter, breeding, wintering, and foraging at various times during the year. 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 2022 site visit, ground and arboreal nests are difficult to detect and may be present in the project area. 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 (Service 2022c) and the Colorado Department of Transportation (Colorado Department of Transportation 2011) 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 area 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 area, activities that would directly affect the nests should be restricted. Habitat-disturbing activities (e.g., tree removal, grading, scraping, and grubbing) should be conducted in the nonbreeding season to avoid disturbing active nests or to avoid a “take” of the migratory bird nests in the project area. 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 cannot be conducted until the birds have vacated the nests.

## Other Wildlife Considerations

The project area provides habitat for a variety of small mammals such as cottontail rabbits (*Sylvilagus* sp.), deer mice, voles, and pocket gophers. Grassland habitat likely provides breeding habitat for numerous ground-nesting prairie bird species, and riparian ecosystems typically support many more species of native birds than surrounding grassland or shrubland communities (Knopf and Samson 1994). Although influenced by human disturbance, Cottonwood Creek and the ponds appear to support a relatively permanent water source, the wetlands and riparian corridor provides protective cover, foraging, and nesting habitat for wildlife and birds. Additionally, Cottonwood Creek and its riparian corridor extends through the project area and nearby development areas to the southwest and likely provide foraging, sheltering, and dispersal habitat components for numerous species.

As with any human development, wildlife species sensitive to human disturbance are likely to decline in abundance or abandon the area, while other wildlife species adapted to development are likely to increase in abundance. Overall, surrounding and continuing development contributes to a decline in the number and diversity of wildlife species nearby and to a change in species composition to favor species that adapt better to human disturbance.

## Conclusions

The existing vegetation communities and topographical features in the project area provide contiguous habitat, water resources, and core wildlife values such as cover and forage for various wildlife species. In particular, the drainage corridors along Cottonwood Creek contribute to the overall diversity of the project area and provide wildlife movement passageways that help maintain connections between wildlife populations. The project proponent plans to preserve the drainages, which will help maintain and conserve the wildlife values of the project area. Additionally, conserving larger contiguous parcels and concentrating building envelopes would provide a greater value to wildlife than numerous smaller parcels.

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**Appendix A Photo Log**

EAGLE RISING SUBDIVISION  
PHOTO LOG  
MARCH 19, 2012 AND APRIL 27, 2022



**Photo 1a** - Cottonwood Creek at the southern boundary of the project area. View is to the south.



**Photo 1b** - Cottonwood Creek at the southern boundary of the project area. View is to the south.



**Photo 2a** - Wetlands along Cottonwood Creek in the project area. View is to the south.



**Photo 2b** - Wetlands along Cottonwood Creek in the project area. View is to the south.



**Photo 3a** - Pond 1 in the project area. View is to the east.



**Photo 3b** - Immediately upstream of Pond 1 in the project area. View is to the east.

EAGLE RISING SUBDIVISION  
PHOTO LOG  
MARCH 19, 2012 AND APRIL 27, 2022



**Photo 4a** - Pond 2 in the project area.  
View is to the northwest.



**Photo 4b** - Pond 2 in the project area.  
View is to the northwest.



**Photo 5a** - Vegetated swale upstream of Cottonwood Creek  
in the project area. View is to the northwest.



**Photo 5b** - Vegetated swale upstream of Cottonwood Creek  
in the project area. View is to the northwest.



**Photo 6a** - Pond 3 in the project area.  
View is to the northwest.



**Photo 6b** - Pond 3 and associate Wetland 5 in the project area.  
View is to the northwest.

EAGLE RISING SUBDIVISION  
PHOTO LOG  
MARCH 19, 2012 AND APRIL 27, 2022



**Photo 7a** - Wetland 9 in the project area.  
View is to the southeast.



**Photo 7b** - Wetland 9 in the project area.  
View is to the southeast.



**Photo 8a** - Disturbed uplands and barn in the project area.  
View is to the northeast.



**Photo 8b** - Disturbed uplands and barn in the project area.  
View is to the northeast.



**Photo 9a** - Native uplands in the project area.  
View is to the northeast.



**Photo 9b** - Native uplands in the project area.  
View is to the northeast.

EAGLE RISING SUBDIVISION  
PHOTO LOG  
MARCH 19, 2012 AND APRIL 27, 2022



**Photo 10a** - Riparian corridor in the project area.  
View is to the southeast.



**Photo 10b** - Riparian corridor in the project area.  
View is to the southeast.

**Appendix B Routine Wetland Determination Datasheets**

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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP1  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Old stock pond Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): E Lat: 38.978817 Long: -104.690038 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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 checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Old stock pond. Dry, with no signs of recent retention of water. Area appears to be drying out.			

