

# Request for Approved Jurisdictional Determination for Rolling Meadows El Paso County, Colorado

## *Prepared for:*

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## *On Behalf of:*

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## *Prepared by:*



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Contact: Justin Apfel

**December 13, 2022**

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To whom this may concern,

Matrix Design Group, Inc. (Matrix) is submitting this request for an Approved Jurisdictional Determination (AJD) on behalf of the Landhuis Company for aquatic resources associated with six unnamed drainages on the Rolling Meadows property (Property) located in El Paso County, Colorado. The Property is approximately 1,869 acres and is located south of Drennan Road and north of the Grand Mountain School. Matrix visited the Property on October 12, 2022 and December 5, 2022, to evaluate the characteristics of the unnamed drainages and their potential connection to downstream waters subject to Clean Water Act (CWA) Section 404 jurisdiction. In the following request, we provide background on the Property location, field methodology, and details on the characteristics of the unnamed drainages and our evaluation of the potential jurisdictional status of aquatic resources on the Property. Please refer to the figures in Appendix A for a depiction of the Property and representative images in Appendix B.

## 1.0 Location

The Property is approximately 1,869-acres and is located southeast of Colorado Springs, approximately 3.5 miles southeast of the Colorado Springs Airport. The Property is situated within Section 1, 12 and 13, Township 15 South, and Range 65 West. The approximate center of the primary drainage feature, Unnamed Drainage 1, within the Property is in UTM Zone 13S, NAD83; 533224.33m E, 4290806.97m N; Latitude 38.764447, Longitude -104.617576; U.S. Geological Survey (USGS) Colorado Springs, CO Quadrangle. The Property is located within Hydrologic Unit Code (HUC) 11020303, an approximately 928 square mile watershed. Based on National Weather Service 30-year precipitation data, Colorado Springs receives 15.91 inches of annual precipitation on average with 13.14 inches per year as rain and 2.77 inches per year as snow.

Bradley Road runs east to west through the approximate center of the Property and two unnamed drainage features are conveyed under the road through culverts. The Property is currently undeveloped and has historically been used for grazing.

## 2.0 Project Applicant and Consultant

### 2.1 Applicant

The Landhuis Company  
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### 2.2 Consultant

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Justin Apfel  
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(757) 817-4267

## 3.0 Assessment Methods

Matrix staff originally visited a portion of the Property on May 13-14 and August 7-8, 2021, to evaluate the characteristics and potential surface or subsurface connections of one drainage located in the northern section of the Property, north of Bradley Road. The methodology and results of the original site visit can be found in the Wetland Assessment and Delineation Report in Appendix D. Matrix conducted additional site visits on October 12, 2022, and December 5, 2022 to evaluate the characteristics and potential surface or subsurface connections of the six unnamed drainages located throughout the Property to known or expected CWA jurisdictional Waters of the U.S. (WOTUS). Prior to conducting field-based assessments, Matrix reviewed current and historic aerial imagery (Google Earth, 2022), current and historic USGS topographic maps, National Oceanic and Atmospheric Administration National Weather Service Weather



Forecast Office (NOAA, 2022), Natural Resources Conservation Service Web Soil Survey (Figure 5; NRCS, 2022), and US Fish and Wildlife Service (USFWS) National Wetlands Inventory and US Geological Survey (USGS) National Hydrography Dataset (Figure 4; NHD and NWI; USGS, 2022 and USFWS, 2022).

Drainage features were evaluated to characterize areas with defined bed and bank and identify manmade or natural breaks in the drainage features, if present, to determine if a hydrologic connection existed with downstream WOTUS. Matrix evaluated potential wetlands using the United States Army Corps of Engineers (USACE) 1987 Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coasts Region (Version 2.0) (Regional Supplement) (USACE, 2008a).

During the field investigation, plant species were recorded to assess vegetation communities, the area was inspected for indicators of wetland hydrology, and the soils were inspected for indicators of hydric conditions. The 2020 National Wetland Plant List (NWPL) website, Version 3.2 (Lichvar, et al., 2020) was used to determine the indicator status of plant species. Taxonomy of plant species follows Lichvar, et al. (2016) and the NRCS PLANTS Database (United States Department of Agriculture [USDA] NRCS, 2017). At those sites where the vegetation, soil, and hydrology criteria were met, the site was identified as a wetland and categorized following suggestions of Cowardin, et al. (1979).

## 4.0 Results

### 4.1 Background Review

Based on the historic aerials and topographic maps, there are no obvious or significant land use or topology changes since the earliest aerial imagery record of 1999 (Google, 2022). According to the National Wetland Inventory and National Hydrology Database, six drainages extend through the Property. All six drainages are shown as intermittent streams on the USGS Corral Bluffs and Fountain NE quadrangles and by the NHD (USGS 2022). The USFWS NWI classifies the drainages as Riverine – Intermittent, Streambed Temporarily Flooded (R4SBA; USFWS 2020).

### 4.2 Land Use

The land use within the Property is primarily undisturbed grasslands with small patches of upland scrub/shrub communities. A housing development exists southwest of the Property with undisturbed grasslands in all other directions.

### 4.3 Aquatic Resources

Six unnamed drainages (Unnamed Drainage 1, Unnamed Drainage 2, Unnamed Drainage 3, Unnamed Drainage 4, Unnamed Drainage 5, and Unnamed Drainage 6) are located on the larger 1,869-acre Property. Small depressional features and a detention basin with an earthen dam were also observed on the Property during the site visit. Vegetation, hydrology, and soils throughout the Property are described in greater detail in the following sections.

#### 4.3.1 Vegetation

Two distinct vegetation communities were observed within the Property: upland grasslands within the drainage channels and adjacent uplands and Palustrine Emergent Wetlands (PEM) associated with small

depressional features. A riparian corridor was not observed surrounding the drainages within the Property. The vegetation community in the uplands extended into the drainage features and was mostly comprised of upland species. The wetland vegetation community types are based on the Cowardin, et al. (1979) classification system (Cowardin, 1979). Please refer to Appendix B for representative photographs of the vegetation observed within the Property.

Vegetation within the Property has been practically undisturbed by the lack of access and activities within the Property. The drainage channels are almost entirely vegetated with upland species, except for the small depressions. The dominant species within the drainage channels include blue grama (*Bouteloua gracilis*, No Indicator [NI]), western wheatgrass (*Pascopyrum smithii*, Facultative Upland [FACU]), and Kochia (*Bassia scoparia*, Facultative [FAC]). Only subtle differences in dominant vegetation species were observed between the drainage channels and adjacent uplands which were dominated by blue grama, fetid marigold (*Dyssodia papposa*, NI), winterfat (*Krascheninnikovia lanata*, NI), and rubber rabbitbrush (*Ericameria nauseosa*, NI). Depressional features observed within the property are sparsely vegetated with a narrow emergent fringe. Dominant species within the depressions include mountain rush (*Juncus arcticus* ssp. *littoralis*, Facultative Wetland [FACW]), vine mesquite (*Panicum obtusum*, FACU), common spikerush (*Eleocharis palustris*, Obligate [OBL]), barnyardgrass (*Echinochloa crus-galli*, FAC), and Pennsylvania smartweed (*Persicaria pennsylvanicum*, FACW).

### 4.3.2 Hydrology

The East Fork of Jimmy Camp Creek is an ungauged tributary to the mainstem of Jimmy Camp Creek (JCC). The proposed project is located 1.6 miles from the confluence of JCC and the East Fork of JCC. JCC is considered ephemeral from its headwaters to its crossing at Link Rd, over 3 miles south of the confluence with East Fork JCC. The closest stream gauge in the basin is located on JCC, 1.5 miles upstream of the confluence with Fountain Creek and measures an average flow between 1 and 3 CFS (Kiowa 2015).

Hydrologic studies have been conducted to determine the flows along the East Fork of JCC. Matrix reviewed the effective Federal Emergency Management Agency (FEMA) Flood Insurance Maps (FIS), the 2015 Drainage Basin Planning Study (DBPS), a 2013 memo on low flow estimation for the basin, and Matrix's internal regional regression equations. There are significant inconsistencies between each of these hydrologic studies. A revised study is currently underway for the basin, but the data is not available at this time.

Review of aerial imagery and field observations confirmed the location and extents of all six unnamed drainages, which traverse through the center of the Property and one detention basin, which included a ponding area behind an earthen dam. No culvert connection or overflow structure was observed along the earthen dam during the site visit; however, a vegetated drainage channel was observed downstream of the dam which confluent with Unnamed Drainage 1. No standing water was observed in the detention basin during the site visit. Based on NHD mapping, all drainage headwaters originate east of the Property (Figure 4), and flow, if present, would be conveyed from the northeast to the southwest across the Property, and adjacent lands, before converging with an intermittent stream, Jimmy Camp Creek, east of Marksheffel Road. Fountain Creek is the closest naturally occurring, year-round flowing feature with a continuous ordinary high-water mark (OHWM). It is approximately 13 river miles and approximately 6.5 aerial miles from the downstream end of the Property. The drainages are generally situated within a relatively flat grassland with gentle slopes from east to the southwest and within the mapped 100-year floodplain. The

surrounding landscape is typical of the region, with rolling hills dominated by prairie grassland species. Annual precipitation values for the El Paso County based on 20-year averages (2002 through 2022) are 15.27 inches of rainfall, within the month of October (NOAA, 2022).

At the time of the field assessment, potential flow indicators (e.g., water-stained leaves, drift lines, sediment deposits) within the drainage were not observed and no evidence of recent flows were noted. No surface water, flowing or stagnant, was observed within the drainage channels at the time of the site visit. The drainage channels are fully vegetated and do not contain a defined bed and bank. These drainage channels are largely driven by topographic changes over the landscape, but do not receive flows frequently enough to create OHWM indicators or a defined bed and bank. The unnamed drainages are wide and deep (roughly 40 feet wide and greater than four feet deep), but poorly defined. Several small, actively eroding head cuts were observed along the drainage channels; however, the channel was not well defined upstream or downstream of the head cuts and remained vegetated. The drainages were almost completely vegetated with no defined bed and bank or OHWM. The channels lack consistency and connectivity throughout the Property. OHWM forms can be found in Appendix C.

Several pocket depressions throughout the unnamed drainages support 26 areas of isolated wetlands, including hydrophytic vegetation, hydric soils, and indicators of wetland hydrology. No concentrated flow paths were observed on the downstream ends of the depressions and depressions may sever flows to downstream drainage features in normal years. These depressions were delineated in the field and are shown in Table 1 and on Figure 7A and Figure 7B. Wetland determination forms can be referenced in Appendix C. Though flows were not recently evident in the channel or at the time of the site assessment, nor were they observed on aerial imagery, it is believed that the drainages collect surface runoff from adjacent hillslopes and roadways in addition to direct precipitation. Based on field and aerial imagery observations, it is our professional opinion that the flow regime of the unnamed drainages may best be described as ephemeral, and largely driven by stormwater and overland flows. Table 1 describes the aquatic features found within the Property.

**Table 1. Aquatic Resources Within the Property**

Name	Flow Frequency	Flows to	Proximity	More info Needed	Size: Length, width, square feet
Drainage 1	< 3 mo/yr	Jimmy Camp Creek		Yes	13,963 ft, ~40ft wide
Drainage 2	< 3 mo/yr	Jimmy Camp Creek		Yes	918 ft, ~20ft wide
Drainage 3	< 3 mo/yr	Jimmy Camp Creek		Yes	3,795 ft, ~40ft wide
Drainage 4	< 3 mo/yr	Jimmy Camp Creek		Yes	1,305 ft, ~15ft wide
Drainage 5	< 3 mo/yr	Jimmy Camp Creek		Yes	5,243 ft, ~25ft wide
Drainage 6	< 3 mo/yr	Jimmy Camp Creek		Yes	15,586 ft, ~40ft wide
<b>Total Drainage Length within Property</b>					<b>40,810 ft</b>
Wetland 1		Drainage 1	Abutting	Yes	957.23
Wetland 2		Drainage 1	Abutting	Yes	342.50
Wetland 3		Drainage 1	Abutting	Yes	7,014.58
Wetland 4		Drainage 1	Abutting	Yes	1,004.73
Wetland 5		Drainage 1	Abutting	Yes	393.88
Wetland 6		Drainage 1	Abutting	Yes	854.68
Wetland 7		Drainage 1	Abutting	Yes	2,745.70
Wetland 8		Drainage 1	Abutting	Yes	2,128.62
Wetland 9		Drainage 1	Adjacent	Yes	753.57
Wetland 10		Drainage 1	Abutting	Yes	3,186.88
Wetland 11		Drainage 6	Abutting	Yes	5,130.13
Wetland 12		Drainage 1	Abutting	Yes	1,668.00
Wetland 13		Drainage 1	Abutting	Yes	13175.83
Wetland 14		Drainage 6	Abutting	Yes	8,955.15
Wetland 15		Drainage 6	Abutting	Yes	4,240.34
Wetland 16		Drainage 1	Abutting	Yes	366.75
Wetland 17		Isolated – no outlet	Isolated	Yes	22,173.98
Wetland 18		Drainage 1	Abutting	Yes	1,397.86
Wetland 19		Drainage 6	Abutting	Yes	686.02
Wetland 20		Drainage 1	Abutting	Yes	455.03
Wetland 21		Drainage 1	Abutting	Yes	638.37
Wetland 22		Drainage 1	Adjacent	Yes	1,686.31
Wetland 23		Drainage 1	Adjacent	Yes	397.35
Wetland 24		Drainage 1	Abutting	Yes	1,857.29
Wetland 25		Drainage 1	Abutting	Yes	1,596.11
Wetland 26		Isolated – no outlet	Isolated	Yes	2,702.99
<b>Total Wetlands in Property</b>					<b>86,509.88 sf / 1.99 ac</b>

### 4.3.3 Soils

Based on the NRCS Web Soil Survey for El Paso County, Nevada (NRCS, 2022), the Property contains eight mapped soil units (Figure 5). Descriptions of the mapped soil types are provided below.

- Ascalon sandy loam, 1 to 3 percent slopes – Ascalon sandy soils are well drained with low runoff potential and moderately high to high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Ascalon sandy loam, 3 to 9 percent slopes – Ascalon sandy soils are well drained with medium runoff potential and moderately high to high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Manzanst clay loam, 0 to 3 percent slopes – Manzanst clay soils are well drained and moderately low to moderately high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Nelson-Tassel fine sandy loam, 3 to 18 percent slopes – Nelson-Tassel fine sandy soils are well drained with medium runoff potential and moderately low to moderately high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Razor-Midway complex – Razor-Midway complex soils are well drained with medium runoff potential and moderately low to moderately high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Sampson loam, 0 to 3 percent slopes – Sampson loam soils are well drained with low runoff potential and moderately high to high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Tassel fine sandy loam, 3 to 18 percent slopes – Tassel fine sandy soils are well drained with medium runoff potential and moderately high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).
- Olnest sandy loam, 0 to 3 percent slopes – Olnest sandy loam soils are well drained with low runoff potential and moderately high to high permeability. Based on the national hydric soils list, this soil is not classified as hydric in El Paso County, Colorado (NRCS, 2022).

At the time of the field assessment, soil pits were sampled in various depressions and upland areas, to determine hydric soil indicators. Soils within the pocket depressions tended to be moist, dark in color, with redox depressions throughout the soil profile and upland soil samples tended to be lighter in color, dry and crumbly, with no hydric indicators.

## 5.0 Wildlife

The Property likely provides habitat for small mammals (rabbits, voles, mice, etc.) and larger mammals such as mule deer, pronghorn, and coyotes. Six pronghorns were observed within the Property during the site visit but were not seen using the detention basin or small depressional wetland features, likely because

these features did not contain any water. Active prairie dog colonies were also observed on portions of the Property. The Property does not contain habitat for federally listed threatened or endangered species.

## 6.0 Significant Nexus Evaluation

In implementing the 2008 Rapanos guidance for non-navigable tributaries that are not relatively permanent, Matrix assessed all six unnamed drainages for physical indicators of flow – bed and bank, and OHWM indicators– to identify signs of a direct surface connection, or in absence, to determine if the drainage contributes to the chemical, physical, or biological functions to downstream waters, thus meeting the definition of a “significant nexus.” From our field evaluations and review of historic Google Earth imagery, the unnamed drainages do not appear to support a continuous hydrologic connection between upstream and downstream channel segments. It is assumed that much of the precipitation that falls on the Property infiltrates in the undeveloped uplands, while small amounts likely reach the drainage channels as surface runoff. Wetlands were observed in isolated depressional features and may be supported by runoff and direct precipitation. The lack of sufficient duration and volume of flows within the channel may preclude development of in-channel and adjacent wetlands. There is a lack of evident flows within the channel and no defined channel, bed and bank, or OHWM indicators. Based on these observations, Matrix believes that channel flows within the drainage do not connect to lower sections of the drainage in a normal year and the drainages only contain water during major storm events. Further, Matrix believes that flows within the drainages are infrequent and driven by major storm events, and that consequently the drainage may contribute insubstantially to the chemical, physical, and biological integrity of a downstream navigable water.

## 7.0 Discussion

Matrix evaluated the Property for the presence, location, and extent of aquatic resources and, reviewed available data sources to assist USACE in making a jurisdictional determination. Following field evaluations and review of available aerial imagery, Matrix identified six unnamed drainage features on the Property. The Landhuis Company requests an approved JD of the unnamed drainages, as described above. Please let us know if you need any additional information to complete your review and make this determination. I can be reached at: [justin.apfel@matrixdesigngroup.com](mailto:justin.apfel@matrixdesigngroup.com) or 757-817-4267.

Sincerely,



Justin Apfel

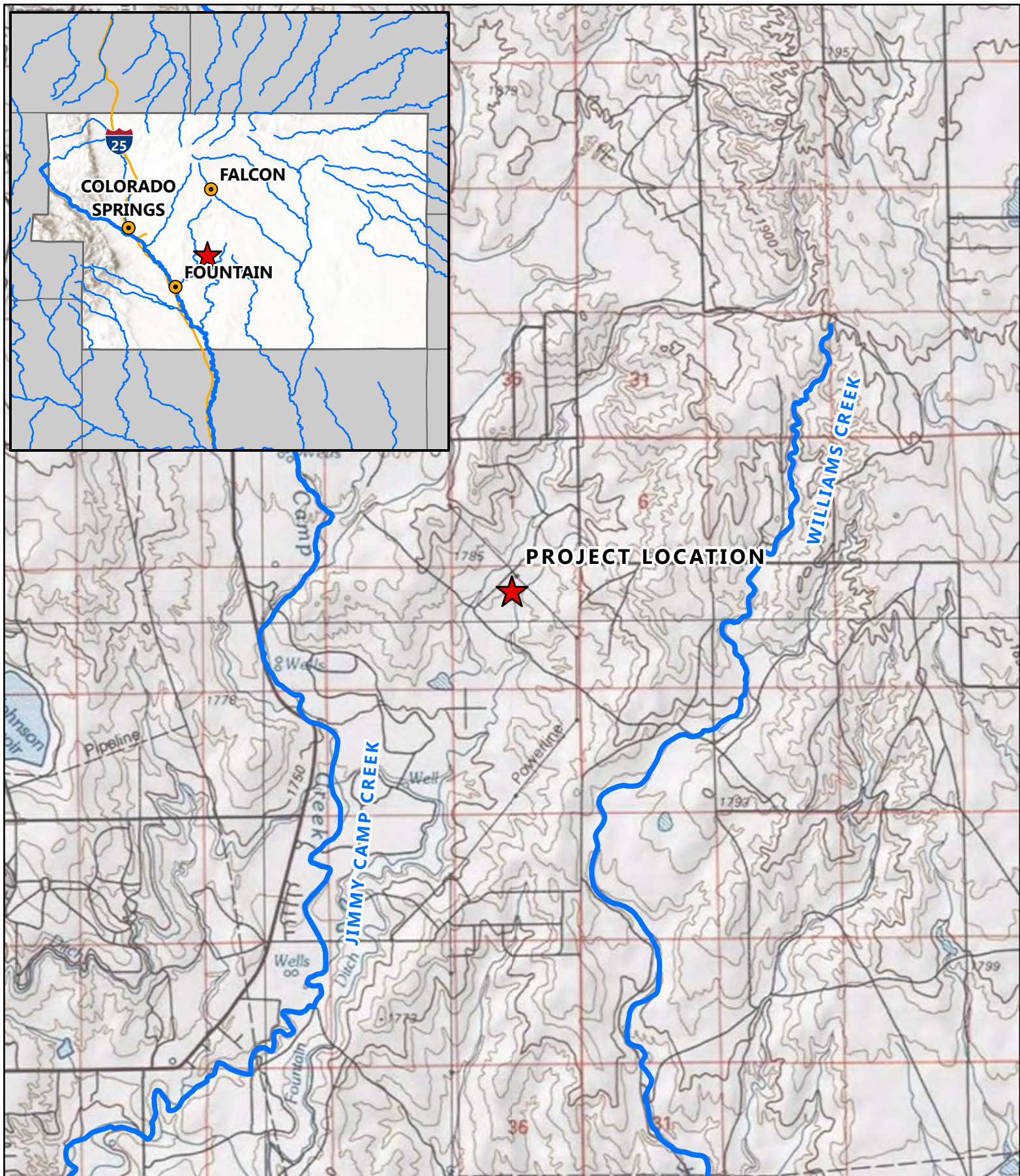
Ecologist, Matrix Design Group, Inc.

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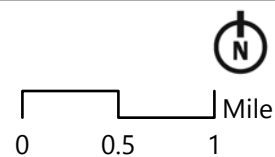
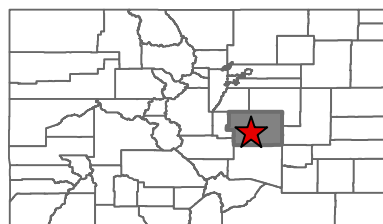
## Appendix A: Figures



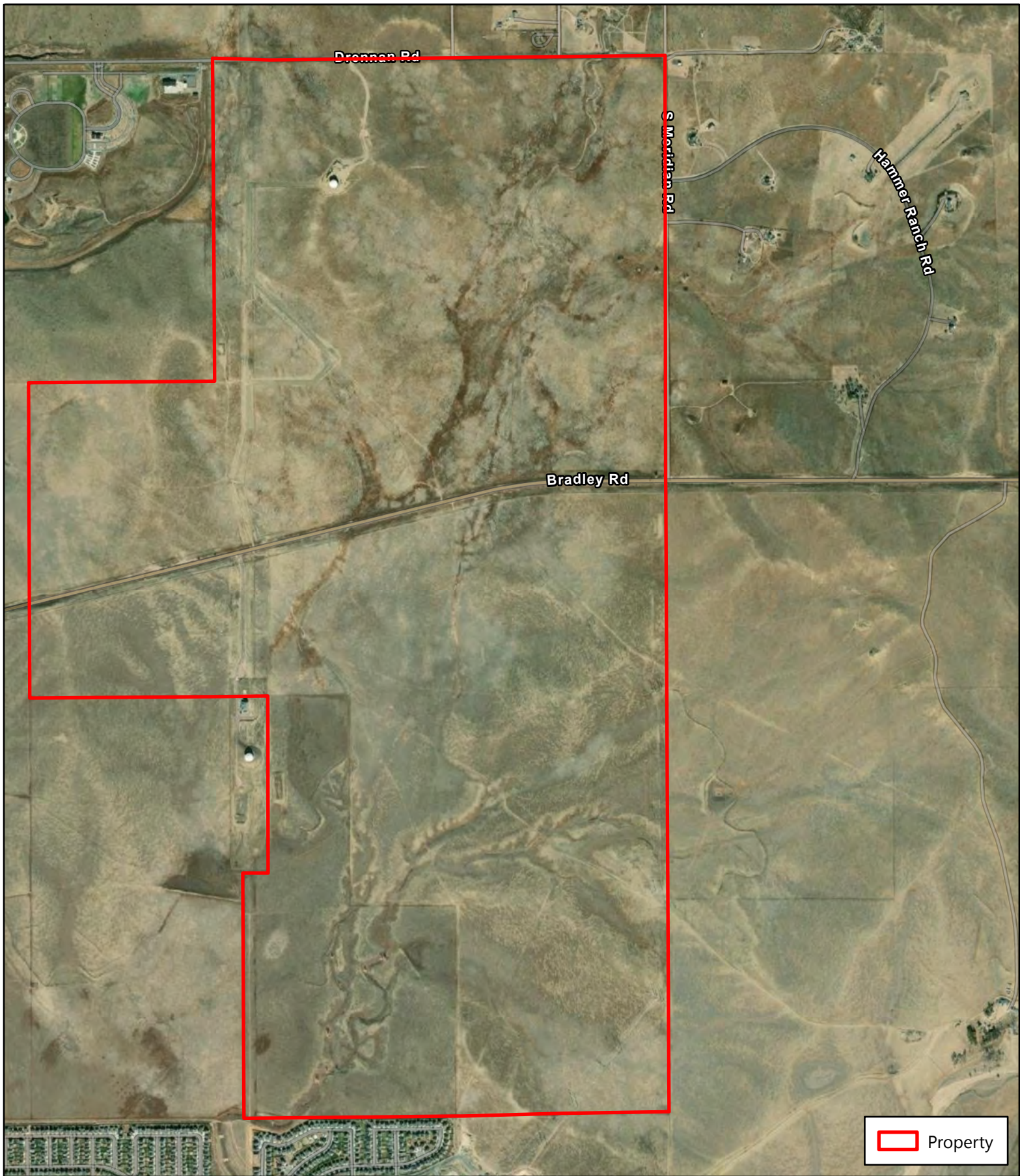


**ROLLING MEADOWS**  
**FIGURE 1: VICINITY MAP**

EL PASO COUNTY  
NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
SOURCE(S): USGS, ESRI

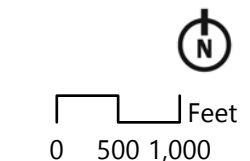




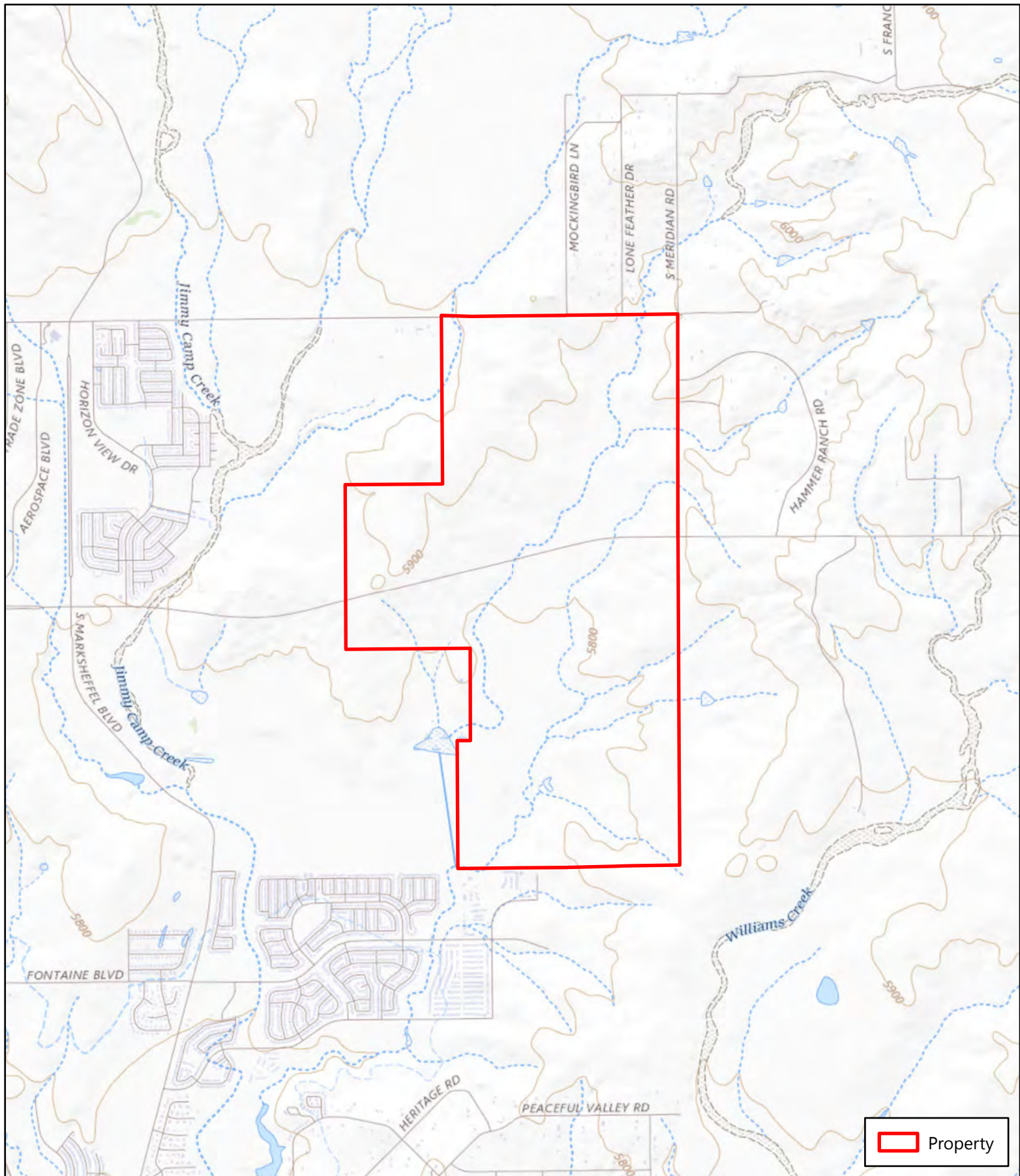


## ROLLING MEADOWS FIGURE 2: PROPERTY

EL PASO COUNTY  
NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
SOURCE(S): ESRI