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5'</u>)</b> 1. <u>Agrostis gigantea</u> 20 Y FAC 2. <u>Poa pratensis</u> 20 Y FAC 3. <u>Cirsium arvense</u> 10 Y FAC 4. <u>Litter (leaves, pine needles, etc.)</u> 30 _____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum _____				
_____ = Total Cover				
Remarks: Mesic vegetation				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-2	organic material	100						
2-11	10YR 3/2	60	7.5YR 4/6	10	C	M	clay loam	
	10YR 2/2	30						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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:

**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 indications of recent retention of water.

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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP2  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.978432 Long: -104.689572 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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: No signs of recent hydrology. Area appears to be drying out.			

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Juncus balticus</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>	Column Totals: _____ (A) _____ (B)
2. <u>Dry litter (leaves, old vegetation)</u>	<u>35</u>	_____	<u>NI</u>	Prevalence Index = B/A = _____
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
= Total Cover				
<b>% Bare Ground in Herb Stratum</b> _____				
Remarks:				



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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP3  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.977894 Long: -104.688830 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

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 _____	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					
Swale along old tributary, immediately upstream of a culvert.					

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				OBL species _____ x 1 = _____	
1. <u>Rosa woodsii</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
<u>3</u> = Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Carex nebrascensis</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Juncus balticus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Elymus canadensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Elymus lanceolatus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>43</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					
Less than 5 percent cover in shrub stratum.					

**SOIL**

Sampling Point: DP3

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	Organic material							
2-5	10YR 2/2	100					Clay	
5-7	10YR 3/2	95	10YR 3/4	5	C	M	Clay	Distinct redox features
7-10	10YR2/2	100					Clay, gravel	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Type: <u>Dense clay and gravel</u> Depth (inches): <u>10</u>								
Remarks:								

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>					
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Surface Water Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	Water Table Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____				
Saturation Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Two secondary indicators observed.					

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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP4  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.977515 Long: -104.687850 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: PEM

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"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					
Tributary into Cottonwood Creek. Distinct transition to uplands; adjacent uplands are similar to vegetation and conditions observed at DP2.					

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				OBL species _____ x 1 = _____	
1. <u>Salix exigua</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
<u>10</u> = Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Typha latifolia</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Phalaris arundacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Carex nebrascensis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>75</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum <u>25</u>					
Remarks:					



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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP5  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): E Lat: 38.978432 Long: -104.689572 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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 type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	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: No signs of recent hydrology. Area appears to be drying out.					

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Salix ligulifolia</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species <u>55</u> x 3 = <u>165</u>
5. _____	_____	_____	_____	FACU species <u>10</u> x 4 = <u>40</u>
<u>35</u> = Total Cover				UPL species <u>10</u> x 5 = <u>50</u>
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Linaria vulgaris</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	Column Totals: <u>75</u> (A) <u>255</u> (B)
2. <u>Poa pratensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = <u>3.4</u>
3. <u>Maianthemum dilatatum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Verbascum thapsus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>40</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



# REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

U.S. ARMY CORPS OF ENGINEERS, OMAHA DISTRICT

The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced below. **Note:** Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

CORPS USE ONLY:

DATE RECEIVED:

PROJECT NO.:

## 1. PROPERTY LOCATION:

Street Address:

City/Township/Parish:

County:  State:

Acreage of Parcel/Review Area for JD:

Section:  Township:  Range:

Latitude:  Longitude:

*(For linear projects, please include the center point of the proposed alignment.)*

## 2. REQUESTOR CONTACT INFORMATION:

Typed or printed name:

Company name:

Street Address:

City:  State:  Zip:

Daytime phone no.:

Email address:

## 3. MAP: Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

## 4. REASON FOR REQUEST (check as many as applicable):

- I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- A Corps JD is required in order to obtain my local/state authorization.
- I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- I believe that the site may be comprised entirely of dry land/upland.
- Other:

## 5. TYPE OF DETERMINATION BEING REQUESTED:

- I am requesting an approved JD
- I am requesting a preliminary JD
- I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- I am unclear as to which JD I would like to request and require additional information.