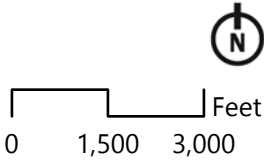




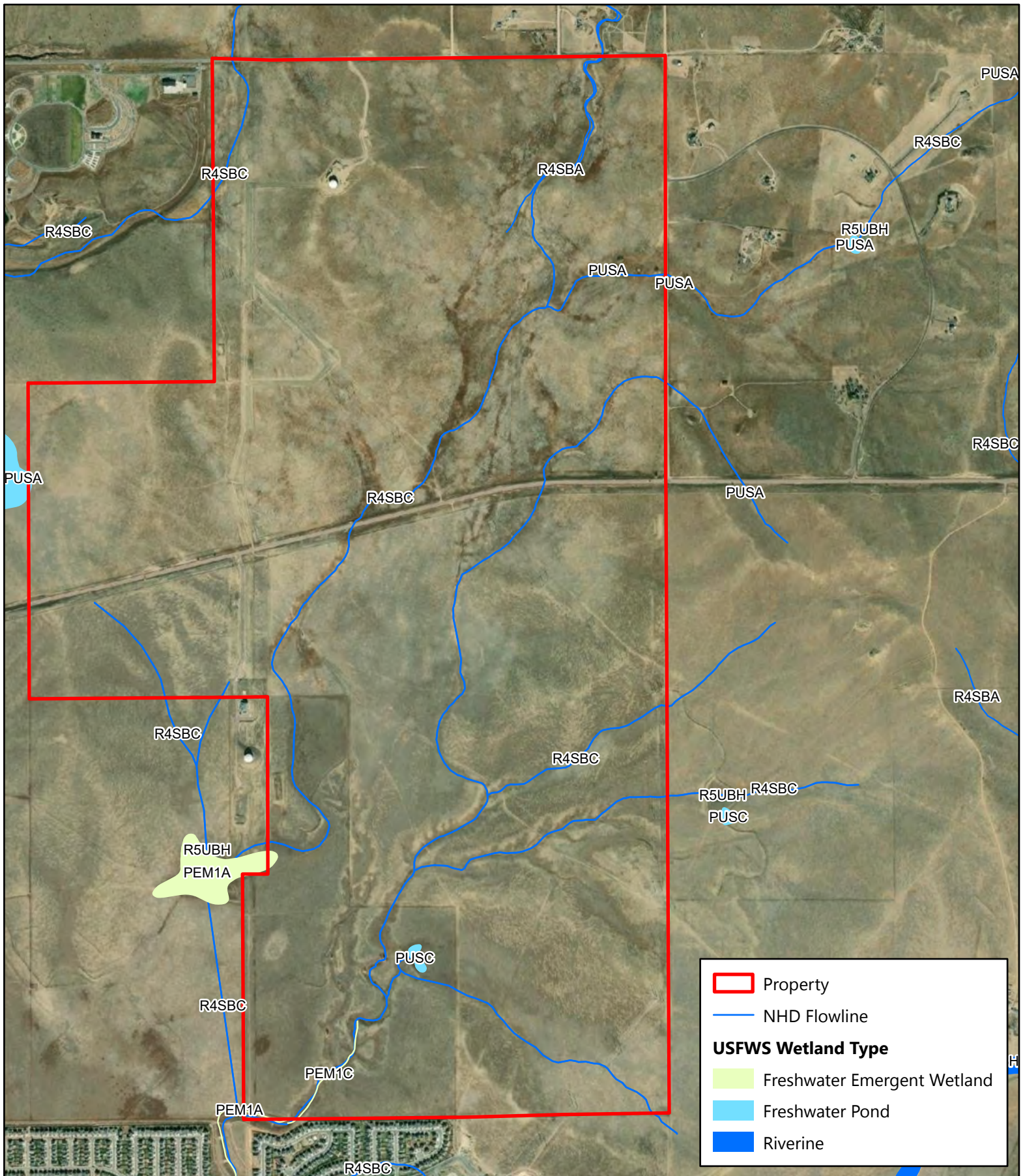
**ROLLING MEADOWS**  
**FIGURE 3: TOPOGRAPHIC MAP**

EL PASO COUNTY  
NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
SOURCE(S): ESRI, USGS

Property







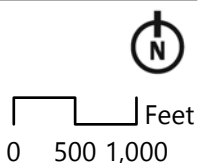
## ROLLING MEADOWS

**FIGURE 4: USGS NHD AND USFWS NWI**

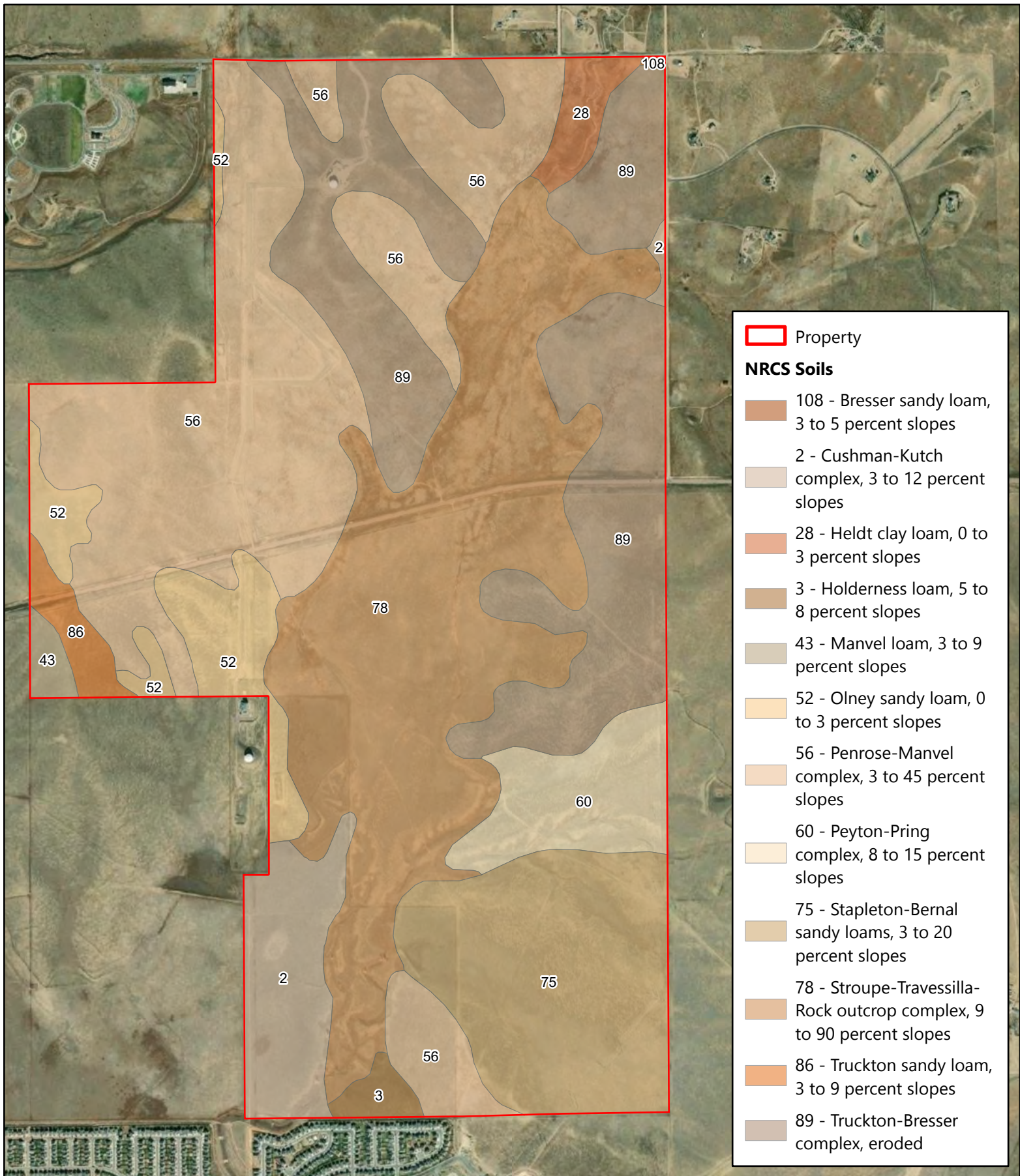
EL PASO COUNTY

NAD 1983 STATE PLANE (2011) COLORADO CENTRAL

SOURCE(S): ESRI, USGS, USFWS



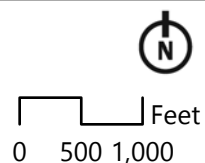




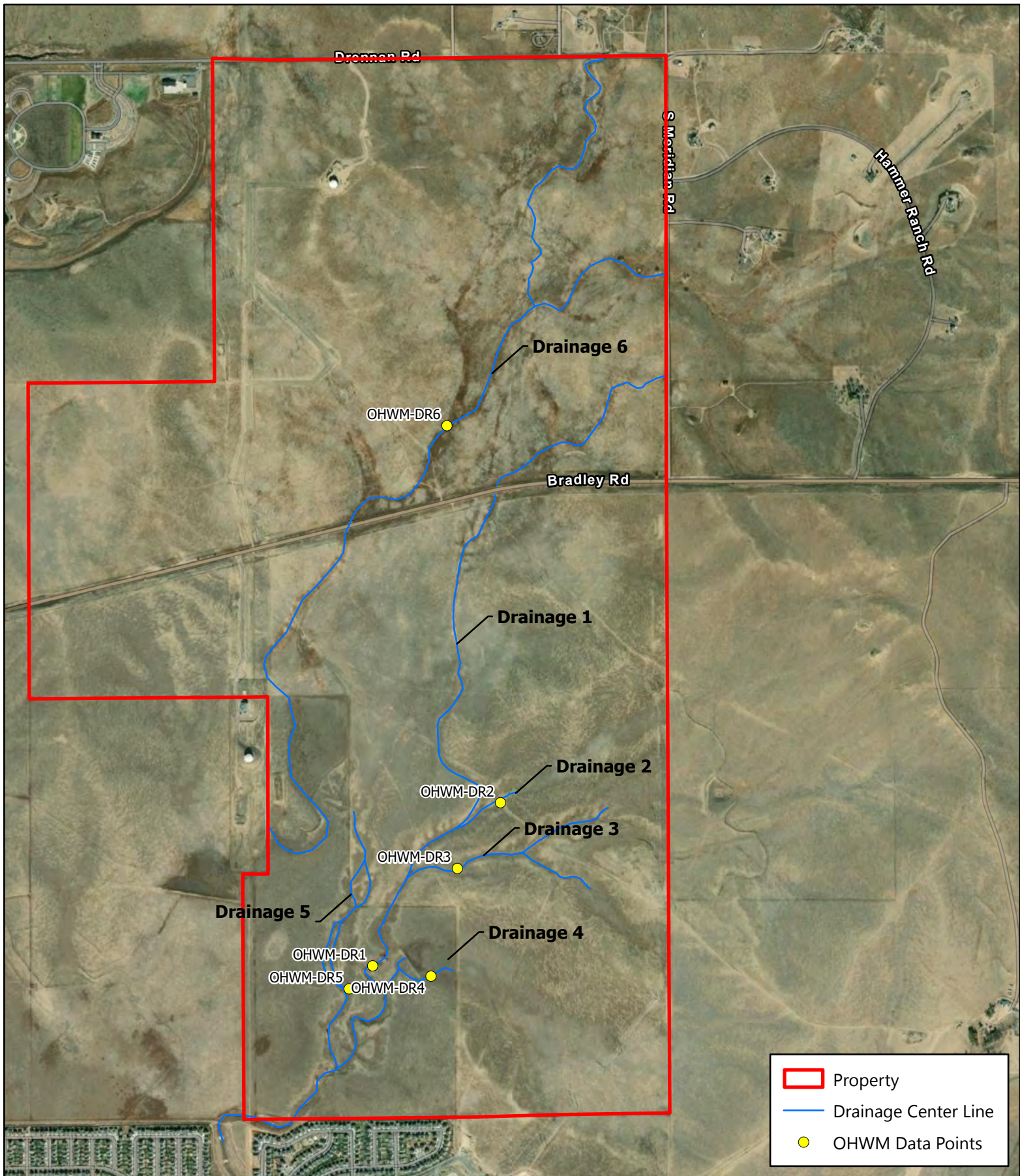
## ROLLING MEADOWS

### FIGURE 5: NRCS SOILS

EL PASO COUNTY  
 NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
 SOURCE(S): ESRI, NRCS

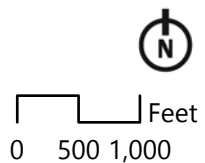




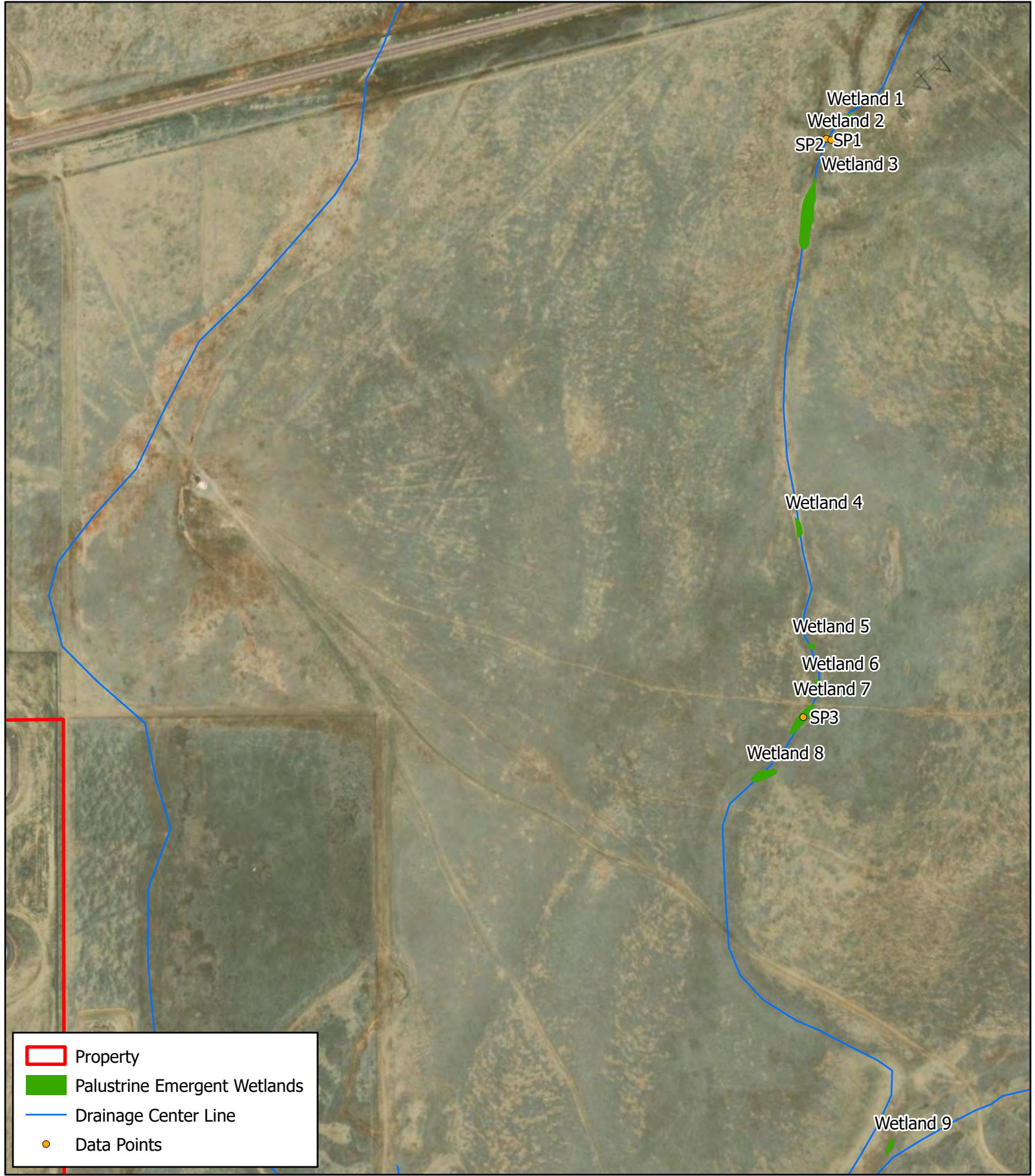


**ROLLING MEADOWS**  
**FIGURE 6: SITE FEATURES**

EL PASO COUNTY  
 NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
 SOURCE(S): ESRI

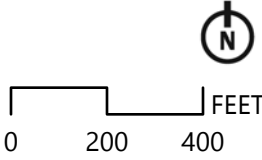
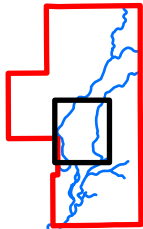




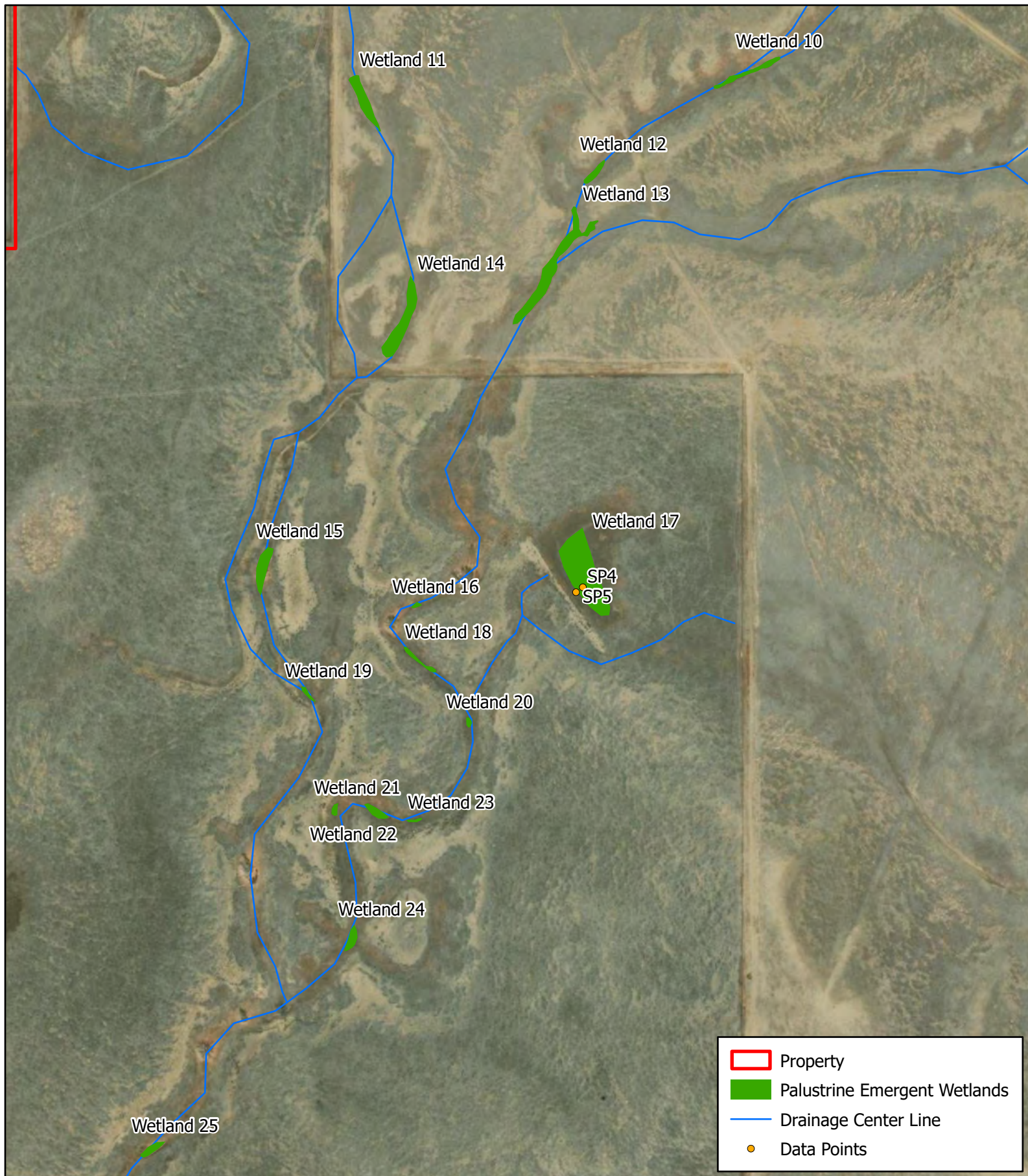


**ROLLING MEADOWS**  
**FIGURE 7A: WETLANDS**

EL PASO  
NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
SOURCE(S): USGS, ESRI

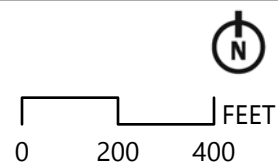
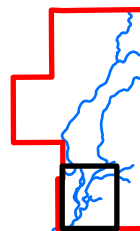






## ROLLING MEADOWS FIGURE 7B: WETLANDS

EL PASO  
NAD 1983 STATE PLANE (2011) COLORADO CENTRAL  
SOURCE(S): USGS, ESRI





## Appendix B: Representative Images



Photo 1: Standing at the northern side of the Property, looking north, towards the culvert crossing.



Photo 2: Standing away from the northern side of the Property, looking north, towards the culvert crossing.





Photo 3: Representative photo of the channel within the northern section of the Property.



Photo 4: Representative photo of the lack of channel connectivity, throughout the drainage.





Photo 5: Representative of fully vegetated channel, near the center of the Property.



Photo 6: Representative photo of an isolated depression within the channel.





Photo 7: Representative photo of the top soil within the isolated depressions.



Photo 8: Representative photo of an earthen dam, dividing the channel.





Photo 9: Depression within the channel.



Photo 10: Standing in the channel, facing northwest, on the southern end of the Property.





Photo 11: Representative photo of the channel on the south end of the Property.



Photo 12: Representative photo of a rock structure within the channel, near the south end of the Property.





Photo 13: Representative photo of the upland soil profile, throughout the Property.



Photo 14: Representative photo of the isolated wetland depressional soil profile, throughout the Property.



## **Appendix C: Wetland Determination and OHWM Forms**

U.S. Army Corps of Engineers				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region					
See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R					
Project/Site: Rolling Meadows		City/County: Colorado Springs		Sampling Date: 10/12/22	
Applicant/Owner: The Landhuis Company		State: CO		Sampling Point: SP1	
Investigator(s): S. O'Brien and J. Apfel		Section, Township, Range: 12, 15S, 65W			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): Concave		Slope (%): 1-3	
Subregion (LRR): LRR E		Lat: 38.7642625		Long: -104.6174996	
				Datum: NAD 83	
Soil Map Unit Name: Stroupe-Travessilla-Rock outcrop complex, 9 to 90 percent slopes				NW1 classification: Upland	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation N, Soil N, or Hydrology N 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 X No				Is the Sampled Area within a Wetland? Yes X No	
Hydric Soil Present? Yes X No X					
Wetland Hydrology Present? Yes X No					
Remarks: Disconnected PEM wetland depression within the channel.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 85 x 3 = 255 FACU species 10 x 4 = 40 UPL species 0 x 5 = 0 Column Totals: 95 (A) 295 (B) Prevalence Index = B/A = 3.11
Sapling/Shrub Stratum (Plot size: )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 10 sq ft )					
1. Echinochloa crus-galli		85	Yes	FAC	
2. Pascopyrum smithii		5	No	FACU	
3. Salsola kali		5	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		95 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 5					
Remarks: Almost completely barnyard grass					

## SOIL

Sampling Point: SP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is 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 on 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 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 checked="" 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> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)			
		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Large surface cracks within depression within drainage area.			

<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region</b> See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R		OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)																																																																																																									
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Section, Township, Range: <u>12, 15S, 65W</u>		Sampling Point: <u>SP2</u>																																																																																																									
Landform (hillside, terrace, etc.): <u>Slight hillslope</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>2-5</u>																																																																																																									
Subregion (LRR): <u>LRR E</u>	Lat: <u>38.7642678</u>	Long: <u>-104.6174788</u>																																																																																																									
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Remarks: None. Upland.																																																																																																											

## SOIL

Sampling Point: SP2

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is 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</b>	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2</b>	
<input type="checkbox"/> High Water Table (A2)	<b>MLRA 1, 2, 4A, and 4B)</b>	<b>4A, and 4B)</b>	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: None. Upland			

<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region</b> See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R		OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)																
Project/Site: <u>Rolling Meadows</u>		City/County: <u>Colorado Springs</u>																
Applicant/Owner: <u>The Landhuis Company</u>		State: <u>CO</u>																
Investigator(s): <u>S. O'Brien and J. Apfel</u>		Sampling Date: <u>10/12/22</u>																
Section, Township, Range: <u>12, 15S, 65W</u>		Sampling Point: <u>SP3</u>																
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): <u>0</u>																
Subregion (LRR): <u>LRR E</u>	Lat: _____	Long: _____																
Datum: <u>NAD 83</u>																		
Soil Map Unit Name: <u>Stroupe-Travessilla-Rock outcrop complex, 9 to 90 percent slopes</u>		NWI classification: <u>Upland</u>																
Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No _____ (If no, explain in Remarks.)																		
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No _____																		
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic?    (If needed, explain any answers in Remarks.)																		
<b>SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.</b>																		
Hydrophytic Vegetation Present?    Yes _____    No <u>X</u> Hydric Soil Present?    Yes _____    No <u>X</u> Wetland Hydrology Present?    Yes _____    No <u>X</u>		<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____																
Remarks: Depressional feature. No defined channel leading up to or exiting the depression. No water in depression at the time of the site visit.																		
<b>VEGETATION – Use scientific names of plants.</b>																		
<b>Tree Stratum</b> (Plot size: _____ ) 1. _____ 2. _____ 3. _____ 4. _____ _____ =Total Cover		<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
<b>Sapling/Shrub Stratum</b> (Plot size: _____ ) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ =Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>10 sq ft</u> ) 1. <u>Juncus arcticus</u> <u>20</u> Yes      FACW 2. <u>Echinochloa crus-galli</u> <u>10</u> Yes      FAC 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ <u>30</u> =Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; font-size: small;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species      <u>0</u></td> <td>x 1 =      <u>0</u></td> </tr> <tr> <td>FACW species      <u>20</u></td> <td>x 2 =      <u>40</u></td> </tr> <tr> <td>FAC species      <u>10</u></td> <td>x 3 =      <u>30</u></td> </tr> <tr> <td>FACU species      <u>0</u></td> <td>x 4 =      <u>0</u></td> </tr> <tr> <td>UPL species      <u>0</u></td> <td>x 5 =      <u>0</u></td> </tr> <tr> <td>Column Totals:      <u>30</u>    (A)</td> <td><u>70</u>    (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =      <u>2.33</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>30</u> (A)	<u>70</u> (B)	Prevalence Index = B/A = <u>2.33</u>	
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>30</u> (A)	<u>70</u> (B)																	
Prevalence Index = B/A = <u>2.33</u>																		
<b>Woody Vine Stratum</b> (Plot size: _____ ) 1. _____ 2. _____ _____ =Total Cover % Bare Ground in Herb Stratum <u>70</u>		<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ 5 - Wetland Non-Vascular Plants <sup>1</sup> _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Remarks: Depression with hydrophytic vegetation.		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																

## SOIL

Sampling Point: SP3

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	10yr 5/3	100					Sandy	Dry and blocky
2-12	10yr 2/1	98	10yr 3/6	2	C	M	Loamy/Clayey	Faint redox
12-16	10yr 4/2	100					Loamy/Clayey	No redox

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<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"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): <u>          </u>	<b>Hydric Soil Present?</b> Yes <u>      </u> No <u>  X  </u>
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<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 on Living Roots (C3)	<input 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) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input checked="" 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 checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

<b>Field Observations:</b> Surface Water Present?    Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> Water Table Present?      Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> Saturation Present?        Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> (includes capillary fringe)				<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No <u>      </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks: No water in depression at the time of the site visit, but likely holds water from overland flow during storm events.				





# SOIL

Sampling Point: SP4

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>		
0-1	10yr 4/1	100				PL/M	Loamy/Clayey	Dry
1-12	10yr 3/2	85	10yr 4/6	15		PL/M	Loamy/Clayey	Moist
12-18	10yr 3/2	98	10yr 4/6	2		PL/M	Loamy/Clayey	Moist

<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.)			Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<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)			
<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"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input checked="" type="checkbox"/> Redox Depressions (F8)			

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

<b>Restrictive Layer (if observed):</b> Type: <u>                    </u> None Depth (inches): <u>                    </u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Moist with redox throughout. Dry and blocky

# HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> High Water Table (A2)	<input checked="" 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 on 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 type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input checked="" 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> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Ponging. No Drainage or connector to main channel.