## 6. OWNERSHIP DETAILS:

- I currently own this property.
- I plan to purchase this property.
- I am an agent/consultant acting on behalf of the requestor.
- Other (please explain):

**\*Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332. **Uses:** This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature:

Date:

June 29, 2022

Ms. Kara Hellige, Southern Colorado Regulatory Branch  
U.S. Army Corps of Engineers  
201 West 8th Street, Suite 350  
Pueblo, Colorado 81003

**RE:** Request for Approved Jurisdictional Determination for features in the Eagle Rising Subdivision  
in El Paso County, Colorado

Dear Ms. Hellige,

On behalf of Stephen Jacobs (project proponent), ERO Resources Corporation (ERO) is requesting an approved Jurisdictional Determination (JD) for features in the Eagle Rising subdivision property east of Black Forest Road and south of Kurie Road in El Paso County, Colorado (project area; Figure 1 attached). Future subdivision of the project and activities in the project area may impact this area, and the approved JD would be used to avoid and minimize impacts on any jurisdictional features. ERO has recommended a “No Build Zone” for the project area based on topography, vegetation, and hydrology characteristics of the project area. The project proponent incorporated this recommendation in the preliminary plan and has established a “prudent line – no construction disturbance limit” that avoids and protects both wetlands and riparian vegetation.

## Introduction

The project proponent retained ERO to identify potential waters of the U.S. in the project area, including wetlands, and to assist with Clean Water Act compliance. ERO previously conducted a wetland delineation for the project area in 2012 (ERO 2012). On May 26, 2022, Courtney Marne and Ron Beane, biologists with ERO, assessed the project area for potential isolated wetlands, jurisdictional wetlands, and other possible waters of the U.S. (2022 site visit). During the 2022 site visit, ERO verified and refined the 2012 delineation boundaries of wetlands, stream channels, and open water in the project area.

## Project Area Location

The project area is a 70.79-acre agricultural parcel in the eastern half of Section 29, Township 12 South, Range 65 West of the 6th Principal Meridian in El Paso County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project area are 526926mE, 4314192mN, Zone 13. The longitude/latitude of the project area is -104.689148°W/38.976294°N. The elevation of the project area is approximately 7,100 feet above sea level. Photos of the project area are attached and photo points are shown on Figure 2 (attached).

## Project Area Description

The National Land Cover Database maps five land cover types in the project area (U.S. Geological Survey 2016). Grassland/herbaceous is the most dominant land cover type and occurs throughout the majority of the western portion of the project area. The other land cover types in the project area include evergreen forest, scrub/shrub, open water, and barren land.

The project area is on the southern edge of the Black Forest, northeast of Colorado Springs (Figure 1). Vegetation in the project area consists of upland grasslands, patches of ponderosa pine (*Pinus ponderosa*) and upland shrubs, and wetland/riparian vegetation along drainages. Rural residential development (2- to 5-acre lots) surrounds the entire project area. Two residences are in the northwest corner of the project area and a large barn, corral, and disturbed area occurs in the north-central portion of the project area. The uplands in the project area are a mixture of native grassland and disturbed areas. The project area has historically been used for cattle grazing, and some limited grazing continues in the southeast corner of the project area. The native upland areas are dominated by blue grama (*Bouteloua gracilis*), sand dropseed (*Sporobolus cryptandrus*), threeawn (*Aristida* sp.), soapweed yucca (*Yucca glauca*), Canada wildrye (*Elymus canadensis*), intermediate wheatgrass (*Thinopyrum intermedium*), sideoats grama (*Bouteloua curtipendula*), muhly (*Muhlenbergia* sp.), and ponderosa pine. The disturbed uplands are dominated by smooth brome (*Bromus inermis*), diffuse knapweed (*Centaurea diffusa*), Canada thistle (*Cirsium arvensis*), musk thistle (*Carduus nutans*), common mullein (*Verbascum thapsus*), common teasel (*Dipsacus fullonum*), and kochia (*Bassia scopara*).

Three tributaries to Cottonwood Creek converge at the eastern project area boundary. In the project area, Cottonwood Creek generally flows from north to south and primarily consists of wetlands throughout the channel (Figure 2). Two ponds (Ponds 1 and 2) occur along Cottonwood Creek in the project area that are contained behind earthen dams (Photo 2). As a result of water rights negotiations and drought, the wetlands along Cottonwood Creek and the two ponds were drier during the 2022 site visit than what was observed in 2012. Along Cottonwood Creek, wetlands occur in the channel and on benches and terraces and as small fringes along the ponds. A third pond (Pond 3) bounded by wetlands (Wetland 5) that was excavated in uplands occurs in the west-central portion of the project area (Figure 2; Photo 4). Additionally, a depression area and swale consisting of wetland vegetation (Wetland 4) occurs northwest of Pond 2 (Figure 2; Photos 5 and 6).