<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region</b> See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R		OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)																																																																																																																																																																					
Project/Site: <u>Rolling Meadows</u> City/County: <u>Colorado Springs</u> Sampling Date: <u>10/12/22</u>																																																																																																																																																																							
Applicant/Owner: <u>The Landhuis Company</u> State: <u>CO</u> Sampling Point: <u>SP5</u>																																																																																																																																																																							
Investigator(s): <u>S. O'Brien and J. Apfel</u> Section, Township, Range: <u>13, 15S, 65W</u>																																																																																																																																																																							
Landform (hillside, terrace, etc.): <u>Depression</u> Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>10-15</u>																																																																																																																																																																							
Subregion (LRR): <u>LRR E</u> Lat: <u>38.7500484</u> Long: <u>-104.6199312</u> Datum: <u>NAD 83</u>																																																																																																																																																																							
Soil Map Unit Name: <u>Stapleton-Bernal sandy loams, 3 to 20 percent slopes</u> NWI classification: <u>Upland</u>																																																																																																																																																																							
Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)																																																																																																																																																																							
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>																																																																																																																																																																							
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<b>SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.</b>																																																																																																																																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">           Hydrophytic Vegetation Present?    Yes <u>      </u>    No <u>X</u>            Hydric Soil Present?    Yes <u>      </u>    No <u>X</u>            Wetland Hydrology Present?    Yes <u>      </u>    No <u>X</u> </td> <td style="width: 50%; padding: 5px; text-align: center;"> <b>Is the Sampled Area within a Wetland?</b>            Yes <u>      </u>    No <u>X</u> </td> </tr> </table>			Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u> Hydric Soil Present?    Yes <u>      </u> No <u>X</u> Wetland Hydrology Present?    Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>																																																																																																																																																																			
Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u> Hydric Soil Present?    Yes <u>      </u> No <u>X</u> Wetland Hydrology Present?    Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>																																																																																																																																																																						
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## SOIL

Sampling Point: SP5

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>		
0-6	10yr 4/1	60	7.5yr 5/8	40	C	M	Loamy/Clayey	Dry and blocky
6-16	10yr 3/1	90	10yr 4/6	10	C	M	Loamy/Clayey	Dry and blocky

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" 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 checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input checked="" type="checkbox"/> Redox Depressions (F8)	

<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): <u>                    </u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Upland. Pond hillside. Wet when filled.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<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 on Living Roots (C3)	<input 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 type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input checked="" 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> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> (includes capillary fringe)				<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
None. Hillside

**Project: Rolling Hills**  
**Project Number: 21.1129.009**  
**Stream: Drainage 1**  
**Investigator(s): S O'Brien and J. Apfel**

**Date: 10/12/2022** **Time: 9:45**  
**Town: CO Springs** **State: CO**  
**Photo begin file#** **Photo end file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?  
 Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details:** Located just south of Bradely Rd  
**Datum:**  
**Coordinates:** 38.749935, -104.621694

**Notes:** OHWM is not present throughout the entire channel corridor. Present in several locations throughout the channel right-of-way.

**Brief site description:** Fully vegetated drainage feature, with topographic breaks on both sides. OHWM and other hydrology indicators, not consistent throughout the channel corridor.

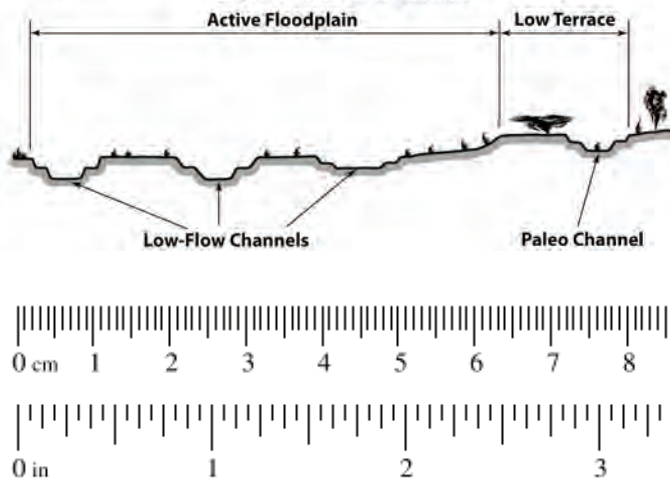
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography    | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
| <input checked="" type="checkbox"/> Topographic maps      | Period of record:  |
| Scale:  | <input type="checkbox"/> Clinometer / level  |
| <input type="checkbox"/> Geologic maps                    | <input type="checkbox"/> History of recent effective discharges  |
| <input checked="" type="checkbox"/> Vegetation maps       | <input type="checkbox"/> Results of flood frequency analysis   |
| <input checked="" type="checkbox"/> Soils maps            | <input type="checkbox"/> Most recent shift-adjusted rating   |
| <input type="checkbox"/> Rainfall/precipitation maps      | <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event |
| <input type="checkbox"/> Existing delineation(s) for site |  |
| <input type="checkbox"/> Global positioning system (GPS)  |  |
| <input type="checkbox"/> Other studies                    |  |

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
2.56	— — — 64	Cobble	
0.157	— — — 4	Pebble	
		Granule	
0.079	— — — 2.00		Sand
0.039	— — — 1.00	Very coarse sand	
		Coarse sand	
0.020	— — — 0.50	Medium sand	
1/2 0.0098	— — — 0.25	Fine sand	
1/4 0.005	— — — 0.125	Very fine sand	
1/8 — 0.0025	— — — 0.0625		Silt
1/16 0.0012	— — — 0.031	Coarse silt	
1/32 0.00061	— — — 0.0156	Medium silt	
1/64 0.00031	— — — 0.0078	Fine silt	
1/128 — 0.00015	— — — 0.0039	Very fine silt	Mud
		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**



<input checked="" type="checkbox"/>	<b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.</b>
<input checked="" type="checkbox"/>	<b>Locate the low-flow channel (lowest part of the channel). Record observations.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Silt</u> Total veg cover: <u>80</u> %    Tree: <u>0</u> Shrub: <u>0</u> %    Herb: <u>80</u> % <u>% Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </div> </div> <u>Dominant species present:</u> Western wheat ( <i>Pascopyrum smithii</i> ), Field bindweed ( <i>Convolvulus arvensis</i> ), Kochia ( <i>Bassia scoparia</i> )  <u>Other:</u> <input checked="" type="checkbox"/> No bed and bank for low flow channel <input checked="" type="checkbox"/> No evidence of recent flows <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	<b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b> <u>Characteristics used to delineate the low-flow/active floodplain boundary:</u> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other </div> <div style="width: 50%;"> <input type="checkbox"/> Tree  <input type="checkbox"/> Shrub  <input checked="" type="checkbox"/> Herb  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input checked="" type="checkbox"/> Other: Change in slope  <input type="checkbox"/> Other: </div> </div>
<input checked="" type="checkbox"/>	<b>Continue walking the channel cross-section. Record observations below.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Silt</u> Total veg cover: <u>70</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>70</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </div> </div> <u>Dominant species present:</u> Western wheat ( <i>Pascopyrum smithii</i> ), Field bindweed ( <i>Convolvulus arvensis</i> ), Kochia ( <i>Bassia scoparia</i> ), Blue grama ( <i>Bouteloua gracilis</i> )  <u>Other:</u> <input checked="" type="checkbox"/> Depressional features within drainage (sparsley vegetated) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.</b></p> <p><u>Characteristics used to delineate the active floodplain/ low terrace boundary:</u></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Change in average sediment texture  <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other: </div> <div style="width: 50%;"> <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input checked="" type="checkbox"/> Other: <u>No Change</u>  <input type="checkbox"/> Other: </div> </div>
<input checked="" type="checkbox"/>	<p><b>Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.</b></p> <p><u>Consistency of indicators used to delineate the active floodplain/low terrace boundary:</u></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Change in average sediment texture  Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Change in total veg cover  Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Change in overall vegetation maturity  Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Change in dominant species present  Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Other: </div> <div style="width: 50%;"> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Presence of bed and bank  Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Drift and/or debris  Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Other: <u>Slope (Slightly)</u>  Y <input type="checkbox"/> N <input type="checkbox"/> Other: </div> </div>
<input checked="" type="checkbox"/>	<p><b>If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.</b></p>
<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record characteristics of the low terrace.</b></p> <p><u>Characteristics of the low terrace:</u></p> <p>Average sediment texture: <u>Silt</u></p> <p>Total veg cover: <u>75</u> %    Tree: <u>0</u>    Shrub: <u>20</u> %    Herb: <u>55</u> %</p> <p><u>% Community successional stage:</u></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings) </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </div> </div> <p><u>Dominant species present:</u>    Western wheat (<i>Pascopyrum smithii</i>), Field bindweed (<i>Convolvulus arvensis</i>), Kochia (<i>Bassia scoparia</i>), Blue grama (<i>Bouteloua gracilis</i>), Yellow bush lupine (<i>Lupinus arboreus</i>), Rabbit brush (<i>Ericameria nauseosa</i>)</p> <p><u>Other:</u> <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____</p>
<input checked="" type="checkbox"/>	<p><b>If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.</b></p> <p><u>Active floodplain/low terrace boundary acquired via:</u></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input checked="" type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div>

**Project: Rolling Meadows**  
**Project Number: 21.1129.009**  
**Stream: Drainage 2**  
**Investigator(s): Seymone O'Brien**

**Date: 12/6/2022** **Time: 1pm**  
**Town: Colorado** **State: CO**  
**Springs** **Photo end file#**  
**Photo begin file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?  
 Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details: Tributary to drainage 1, located on the east side of the project area.**  
**Datum:** **Projection:**  
**Coordinates: 38.755488, -104.61603**

**Notes:** Discontinuous stream channel. Very shallow and completely dry without evidence of recent flows.

**Brief site description:** Fully vegetated drainage. Contributes to the main drainage 1, within the Project Area.

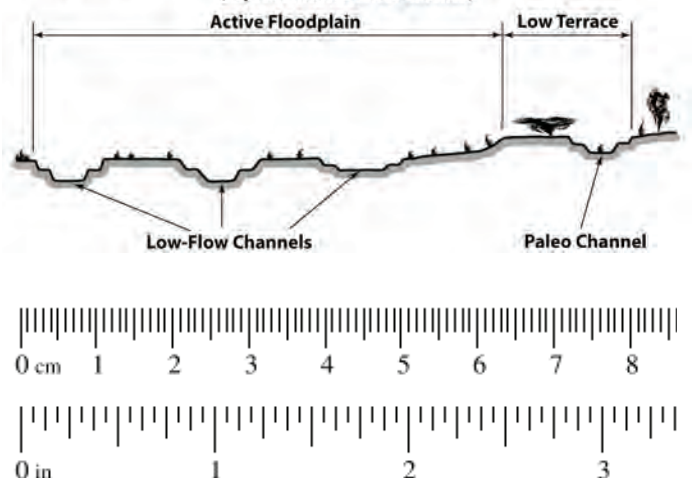
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography              | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
| <input checked="" type="checkbox"/> Topographic maps                | Period of record:  |
| Scale:  | <input type="checkbox"/> Clinometer / level  |
| <input type="checkbox"/> Geologic maps                              | <input type="checkbox"/> History of recent effective discharges  |
| <input checked="" type="checkbox"/> Vegetation maps                 | <input type="checkbox"/> Results of flood frequency analysis   |
| <input checked="" type="checkbox"/> Soils maps                      | <input type="checkbox"/> Most recent shift-adjusted rating   |
| <input type="checkbox"/> Rainfall/precipitation maps                | <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event |
| <input type="checkbox"/> Existing delineation(s) for site           |  |
| <input checked="" type="checkbox"/> Global positioning system (GPS) |  |
| <input type="checkbox"/> Other studies                              |  |

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
2.56	— — — 64	Cobble	
0.157	— — — 4	Pebble	
0.079	— — — 2.00	Granule	
0.039	— — — 1.00	Very coarse sand	Sand
0.020	— — — 0.50	Coarse sand	
1/2 0.0098	— — — 0.25	Medium sand	
1/4 0.005	— — — 0.125	Fine sand	
1/8 — 0.0025	— — — 0.0625	Very fine sand	
1/16 0.0012	— — — 0.031	Coarse silt	Silt
1/32 0.00061	— — — 0.0156	Medium silt	
1/64 0.00031	— — — 0.0078	Fine silt	
1/128 — 0.00015	— — — 0.0039	Very fine silt	Mud
		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**



<input checked="" type="checkbox"/>	<b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in “Notes” above.</b>
<input checked="" type="checkbox"/>	<b>Locate the low-flow channel (lowest part of the channel). Record observations.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Sandy-loam/Clay</u> Total veg cover: <u>80</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>80</u> % <u>Community successional stage:</u> <input type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input checked="" type="checkbox"/> Early (herbaceous & seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>), crested wheatgrass (<i>Agropyron cristatum</i>)</u>  <u>Other:</u> <input type="checkbox"/> <u>No bed and bank for low flow channel</u> <input type="checkbox"/> <u>No evidence of recent flows</u> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	<b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b> <u>Characteristics used to delineate the low-flow/active floodplain boundary:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other         </div> <div> <input type="checkbox"/> Tree  <input type="checkbox"/> Shrub  <input checked="" type="checkbox"/> Herb  <span style="color: red; font-weight: bold;">No Change</span>  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>
<input checked="" type="checkbox"/>	<b>Continue walking the channel cross-section. Record observations below.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Clay</u> Total veg cover: <u>20</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>20</u> % <u>Community successional stage:</u> <input type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input checked="" type="checkbox"/> Early (herbaceous & seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>), crested wheatgrass (<i>Agropyron cristatum</i>)</u>  <u>Other:</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.</b></p> <p><u>Characteristics used to delineate the active floodplain/ low terrace boundary:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> Change in average sediment texture</td> <td><input type="checkbox"/> Tree</td> <td><input type="checkbox"/> Shrub</td> <td><input checked="" type="checkbox"/> Herb</td> </tr> <tr> <td><input type="checkbox"/> Change in total veg cover</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Presence of bed and bank</td> <td colspan="2"><b>No Change</b></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Drift and/or debris</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> </table>	<input type="checkbox"/> Change in average sediment texture	<input type="checkbox"/> Tree	<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Herb	<input type="checkbox"/> Change in total veg cover				<input type="checkbox"/> Change in overall vegetation maturity				<input type="checkbox"/> Change in dominant species present				<input type="checkbox"/> Other	<input type="checkbox"/> Presence of bed and bank	<b>No Change</b>			<input type="checkbox"/> Drift and/or debris				<input type="checkbox"/> Other: _____				<input type="checkbox"/> Other: _____										
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**Project: Rolling Meadows**  
**Project Number: 21.1129.009**  
**Stream: Drainage 3**  
**Investigator(s): Seymone O'Brien**

**Date: 12/6/2022**  
**Town: Colorado**  
**Springs**  
**Photo begin file#**  
**Time: 1pm**  
**State: CO**  
**Photo end file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details: North side of the Project Area.**

**Datum:** **Projection:**

**Coordinates: 38.753248, -104.617944**

**Notes:** Discontinuous stream channel. Very shallow and completely dry without evidence of recent flows.

**Brief site description:** Fully vegetated drainage. Within the eastern section of the Project Area.

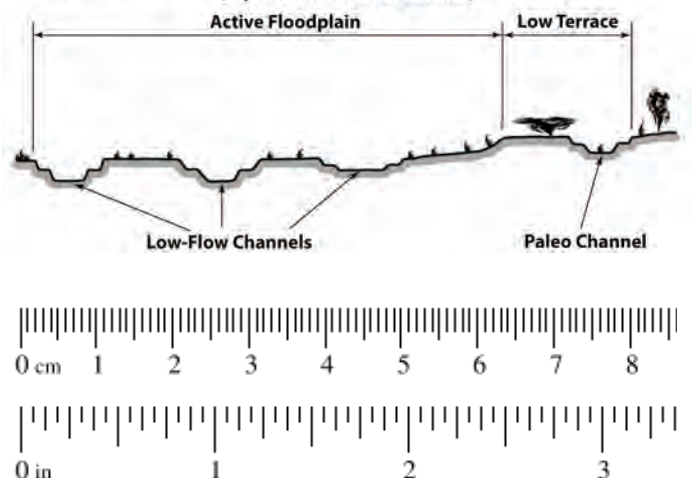
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography              | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
| <input checked="" type="checkbox"/> Topographic maps                | Period of record:  |
| Scale:  | <input type="checkbox"/> Clinometer / level  |
| <input type="checkbox"/> Geologic maps                              | <input type="checkbox"/> History of recent effective discharges  |
| <input checked="" type="checkbox"/> Vegetation maps                 | <input type="checkbox"/> Results of flood frequency analysis   |
| <input checked="" type="checkbox"/> Soils maps                      | <input type="checkbox"/> Most recent shift-adjusted rating   |
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| <input type="checkbox"/> Existing delineation(s) for site           |  |
| <input checked="" type="checkbox"/> Global positioning system (GPS) |  |
| <input type="checkbox"/> Other studies                              |  |

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
2.56	— — — 64	Cobble	
0.157	— — — 4	Pebble	
0.079	— — — 2.00	Granule	
0.039	— — — 1.00	Very coarse sand	Sand
0.020	— — — 0.50	Coarse sand	
1/2 0.0098	— — — 0.25	Medium sand	
1/4 0.005	— — — 0.125	Fine sand	
1/8 — 0.0025	— — — 0.0625	Very fine sand	
1/16 0.0012	— — — 0.031	Coarse silt	Silt
1/32 0.00061	— — — 0.0156	Medium silt	
1/64 0.00031	— — — 0.0078	Fine silt	
1/128 — 0.00015	— — — 0.0039	Very fine silt	Mud
		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**



<input checked="" type="checkbox"/>	<p><b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in “Notes” above.</b></p>
<input checked="" type="checkbox"/>	<p><b>Locate the low-flow channel (lowest part of the channel). Record observations.</b></p> <p><u>Characteristics of the low-flow channel:</u></p> <p>Average sediment texture: <u>Sandy-loam/Clay</u></p> <p>Total veg cover: <u>80</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>80</u> %</p> <p><u>Community successional stage:</u></p> <p> <input type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </p> <p><u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>)</u></p> <p>Other: <input checked="" type="checkbox"/> <u>No bed and bank or low flow channel</u></p> <p> <input checked="" type="checkbox"/> <u>No evidence of recent flows</u>  <input type="checkbox"/>  <input type="checkbox"/> </p>
<input checked="" type="checkbox"/>	<p><b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b></p> <p><u>Characteristics used to delineate the low-flow/active floodplain boundary:</u></p> <p> <input type="checkbox"/> Change in total veg cover <input type="checkbox"/> Tree <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Herb </p> <p> <input type="checkbox"/> Change in overall vegetation maturity </p> <p> <input type="checkbox"/> Change in dominant species present      <b>No Change</b> </p> <p> <input type="checkbox"/> Other <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ </p>
<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record observations below.</b></p> <p><u>Characteristics of the low-flow channel:</u></p> <p>Average sediment texture: <u>Clay</u></p> <p>Total veg cover: <u>20</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>20</u> %</p> <p><u>Community successional stage:</u></p> <p> <input type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </p> <p><u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>)</u></p> <p>Other: <input type="checkbox"/></p> <p> <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> </p>

<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.</b></p> <p><u>Characteristics used to delineate the active floodplain/ low terrace boundary:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> Change in average sediment texture</td> <td><input type="checkbox"/> Tree</td> <td><input type="checkbox"/> Shrub</td> <td><input checked="" type="checkbox"/> Herb</td> </tr> <tr> <td><input type="checkbox"/> Change in total veg cover</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Presence of bed and bank</td> <td colspan="2"><b>No Change</b></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Drift and/or debris</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> </table>	<input type="checkbox"/> Change in average sediment texture	<input type="checkbox"/> Tree	<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Herb	<input type="checkbox"/> Change in total veg cover				<input type="checkbox"/> Change in overall vegetation maturity				<input type="checkbox"/> Change in dominant species present				<input type="checkbox"/> Other	<input type="checkbox"/> Presence of bed and bank	<b>No Change</b>			<input type="checkbox"/> Drift and/or debris				<input type="checkbox"/> Other: _____				<input type="checkbox"/> Other: _____										
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<input checked="" type="checkbox"/>	<p><b>Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.</b></p> <p><u>Consistency of indicators used to delineate the active floodplain/low terrace boundary:</u></p> <table border="0"> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in average sediment texture</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in total veg cover</td> <td><input type="checkbox"/> Tree</td> <td><input type="checkbox"/> Shrub</td> <td><input type="checkbox"/> Herb</td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Other:</td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Presence of bed and bank</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Drift and/or debris</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Other: _____</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Other: _____</td> <td></td> </tr> </table>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in average sediment texture				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in total veg cover	<input type="checkbox"/> Tree	<input type="checkbox"/> Shrub	<input type="checkbox"/> Herb	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in overall vegetation maturity				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in dominant species present				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Other:	Y <input type="checkbox"/> N <input type="checkbox"/>	Presence of bed and bank				Y <input type="checkbox"/> N <input type="checkbox"/>	Drift and/or debris				Y <input type="checkbox"/> N <input type="checkbox"/>	Other: _____				Y <input type="checkbox"/> N <input type="checkbox"/>	Other: _____	
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**Project: Rolling Meadows**  
**Project Number: 21.1129.009**  
**Stream: Drainage 4**  
**Investigator(s): Seymone O'Brien**

**Date: 12/6/2022** **Time: 1pm**  
**Town: Colorado** **State: CO**  
**Springs** **Photo end file#**  
**Photo begin file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details: North side of the Project Area.**

**Datum:**

**Projection:**

**Coordinates: 38.74956, -104.619144**

**Notes:** Discontinuous stream channel. Very shallow and completely dry without evidence of recent flows.

**Brief site description:** Fully vegetated drainage. Within the eastern section of the Project Area.

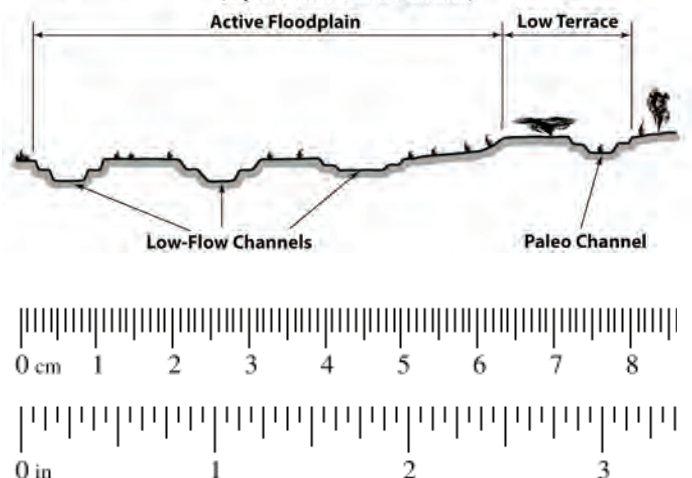
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography              | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
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| <input type="checkbox"/> Other studies                              |  |

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
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		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**



<input checked="" type="checkbox"/>	<b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in “Notes” above.</b>
<input checked="" type="checkbox"/>	<b>Locate the low-flow channel (lowest part of the channel). Record observations.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Sandy-loam/Clay</u> Total veg cover: <u>80</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>80</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div> <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian</u> <u>thistle (<i>Salsola kali</i>), crested wheatgrass (<i>Agropyron cristatum</i>)</u> <u>Other:</u> <input type="checkbox"/> <u>No bed and bank or low flow channel</u> <input type="checkbox"/> <u>No evidence of recent flows</u> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	<b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b> <u>Characteristics used to delineate the low-flow/active floodplain boundary:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other         </div> <div> <input type="checkbox"/> Tree  <input type="checkbox"/> Shrub  <input checked="" type="checkbox"/> Herb  <span style="color: red; font-weight: bold;">No Change</span>  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>
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**Project: Rolling Meadows**  
**Project Number: 21.1129.009**  
**Stream: Drainage 5**  
**Investigator(s): Seymone O'Brien**

**Date: 12/6/2022**  
**Town: Colorado**  
**Springs**  
**Photo begin file#**  
**Time: 1pm**  
**State: CO**  
**Photo end file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details: Tributary to drainage 1, located on the east side of the project area.**

**Datum:** **Projection:**

**Coordinates: 38.749153, -104.622732**

**Notes:** Discontinuous stream channel. Very shallow and completely dry without evidence of recent flows.

**Brief site description:** Fully vegetated drainage. Contributes to the main drainage 1, within the Project Area. Head cut on the west side of the channel.

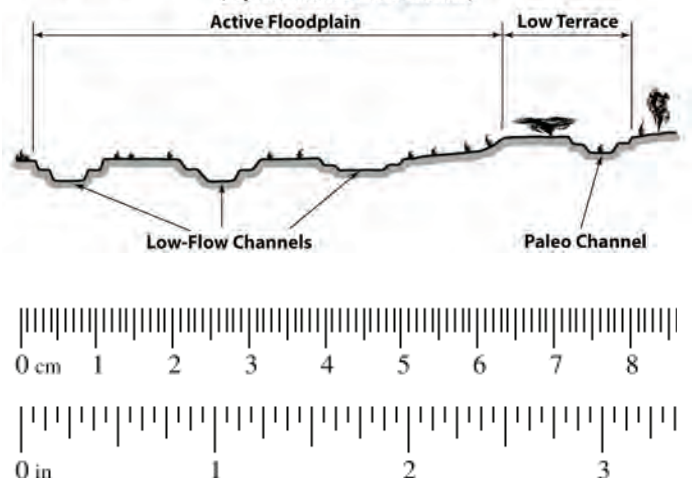
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography              | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
| <input checked="" type="checkbox"/> Topographic maps                | Period of record:  |
| Scale:  | <input type="checkbox"/> Clinometer / level  |
| <input type="checkbox"/> Geologic maps                              | <input type="checkbox"/> History of recent effective discharges  |
| <input checked="" type="checkbox"/> Vegetation maps                 | <input type="checkbox"/> Results of flood frequency analysis   |
| <input checked="" type="checkbox"/> Soils maps                      | <input type="checkbox"/> Most recent shift-adjusted rating   |
| <input type="checkbox"/> Rainfall/precipitation maps                | <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event |
| <input type="checkbox"/> Existing delineation(s) for site           |  |
| <input checked="" type="checkbox"/> Global positioning system (GPS) |  |
| <input type="checkbox"/> Other studies                              |  |

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
2.56	— — — 64	Cobble	
0.157	— — — 4	Pebble	
0.079	— — — 2.00	Granule	
0.039	— — — 1.00	Very coarse sand	Sand
0.020	— — — 0.50	Coarse sand	
1/2 0.0098	— — — 0.25	Medium sand	
1/4 0.005	— — — 0.125	Fine sand	
1/8 — 0.0025	— — — 0.0625	Very fine sand	
1/16 0.0012	— — — 0.031	Coarse silt	Silt
1/32 0.00061	— — — 0.0156	Medium silt	
1/64 0.00031	— — — 0.0078	Fine silt	
1/128 — 0.00015	— — — 0.0039	Very fine silt	Mud
		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**





<input checked="" type="checkbox"/>	<b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.</b>
<input checked="" type="checkbox"/>	<b>Locate the low-flow channel (lowest part of the channel). Record observations.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Sandy-loam/Clay</u> Total veg cover: <u>90</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>90</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </div> </div> <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), Russian thistle (<i>Salsola kali</i>), crested wheatgrass (<i>Agropyron cristatum</i>), western wheatgrass (<i>Pascopyrum smithii</i>), kochia (<i>Bassia prostrata</i>), scotch thistle (<i>Onopordum acanthium</i>)</u> <u>Other:</u> <input checked="" type="checkbox"/> <u>No evidence of recent flows</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	<b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b> <u>Characteristics used to delineate the low-flow/active floodplain boundary:</u> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input checked="" type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other </div> <div style="width: 50%;"> <input type="checkbox"/> Tree  <input type="checkbox"/> Shrub  <input checked="" type="checkbox"/> Herb  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____ </div> </div>
<input checked="" type="checkbox"/>	<b>Continue walking the channel cross-section. Record observations below.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Clay</u> Total veg cover: <u>80</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>80</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings) </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) </div> </div> <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), Russian thistle (<i>Salsola kali</i>), crested wheatgrass (<i>Agropyron cristatum</i>), western wheatgrass (<i>Pascopyrum smithii</i>), kochia (<i>Bassia prostrata</i>), scotch thistle (<i>Onopordum acanthium</i>)</u> <u>Other:</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.</b></p> <p><u>Characteristics used to delineate the active floodplain/ low terrace boundary:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> Change in average sediment texture</td> <td><input type="checkbox"/> Tree</td> <td><input checked="" type="checkbox"/> Shrub</td> <td><input checked="" type="checkbox"/> Herb</td> </tr> <tr> <td><input type="checkbox"/> Change in total veg cover</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Presence of bed and bank</td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Drift and/or debris</td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td></td> <td></td> </tr> </table>	<input type="checkbox"/> Change in average sediment texture	<input type="checkbox"/> Tree	<input checked="" type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Herb	<input type="checkbox"/> Change in total veg cover				<input type="checkbox"/> Change in overall vegetation maturity				<input type="checkbox"/> Change in dominant species present				<input type="checkbox"/> Other	<input type="checkbox"/> Presence of bed and bank				<input type="checkbox"/> Drift and/or debris				<input type="checkbox"/> Other: _____				<input type="checkbox"/> Other: _____										
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**Project: Rolling Meadows**  
**Project Number: 21.1129.009**  
**Stream: Drainage 6**  
**Investigator(s): Seymone O'Brien**