Wetlands in the project area are dominated by Nebraska sedge (*Carex nebrascensis*), Baltic rush (*Juncus balticus*), redtop (*Agrostis gigantea*), broadleaf cattail (*Typha angustifolia*), sandbar willow (*Salix exigua*), strapleaf willow (*Salix ligulifolia*), park willow (*Salix monticola*), and shining willow (*Salix lucida* subsp. *caudata*). The riparian overstory along Cottonwood Creek is dominated by peachleaf willow (*Salix amygdaloides*) and plains cottonwood (*Populus deltoides* subsp. *monilifera*) trees. Upland shrubs in the riparian corridor include snowberry (*Symphoricarpos occidentalis*), Woods' rose (*Rosa woodsii*), golden currant (*Ribes aureum*), and chokecherry (*Padus virginiana*).

## Methods

ERO followed the methods for routine on-site wetland determinations as described in the 1987 U.S. Army Corps of Engineers (Corps) Wetlands Delineation Manual (Environmental Laboratory 1987) and

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 verify existing wetlands and refine changes in wetland boundaries between the 2012 and 2022 site visits. Before the 2022 site visit, ERO reviewed U.S. Geological Survey (USGS) quadrangle topographic maps and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or waters of the U.S.

The wetland indicator status of plant species was identified using the *National Wetland Plant List* (Corps 2020), taxonomy was determined using *Colorado Flora: Eastern Slope* (Weber, Wittmann, and Müller-Wille 2012), and nomenclature was determined using the *PLANTS Database* (USDA, NRCS 2022a). If present, hydric soils were identified using field observation for hydric soil indicators accepted by the Corps. Soil map unit names were determined using the Web Soil Survey (USDA, NRCS 2022). Soil data were not always collected if hydrophytic vegetation and hydrology were present and did not appear altered (Environmental Laboratory 1987). In addition, soil data were not collected in conditions where there was a clear lack of hydrology and hydrophytic vegetation indicators. Where soil data were collected, a Munsell soil color chart was used to determine soil color.

Ephemeral, intermittent, 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 waters of the U.S. Federal jurisdiction over nonwetland waters of the U.S. 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.”

The boundaries of identified wetlands and other characteristics of potential waters of the U.S. 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 aerials and then digitized.

## **Jurisdictional Assessment**

To assist the Corps in making an approved JD, ERO reviewed the proximity and potential surface water connection of wetlands to known jurisdictional waters of the U.S. using aerial photo interpretation, landowner information, and information from the wetland survey. The following sections contain information on potential surface water connections of wetlands and other waters along the segment. This JD request is based on Rapanos guidelines; if regulations change that could affect any feature identified in this report, ERO will contact the Corps to discuss reevaluating the feature under new regulations.

Based on the information in this report, if the Corps determines that some or all of the wetlands or waters are not jurisdictional, ERO would appreciate a written determination of this request confirming that no further consultation under Section 404 is required.

## Description of Wetlands and Other Waters

ERO assessed the project area for wetlands and other waters as described below. Data were collected from various locations in the project area to document the characteristics of uplands, wetlands, and the transition areas between them. Each data point (DP) was given a label that corresponds to a location shown on Figure 2 and routine wetland determination forms (attached). As mentioned above, ERO recommended a “No Build Zone” (shown as the Construction/Disturbance Limit on Figure 2) for the project area based on topography and vegetation and hydrology characteristics of the project area. The “No Build Zone” encompasses Cottonwood Creek and its adjoining wetlands (Wetlands 1 through 3) and Ponds 1 and 2 (Figure 2). The project proponent incorporated this recommendation in the preliminary plan and has established a “prudent line – no construction disturbance limit” that avoids and protects both wetlands and riparian vegetation.

The project proponent is requesting an approved JD for only those features described below, which include an old stock pond and upland vegetated swale in the northwestern portion of the project area, that were previously mapped as wetlands in 2012 but now lack wetland characteristics, Pond 3 and its associated wetlands (Wetland 5), which is man-made and excavated from uplands, and Wetland 4, which occurs downstream of a stormwater culvert and water distribution pipes. These areas shown on Figure 2 are within the jurisdictional review boundary and the project proponent requests the Corps only review those areas described below. Any other potential wetlands or open waters in the project area are assumed jurisdictional and would be avoided by the project.