**Date: 12/6/2022** **Time: 1pm**  
**Town: Colorado** **State: CO**  
**Springs** **Photo end file#**  
**Photo begin file#**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

**Location Details: North side of the Project Area.**

**Datum:** **Projection:**

**Coordinates: 38.768436, -104.618213**

**Notes:** Discontinuous stream channel. Very shallow and completely dry without evidence of recent flows.

**Brief site description:** Fully vegetated drainage. Within the northern section of the Project Area. North of Bradley Road

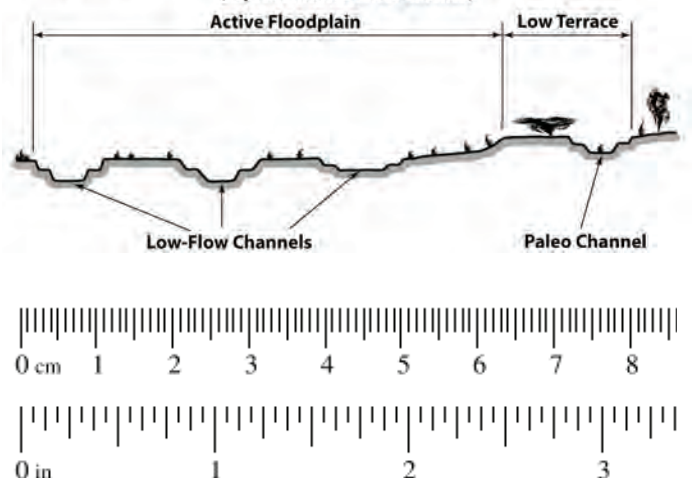
**Checklist of resources (if available):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography              | <input type="checkbox"/> Stream gage data  |
| Dates:  | Gage number:   |
| <input checked="" type="checkbox"/> Topographic maps                | Period of record:  |
| Scale:  | <input type="checkbox"/> Clinometer / level  |
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The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	— — — 256	Boulder	Gravel
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0.079	— — — 2.00	Granule	
0.039	— — — 1.00	Very coarse sand	Sand
0.020	— — — 0.50	Coarse sand	
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1/8 — 0.0025	— — — 0.0625	Very fine sand	
1/16 0.0012	— — — 0.031	Coarse silt	Silt
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1/64 0.00031	— — — 0.0078	Fine silt	
1/128 — 0.00015	— — — 0.0039	Very fine silt	Mud
		Clay	

**Hydrogeomorphic Floodplain Units - Intermittent and Ephemeral Channel Forms (representative cross-section)**



<input checked="" type="checkbox"/>	<b>Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in “Notes” above.</b>
<input checked="" type="checkbox"/>	<b>Locate the low-flow channel (lowest part of the channel). Record observations.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Sandy-loam/Clay</u> Total veg cover: <u>80</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>80</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div> <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>)</u> <hr/> <div> <u>Other:</u> <input type="checkbox"/> <u>No bed and bank or low flow channel</u>  <input type="checkbox"/> <u>No evidence of recent flows</u>  <input type="checkbox"/> _____  <input type="checkbox"/> _____         </div>
<input checked="" type="checkbox"/>	<b>Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.</b> <u>Characteristics used to delineate the low-flow/active floodplain boundary:</u> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <input type="checkbox"/> Change in total veg cover  <input type="checkbox"/> Change in overall vegetation maturity  <input type="checkbox"/> Change in dominant species present  <input type="checkbox"/> Other         </div> <div style="width: 50%;"> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Tree             <input type="checkbox"/> Shrub             <input checked="" type="checkbox"/> Herb           </div> <div style="color: red; font-weight: bold; text-align: center; margin: 5px 0;">No Change</div> <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>
<input checked="" type="checkbox"/>	<b>Continue walking the channel cross-section. Record observations below.</b> <u>Characteristics of the low-flow channel:</u> Average sediment texture: <u>Clay</u> Total veg cover: <u>20</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>20</u> % <u>Community successional stage:</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div> <u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>)</u> <hr/> <div> <u>Other:</u> <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____         </div>

<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.</b></p> <p><u>Characteristics used to delineate the active floodplain/ low terrace boundary:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> Change in average sediment texture</td> <td><input type="checkbox"/> Tree</td> <td><input type="checkbox"/> Shrub</td> <td><input checked="" type="checkbox"/> Herb</td> </tr> <tr> <td><input type="checkbox"/> Change in total veg cover</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Presence of bed and bank</td> <td colspan="2"><b>No Change</b></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Drift and/or debris</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other: _____</td> <td colspan="2"></td> </tr> </table>	<input type="checkbox"/> Change in average sediment texture	<input type="checkbox"/> Tree	<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Herb	<input type="checkbox"/> Change in total veg cover				<input type="checkbox"/> Change in overall vegetation maturity				<input type="checkbox"/> Change in dominant species present				<input type="checkbox"/> Other	<input type="checkbox"/> Presence of bed and bank	<b>No Change</b>			<input type="checkbox"/> Drift and/or debris				<input type="checkbox"/> Other: _____				<input type="checkbox"/> Other: _____										
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<input checked="" type="checkbox"/>	<p><b>Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.</b></p> <p><u>Consistency of indicators used to delineate the active floodplain/low terrace boundary:</u></p> <table border="0"> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in average sediment texture</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in total veg cover</td> <td><input type="checkbox"/> Tree</td> <td><input type="checkbox"/> Shrub</td> <td><input type="checkbox"/> Herb</td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in overall vegetation maturity</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Change in dominant species present</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y <input type="checkbox"/> N <input checked="" type="checkbox"/></td> <td>Other:</td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Presence of bed and bank</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Drift and/or debris</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Other: _____</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Y <input type="checkbox"/> N <input type="checkbox"/></td> <td>Other: _____</td> <td></td> </tr> </table>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in average sediment texture				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in total veg cover	<input type="checkbox"/> Tree	<input type="checkbox"/> Shrub	<input type="checkbox"/> Herb	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in overall vegetation maturity				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Change in dominant species present				Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Other:	Y <input type="checkbox"/> N <input type="checkbox"/>	Presence of bed and bank				Y <input type="checkbox"/> N <input type="checkbox"/>	Drift and/or debris				Y <input type="checkbox"/> N <input type="checkbox"/>	Other: _____				Y <input type="checkbox"/> N <input type="checkbox"/>	Other: _____	
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<input checked="" type="checkbox"/>	<p><b>If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.</b></p>																																								
<input checked="" type="checkbox"/>	<p><b>Continue walking the channel cross-section. Record characteristics of the low terrace.</b></p> <p><u>Characteristics of the low terrace:</u></p> <p>Average sediment texture: <u>Clay</u></p> <p>Total veg cover: <u>20</u> %    Tree: <u>0</u> %    Shrub: <u>0</u> %    Herb: <u>20</u> %</p> <p><u>Community successional stage:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> NA</td> <td><input type="checkbox"/> Mid (herbaceous, shrubs, saplings)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Early (herbaceous &amp; seedlings)</td> <td><input type="checkbox"/> Late (herbaceous, shrubs, mature trees)</td> </tr> </table> <p><u>Dominant species present:</u> <u>Blue grama (<i>Bouteloua gracilis</i>), fetid marigold (<i>Dyssodia papposa</i>), Russian thistle (<i>Salsola kali</i>)</u></p> <p>_____</p> <p>_____</p> <p><u>Other:</u> <input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p>	<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)																																				
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<input type="checkbox"/>	<p><b>If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.</b></p> <p><u>Active floodplain/low terrace boundary acquired via:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other: _____</td> </tr> </table>	<input type="checkbox"/> Mapping on aerial photograph	<input type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other: _____																																				
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## **Appendix D: 2021 Wetland Assessment and Delineation Report**

**Date:** 22 September 2021

**To:** Tony Martinez, U.S. Army Corps of Engineers

**From:** Tierney Walsh, Matrix Environmental Services

**Subject:** Wetland Assessment and Delineation Report – Rolling Hills Development at Jimmy Camp Creek East Tributary, West of S Meridian Road and South of Drennan Road, El Paso County, Colorado

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Mr. Martinez,

On behalf of the Landhuis Company, Matrix Environmental Services, LLC (MES) is pleased to submit this report summarizing the assessment and delineation of wetlands within the Rolling Hills development area (the Site), which is located west of S. Meridian Road and south of Drennan Road in El Paso County, Colorado.

The scope of work for the wetland assessment and delineation included the entire Site, which totals approximately 1,025 acres. Similar plant communities were identified throughout the Site; therefore, the observed plant communities were divided into eight distinct communities with one data sample point collected in each community.

The assessment and delineation field work were conducted May 13-14, 2021 (Communities 1-5) and August 7-8, 2021 (Communities 6-8). Climatic and hydrologic conditions at the Site were drier than average for the time of year during the May assessment due to below-normal rainfall; however, conditions were normal during the August assessment. The wet season in Colorado Springs is between April and September, peaking in July and August.

Community 1 includes the relatively flat area identified as a seasonally flooded, intermittent riverine system by the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), which is unnamed and shown by the USFWS NWI to converge with the Jimmy Camp Creek East Tributary at a point approximately 1.75-miles southwest. Community 1 is dominated by common kochia (*Bassia scoparia*) and a grass that was not identifiable at the time of assessment due to the lack of inflorescence. Community 1 vegetation also includes minor amounts of groundplum milkvetch (*Astragalus crassicaarpus*), lamb's quarters (*Chenopodium album*) and musk thistle (*Carduus nutans*). No hydric soil indicators were observed within the area's sandy clay soils. Additionally, saturation and a water table were not observed within Community 1: soil was dry to a depth of 28 inches. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of hydric soils and a lack of wetland hydrology.

Community 2 includes a small depression near the eastern boundary of the Site, which is dominated by Russian olive (*Elaeagnus angustifolia*), common kochia (*Bassia scoparia*) and a grass that was not identifiable at the time of assessment due to the lack of inflorescence. Community 2 vegetation also includes minor amounts of field bindweed (*Convolvulus arvensis*) and Russian thistle (*Salsola tragus*). No hydric soil indicators were observed within the area's sandy clay loam and clay soils. Additionally, saturation and a water table were not observed within Community 2 despite the soil pit being advanced to 42 inches below the ground surface. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of hydric soils and a lack of wetland hydrology.

Community 3 includes the drainage swale identified as Jimmy Camp Creek East Tributary, which is dominated by common kochia (*Bassia scoparia*), a grass that was not identifiable at the time of assessment due to the lack of inflorescence and Woods' rose (*Rosa woodsii*). Community 3 vegetation also includes minor amounts of curly dock (*Rumex crispus*) and Russian thistle (*Salsola tragus*). No hydric soil indicators were observed within the area's sandy loam, loamy sand and sand soils. Additionally, saturation and a water table were not observed within Community 3 despite the soil pit being advanced to 52 inches below the ground surface. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of hydric soils and a lack of wetland hydrology.

Community 4 includes the relatively flat area identified as a seasonally flooded, intermittent riverine system by the USFWS NWI, which the NWI shows to converge onsite with Jimmy Camp Creek East Tributary. Community 4 is dominated by common kochia (*Bassia scoparia*) and field bindweed (*Convolvulus arvensis*) with minor amounts of lamb's quarters (*Chenopodium album*) and a grass that was not identifiable at the time of assessment due to the lack of inflorescence. No hydric soil indicators were observed within the area's sandy loam and sandy clay loam soils. Additionally, saturation and a water table were not observed within Community 4 despite the soil pit being advanced to 38 inches below the ground surface. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of dominance of hydrophytic vegetation, a negative prevalence index, the lack of hydric soils and a lack of wetland hydrology.

Community 5 includes a depression near the eastern boundary of the Site within the area identified as a seasonally flooded, intermittent riverine system by the USFWS NWI. Community 5 is dominated by field bindweed (*Convolvulus arvensis*) and a grass that was not identifiable at the time of assessment due to the lack of inflorescence. Vegetation in Community 5 also includes minor amounts of lamb's quarters (*Chenopodium album*) and common kochia (*Bassia scoparia*). No hydric soil indicators were observed within the area's sandy clay and sandy loam soils. Additionally, saturation and a water table were not observed within Community 5: soil was dry to a depth of 38 inches. However, oxidized rhizospheres along living roots were detectable within 12 inches of the soil surface. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of hydric soils.



Community 6 is approximately 0.18 acres and includes a drainage channel associated with a windmill-powered well south of Bradley Road. Community 6 is dominated by foxtail barley (*Hordeum jubatum*) and common kochia (*Bassia scoparia*) with minor amounts of lamb's quarters (*Chenopodium album*), Canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*) and alfalfa dodder (*Cuscuta approximata*). The community had visible surface water in approximately 30% of the area, surface soil cracks, algal mats and oxidized rhizospheres along living roots from 4-12 inches. Additionally, 5% prominent redox concentrations from 4-12 inches satisfy the criteria for redox dark surface. In my professional opinion, this community meets the criteria to be identified as a wetland based on the predominance of hydrophytic vegetation and the observation of hydric soil and wetland hydrology indicators.

Community 7 is located immediately south of Community 6 and includes the southern edge of the drainage channel that forms Community 6. Community 7 is dominated by blue grama (*Bouteloua gracilis*) and common kochia (*Bassia scoparia*) with minor amounts of lamb's quarters (*Chenopodium album*), alfalfa dodder (*Cuscuta approximata*), annual meadow grass (*Poa annua*), proso millet (*Panicum miliaceum*), common sunflower (*Helianthus annuus*) and golden crownbeard (*Verbesina encelioides*). No hydric soil indicators were observed within the area's silty clay loam and sandy loam soils. Additionally, saturation and a water table were not observed within Community 7: soil was dry to a depth of 30 inches. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of dominance of hydrophytic vegetation, a negative prevalence index, lack of hydric soils, and a lack of wetland hydrology indicators.

Community 8 includes the relatively flat area identified as Jimmy Camp Creek East Tributary south of Bradley Road, which the USFWS NWI describes as a seasonally flooded, intermittent riverine system. Community 8 is dominated by blue grama (*Bouteloua gracilis*), lamb's quarters (*Chenopodium album*) and red-root amaranth (*Amaranthus retroflexus*) with minor amounts of pineapple-weed (*Matricaria discoidea*), common kochia (*Bassia scoparia*), golden crownbeard (*Verbesina encelioides*) and curly dock (*Rumex crispus*). No hydric soil indicators were observed within the area's clay loam and silty loam soils. Additionally, saturation and a water table were not observed within Community 8: soil was dry to a depth of 48 inches. In my professional opinion, this community does not meet the criteria of a wetland based on the lack of dominance of hydrophytic vegetation, a negative prevalence index, the lack of hydric soils and a lack of wetland hydrology.