### Old Stock Pond and Upland Vegetated Swale

The National Hydrography Dataset (NHD) shows an old stock pond along a swale in the northwestern portion of the project area (USGS 2022). The swale downstream of the stock pond is not mapped in the NHD. In 2012, ERO mapped wetlands in the stock pond and along the swale; however, based on conditions during the 2022 site visit, these areas have transitioned to uplands and no OHWM or wetlands were observed (Photos 1 through 3). During the 2022 site visit, there was no evidence of recent flows in these areas. Because the stock pond and swale do not appear to have ephemeral, intermittent, or perennial flows and lack wetlands or characteristics of a defined channel bed and bank, ERO believes these features would be considered nonjurisdictional. One DP (DP1) was collected in the old stock pond, and two DPs (DP2 and DP3) were collected along the upland vegetated swale, which are described in detail below.

### Vegetation

At DP1, the vegetation in the old stock pond was dominated by redtop (facultative), Kentucky bluegrass (*Poa pratensis* - facultative), and Canada thistle (facultative). At DP2, along the upland vegetated swale, the vegetation consisted primarily of Baltic rush (facultative wetland). At DP3, at the downstream end of the swale, the vegetation was dominated by Nebraska sedge (obligate wetland), Baltic rush, Canada wildrye (facultative), and thickspike wheatgrass (*Elymus lanceolatus* - facultative upland). Although

hydrophytic vegetation was present at DP1, DP2, and DP3, each of these DPs did not meet the hydric soils or hydrology indicator requirements; therefore, they were not wetlands.

### **Soils**

Soil types in the project area had been identified by the NRCS Soil Surveys for El Paso County, Colorado. The NRCS mapped the primary soil in the project area as Pring coarse sandy loam (3 to 8 percent slopes) (USDA, NRCS 2022b). These soils are mostly coarse sandy loam or gravelly sandy loam, which are well-drained soils typically found on hills and side slopes.

Field observations revealed that soils primarily consisted of clay loam and sandy or gravelly clay loam within 16 inches of the ground surface. At DP1, the soils contained matrix colors of 10YR 2/2 and 10YR 2/2 with a redox feature of 7.5YR 4/6. At DP1, soils met the redox depressions soil indicator. No hydric soil indicators were observed at DP2 or DP3. See the attached wetland determination forms for additional details on soils for each DP.

### **Hydrology**

Geomorphic position, a secondary indicator, was observed at DP1 and DP2; however, no other hydrology indicators were present; therefore, these areas were not wetlands. At DP3, two secondary hydrologic indicators including a successful FAC-neutral test and geomorphic position were observed, meeting the wetland hydrology indicator requirements.

### **Pond 3 and Wetland 5**

A small pond (Pond 3) occurs in the disturbed uplands in the project area. The pond is not shown on the USGS Falcon NW topographic quadrangle or the NHD. Pond 3 is man-made and excavated in uplands and no outlet is present. Open water was observed in Pond 3 at the time of the 2022 site visit and wetland vegetation (Wetland 5), dominated by broadleaf cattail (obligate wetland), occurs along the pond margins. During the 2022 site visit, ERO mapped approximately 0.15 acre of open water in Pond 3 and 0.21 acre of wetlands associated with Wetland 5 (Figure 2). Because Pond 3 and adjoining Wetland 5 are isolated, excavated from uplands, and lack a significant nexus to known waters of the U.S., ERO believes these features would be considered nonjurisdictional.

### **Wetland 4**

Wetland 4 occurs downstream of a stormwater culvert and a water distribution pipe in a depression area and shallow swale that transitions to uplands for approximately 160 linear feet before it reaches Wetland 2 where it borders Pond 2 (Figure 2; Photo 5). The project proponent identified leakage from the water distribution pipe, which was contributing to the hydrologic conditions in Wetland 4 (Photo 6). The pipe was repaired on June 27, 2022, which will reduce the water source in the area. Wetland 4 is not shown on the USGS Falcon NW topographic quadrangle or the NHD. The wetland vegetation in Wetland 4 is dominated by dominated by Baltic rush and consists of similar conditions observed at DP2, which is discussed in detail above. During the 2022 site visit, ERO mapped approximately 0.11 acre of wetlands associated with Wetland 4 (Figure 2). Because Wetland 4 appeared to have been supported by a leak in the water distribution pipe and transitions to uplands before reaching wetlands associated with Cottonwood Creek, ERO believes this feature may be considered nonjurisdictional.

## Conclusions

On behalf of the project proponent, ERO is requesting an approved JD for the old stock pond and upland vegetated swale in the northeastern portion of the project area, Pond 3 and associated Wetland 5, and Wetland 4. Based on the information in this report, if the Corps determines that the wetlands and waters are not jurisdictional, ERO would appreciate a written determination of this request confirming that no further consultation under Section 404 is required.

If you have any questions or need additional information, please do not hesitate to contact me at 303-830-1188 or by email at [cmarne@eroresources.com](mailto:cmarne@eroresources.com). I look forward to hearing from you.

Sincerely,



Courtney Marne  
Biologist/Associate

cc: David Jones - Land Resource Associates  
Stephen Jacobs - MyPad, Inc.

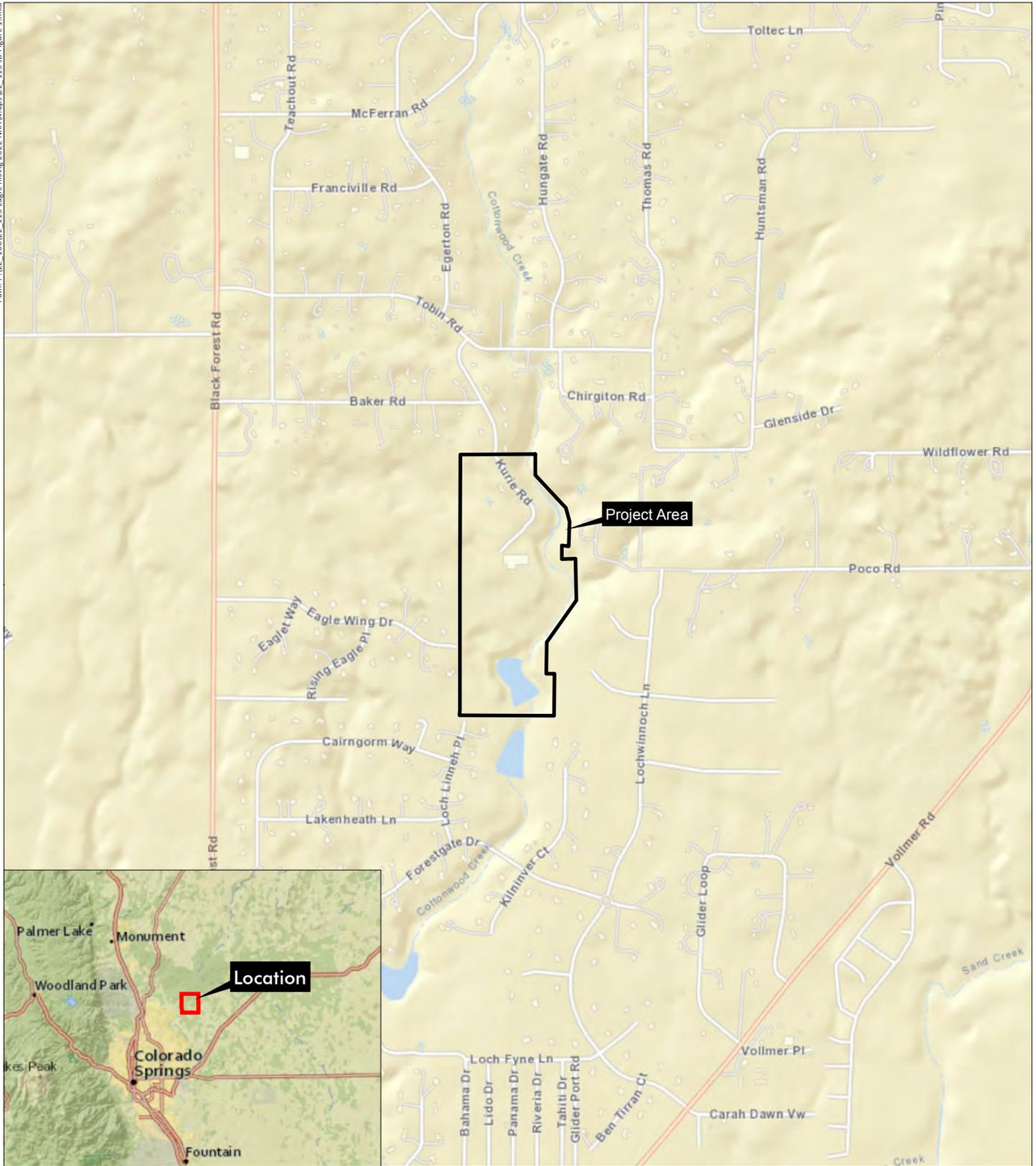
Attachments: Figures 1 and 2; Photo Log; Routine Wetland Determination Forms; JD Form

## References

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Weber, William A., Ronald C. Wittmann, and Linna Weber Müller-Wille. 2012. *Colorado Flora: Eastern Slope, Fourth Edition. A Field Guide to the Vascular Plants*. University Press of Colorado.



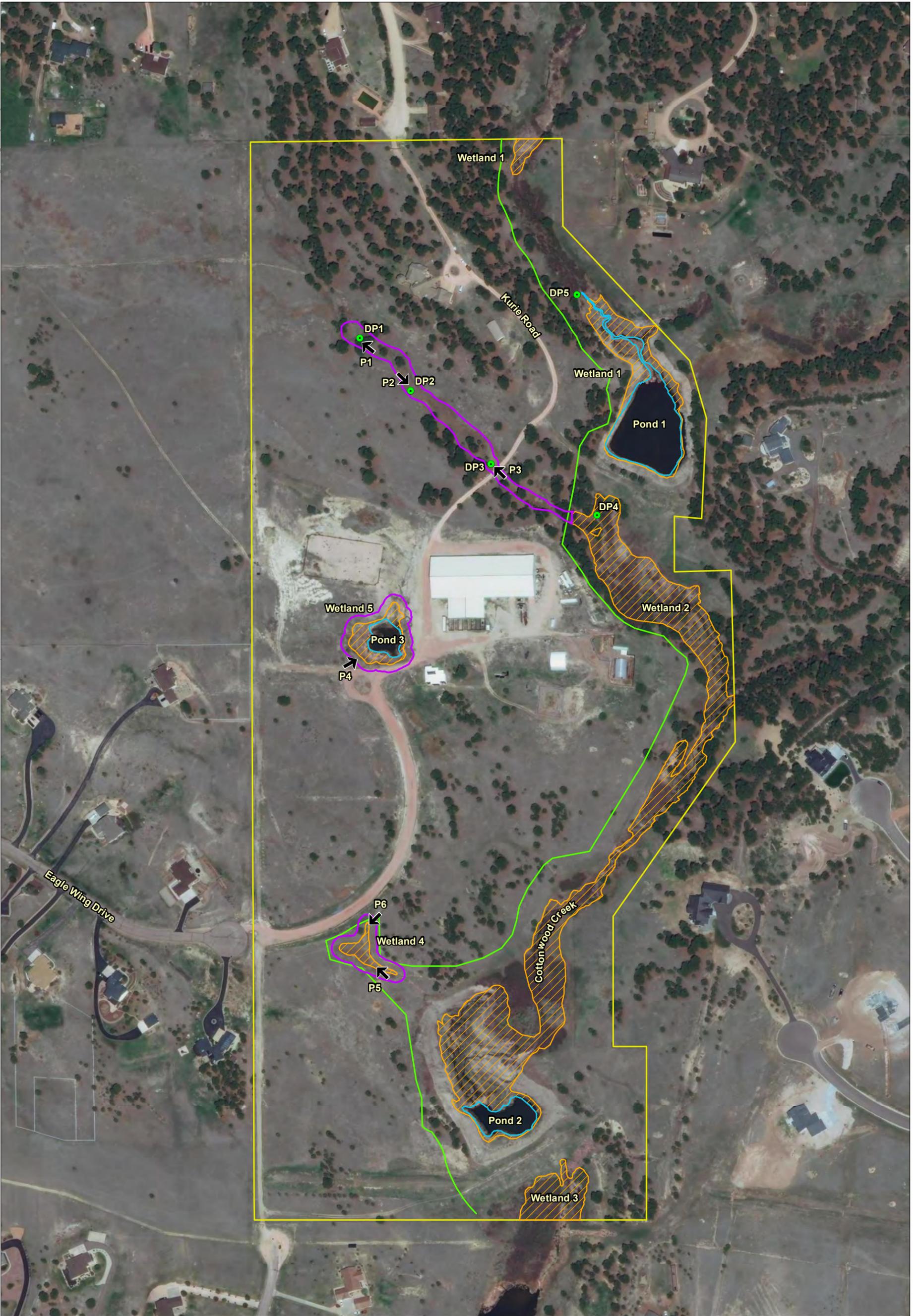
### Eagle Rising 2022 Jurisdictional Determination Request

Section 29, T12S, R65W; 6th PM  
 UTM NAD 83: Zone 13N; 526926mE, 4314192mN  
 Longitude 104.689148°W, Latitude 38.976294°N  
 USGS Falcon NW, CO Quadrangle  
 El Paso County, Colorado

### Figure 1 Vicinity Map

Prepared for: Steve Jacobs  
 File: 22\_113 JD Figure 1.mxd (GS)  
 June 21, 2022





Eagle Rising 2022 Jurisdictional Determination Request

- Data Point
- ➔ Photo Point
- Construction/Disturbance Limit
- Open Water
- Wetland
- Area for Jurisdictional Review

Project Area Boundary

Image Source: Maxar Technologies©, May 24, 2021

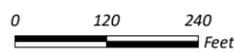


Figure 2  
Existing Conditions

Prepared for: Steve Jacobs  
File: 22\_113 JD Figure 2.mxd (GS)  
June 29, 2022



PHOTO LOG  
EAGLE RISING SUBDIVISION  
EL PASO COUNTY, COLORADO  
MAY 26, 2022



**Photo 1** – Overview of the old stock pond in the project area. View is northwest.



**Photo 2** – Overview of the upland vegetated swale. View is southeast.

PHOTO LOG  
EAGLE RISING SUBDIVISION  
EL PASO COUNTY, COLORADO  
MAY 26, 2022



**Photo 3** – Downstream end of the upland vegetated swale. View is northwest.



**Photo 4** – Overview of Pond 3 and Wetland 5. View is northeast.

PHOTO LOG  
EAGLE RISING SUBDIVISION  
EL PASO COUNTY, COLORADO  
MAY 26, 2022



**Photo 5** – Overview of Wetland 4. View is to the northwest.



**Photo 6** – Leak in a water distribution pipe at the upstream end of Wetland 4. View is southwest.

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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP1  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Old stock pond Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): E Lat: 38.978817 Long: -104.690038 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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 checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
Old stock pond. Dry, with no signs of recent retention of water. Area appears to be drying out.					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: <u>15'</u> )				OBL species _____ x 1 = _____	
1. _____	_____	_____	_____	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
= Total Cover				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Agrostis gigantea</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Poa pratensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Cirsium arvense</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Litter (leaves, pine needles, etc.)</u>	<u>30</u>	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
= Total Cover					
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					
Mesic vegetation					

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-2	organic material	100						
2-11	10YR 3/2	60	7.5YR 4/6	10	C	M	clay loam	
	10YR 2/2	30						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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:

**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 indications of recent retention of water.

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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP2  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.978432 Long: -104.689572 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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: No signs of recent hydrology. Area appears to be drying out.			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				OBL species _____ x 1 = _____	
1. _____	_____	_____	_____	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
= Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Juncus balticus</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Dry litter (leaves, old vegetation)</u>	<u>35</u>	_____	<u>NI</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____	_____	_____	_____		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
= Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
<b>% Bare Ground in Herb Stratum _____</b>					
Remarks:					



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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP3  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.977894 Long: -104.688830 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

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 _____	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					
Swale along old tributary, immediately upstream of a culvert.					

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				OBL species _____ x 1 = _____	
1. <u>Rosa woodsii</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
<u>3</u> = Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Carex nebrascensis</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Juncus balticus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Elymus canadensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Elymus lanceolatus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>43</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					
Less than 5 percent cover in shrub stratum.					



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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP4  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): E Lat: 38.977515 Long: -104.687850 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: PEM

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"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>				
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>				
Remarks:						
Tributary into Cottonwood Creek. Distinct transition to uplands; adjacent uplands are similar to vegetation and conditions observed at DP2.						

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				OBL species _____ x 1 = _____	
1. <u>Salix exigua</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
<u>10</u> = Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Typha latifolia</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Phalaris arundacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Carex nebrascensis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>75</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum <u>25</u>					
Remarks:					



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

Project/Site: Eagle Rising Subdivision City/County: Black Forest/EI Paso County Sampling Date: 5/26/22  
 Applicant/Owner: Steve Jacobs State: CO Sampling Point: DP5  
 Investigator(s): C. Marne, R. Beane Section, Township, Range: Section 29, T12S, R65W; 6th PM  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): E Lat: 38.978432 Long: -104.689572 Datum: NAD 83  
 Soil Map Unit Name: Pring coarse sandy loam, 3 to 8 percent slopes NWI classification: N/A

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 type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	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: No signs of recent hydrology. Area appears to be drying out.					

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Salix ligulifolia</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species <u>55</u> x 3 = <u>165</u>
5. _____	_____	_____	_____	FACU species <u>10</u> x 4 = <u>40</u>
<u>35</u> = Total Cover				UPL species <u>10</u> x 5 = <u>50</u>
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Linaria vulgaris</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	Column Totals: <u>75</u> (A) <u>255</u> (B)
2. <u>Poa pratensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = <u>3.4</u>
3. <u>Maianthemum dilatatum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Verbascum thapsus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>40</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