According to the National Resources Conservation Service's Web Soil Survey, most soils within the Site are classified as Sampson loam, except soils within Community 3 which are classified as Ellicott loamy coarse sand. Additionally, portions of the Site are classified as wetlands according to the USFWS NWI map, including communities 1, 3, 4, 5 and 8 which the NWI describes as temporarily or seasonally flooded riverine habitats.

Flags were placed along the boundaries of areas identified as wetlands within the Site, which was limited to Community 6 as indicated in the attached figure.

The professional opinions made in this report regarding the location and extent of areas that do or do not satisfy the criteria of a wetland were determined pursuant to the Army Corps of Engineer's Regional Supplement and appropriate guidance and pursuant to confirmation by appropriate regulatory staff including but not limited to the Army Corps of Engineers.

Please contact Ms. Tierney Walsh at 719-457-5613 or [Tierney.Walsh@matrixdesigngroup.com](mailto:Tierney.Walsh@matrixdesigngroup.com) should you have any questions or comments.

Sincerely,

Matrix Environmental Services, LLC



Tierney Walsh

Environmental Scientist

Enclosures:

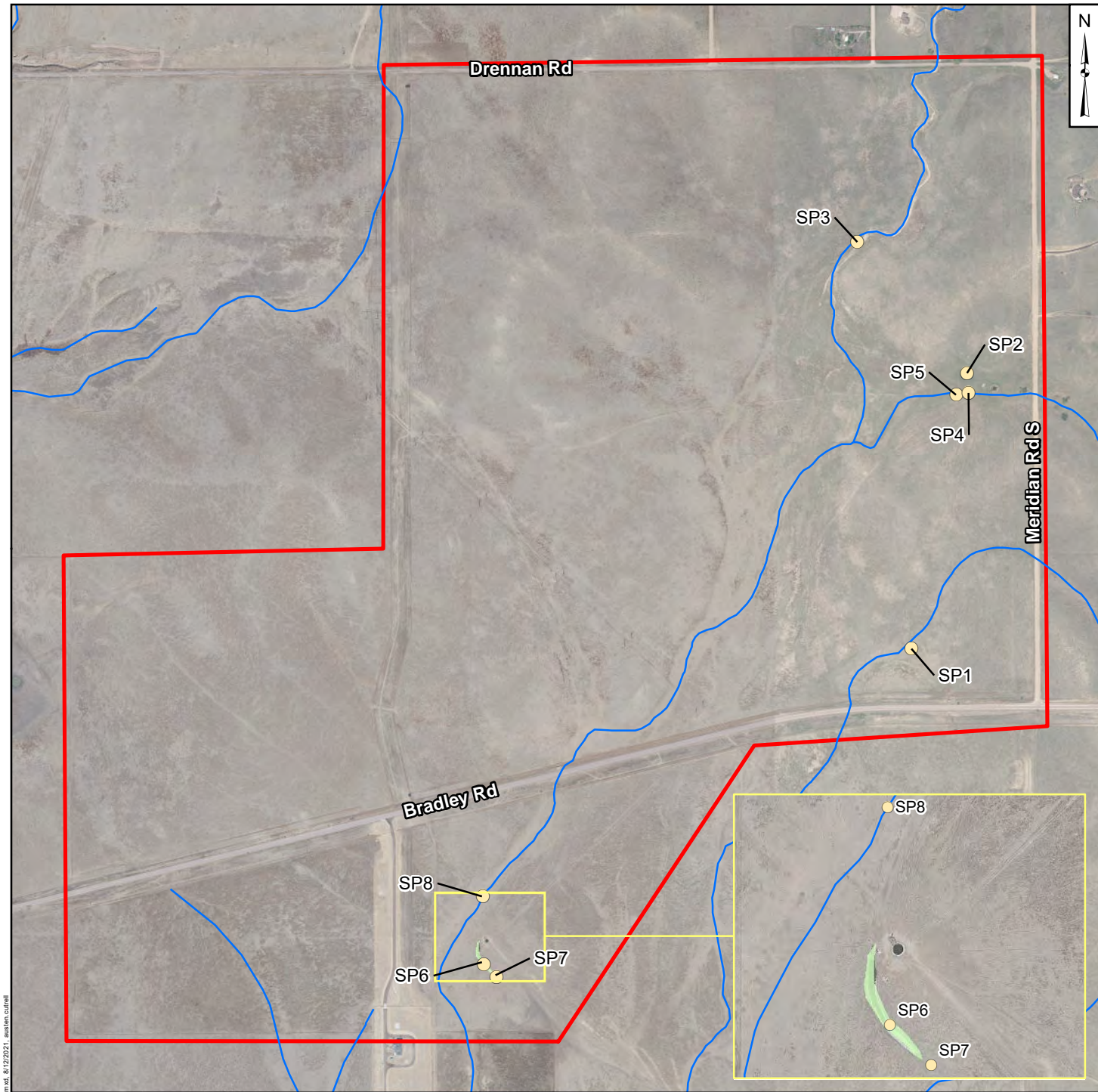
Site Figure

Photolog

Field Data Forms

cc: Mr. Jeff Mark, The Landhuis Company

## Figures



### Legend

- Sampling Point
- Ephemeral Stream
- Wetland
- Site Boundary

0 1,200 2,400  
Feet

### Rolling Hills Wetland Delineation



**Figure  
1**

## Photolog



**Photo Log**  
**Wetland Delineation for Rolling Hills Development**  
**Colorado Springs, Colorado**



Photo 1 – Community 1 includes a relatively flat area identified as a seasonally flooded riverine system by the USFWS NWI. Test pit shown in center of foreground.



Photo 2 – Community 1's sandy clay soils didn't exhibit hydric soil indicators. Additionally, saturation and a water table were not encountered despite the soil pit extending to a depth of 28 inches.



Photo 3 – Community 2 includes a small depression near the eastern boundary of the Site. Test pit is in the center of the middle ground.



Photo 4 – Community 2's sandy clay loam and clay soils didn't exhibit hydric soil indicators. Additionally, saturation and a water table were not encountered despite the soil pit extending to a depth of 42 inches.



**Photo Log**  
**Wetland Delineation for Rolling Hills Development**  
**Colorado Springs, Colorado**



Photo 5 – Community 3 includes the drainage swale identified as Jimmy Camp Creek East Tributary. Test pit is in the center of the foreground.



Photo 6 – Community 3's sandy loam, loamy sand and sand soils didn't exhibit hydric soil indicators, and saturation and a water table were not encountered despite the soil pit extending to a depth of 52 inches.



Photo 7 – Community 4 includes a relatively flat area identified as a seasonally flooded riverine system by the USFWS NWI. Test pit is in the center of the middle ground.



Photo 8 – Community 4's sandy loam and sandy clay loam soils didn't exhibit hydric soil indicators, and saturation and a water table were not encountered despite the soil pit extending to a depth of 38 inches.



**Photo Log**  
**Wetland Delineation for Rolling Hills Development**  
**Colorado Springs, Colorado**



Photo 9 – Community 5 includes a depression near the eastern boundary of the Site within the area identified as a seasonally flooded riverine system by the USFWS NWI. Test pit is on the left in the middle ground.



Photo 10 – Community 5's sandy clay and sandy loam soils didn't exhibit hydric soil indicators; however, oxidized rhizospheres along living roots were detectable within 12 inches of the soil surface.



Photo 11 – Community 6 is approximately 0.18 acres and includes a drainage channel associated with a windmill-powered well south of Bradley Road. Test pit is partially shown in the center of the foreground.



Photo 12 – Community 6's sandy loam soils contained 5% prominent redox concentrations from 4-12 inches, which satisfied the criteria for redox dark surface.



**Photo Log**  
**Wetland Delineation for Rolling Hills Development**  
**Colorado Springs, Colorado**



Photo 13 – Community 7 includes the southern edge of the drainage channel that forms Community 6. Test pit is in the center of the middle ground.



Photo 14 – Community 7's silty clay loam and sandy loam soils didn't exhibit hydric soil indicators, and saturation and a water table were not encountered despite the soil pit extending to a depth of 30 inches.



Photo 15 – Community 8 includes a relatively flat area identified as a seasonally flooded riverine system by the USFWS NWI. Test pit is in the center of the foreground.



Photo 16 – Community 8's clay loam and silty loam soils didn't exhibit hydric soil indicators, and saturation and a water table were not encountered despite the soil pit extending to a depth of 48 inches.



## Field Forms

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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 5/13/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 1  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
 Landform (hillslope, terrace, etc.): flat w/ NW1 boundary Local relief (concave, convex, none): none Slope (%): 0-3%  
 Subregion (LRR): D Lat: N38.767754 Long: W104.612199 Datum: NAD84  
 Soil Map Unit Name: Sampson loam NWI classification: R4SBC

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 ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

Remarks:

Moderate Drought in area during assessment (Drought.gov)

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
= Total Cover			
Herb Stratum (Plot size: <u>1</u> _____)			
1. <u>unidentifiable grass (no reproductive structures)</u>	<u>100%</u>	<u>Y</u>	<u>NA</u>
2. <u>Bassia scoparia</u>	<u>20%</u>	<u>Y</u>	<u>FAC</u>
3. <u>Astragalus crassicaupus</u>	<u>5%</u>	<u>N</u>	<u>NI</u>
4. <u>Chenopodium album</u>	<u>2%</u>	<u>N</u>	<u>FACU</u>
5. <u>Carduus nutans</u>	<u>2%</u>	<u>N</u>	<u>UPL</u>
6. <u>Senecio crassulus</u>	<u>1%</u>	<u>N</u>	<u>FACU</u>
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<u>90%</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
= Total Cover			
% Bare Ground in Herb Stratum <u>10%</u>			

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>3</u>	x 4 = <u>12</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>25</u> (A)	<u>82</u> (B)

Prevalence Index = B/A = 3.28

### Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☒ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- ☒ 5 - Wetland Non-Vascular Plants<sup>1</sup>
- ☒ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes ☐ No ☒

Remarks:

\*sampled entire plant community



## SOIL

Sampling Point: 1

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>		
0-11.5	10YR 2/2	100%						sandy clay moist.
11.5-20	10YR 3/2	99%	10YR 5/8	1%				sandy clay hard, dry
20-24	10YR 3/2	98%	10YR 5/8	2%	C	M		sandy clay hard, dry

<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.)

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                         |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                     |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                 |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                     |
| <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)                   |

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)

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

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): >28"

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:



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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 5/3/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 2  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1%  
 Subregion (LRR): D Lat: N 38.774 002 Long: W 104.610502 Datum: NAD 84  
 Soil Map Unit Name: Sampson loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Moderate drought in area during assessment (drought.gov)</u>		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>*</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Elaeagnus angustifolia</u>	<u>90%</u>	<u>Y</u>	<u>FAC</u>	
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>66%</u> (A/B)
4. _____	_____	_____	_____	
<u>90%</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>116</u> x 3 = <u>330</u>
5. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: <u>115</u> (A) <u>350</u> (B)
				Prevalence Index = B/A = <u>3.04</u>
Herb Stratum (Plot size: <u>*</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Bassia scoparia</u>	<u>20%</u>	<u>Y</u>	<u>FAC</u>	
2. <u>unidentifiable grass (warm season bunchgrass)</u>	<u>20%</u>	<u>Y</u>	<u>NA</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Convolvulus arvensis</u>	<u>10%</u>	<u>N</u>	<u>NI</u>	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Salsola tragus</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>	<input checked="" type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____	<input checked="" 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>55%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>45%</u> = Total Cover				
Remarks: <u>* sampled entire plant community</u>				



SOIL

Sampling Point: 2

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>		
0-6	10YR 2/2	100%					Sandy clay loam	moist
6-13	10YR 2/2	100%					clay	dry, mic compact, CalO <sub>2</sub>
13-21	10YR 3/2	99%	10YR 3/2	1%	C	PL	clay	moist
21-31	10YR 4/2	50%	10YR 4/2				clay	moist, CalO <sub>2</sub>
	10YR 4/2	50%						
31-42	10YR 5/3	98%	10YR 5/3	2%	C	M	loamy sand	moist

<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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<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)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 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)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt; 42"</u>
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt; 42"</u>

(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

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

Remarks:



Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 5/13/21  
Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 3  
Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
Landform (hillslope, terrace, etc.): dipping SW Local relief (concave, convex, none): concave Slope (%): 0-3%  
Subregion (LRR): D Lat: N 38.777078 Long: W 104.613523 Datum: NAD 83  
Soil Map Unit Name: Ellicott loamy coarse sand NWI classification: R4SBA  
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.)

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	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 _____ No <input checked="" type="checkbox"/>		
Remarks: Moderate drought in area during assessment (drought.gov)			

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		= Total Cover		

Sapling/Shrub Stratum (Plot size: <u>★</u> _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Rosa woodsii</u>	<u>5%</u>	<u>Y</u>	<u>FACU</u>
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		<u>5%</u> = Total Cover		

Herb Stratum (Plot size: <u>★</u> _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>unidentifiable grass (no reproductive structure)</u>	<u>40%</u>	<u>Y</u>	<u>NA</u>
2.	<u>Bassia scoparia</u>	<u>30%</u>	<u>Y</u>	<u>FAC</u>
3.	<u>Rumex crispus</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>
4.	<u>Salsola fragus</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
		<u>80%</u> = Total Cover		

Woody Vine Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		= Total Cover		

% Bare Ground in Herb Stratum 20% = Total Cover

Remarks: ★ sampled entire plant community

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</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>33%</u> (A/B)
<b>Prevalence Index worksheet:</b>	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species _____	x 5 = _____
Column Totals: <u>45</u>	<u>145</u> (B)
Prevalence Index = B/A = <u>3.22</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.	
<b>Hydrophytic Vegetation Present?</b>	
Yes _____	No <input checked="" type="checkbox"/>

## SOIL

Sampling Point: 3

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>		
0-3	10YR 4/2	100%					sandy loam	
3-12	10YR 4/2	100%					sandy loam moist	
12-20	10YR 5/4	99%	10YR 3/6	1 1/2	C	PL	loamy sand moist	
20-33	10YR 5/4	100%					sand	

<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.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 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)

- ☐ 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): > 52"

Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): > 52"

(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

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

Remarks:



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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 5/14/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 4  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
 Landform (hillslope, terrace, etc.): flat w/in trib. boundary Local relief (concave, convex, none): none Slope (%): 0%  
 Subregion (LRR): D Lat: N 38° 46.414' Long: W 104° 36.624' Datum: NAD 83  
 Soil Map Unit Name: Sampson loam NWI classification: R4SBC

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"/>	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: <u>Moderate drought in area during assessment (drought.gov)</u>		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>50</u></td> <td>(A) <u>160</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.20</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species _____	x 5 = _____	Column Totals: <u>50</u>	(A) <u>160</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species _____	x 5 = _____																	
Column Totals: <u>50</u>	(A) <u>160</u> (B)																	
_____ = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
_____ = Total Cover																		
<b>Herb Stratum (Plot size: <u>4</u>)</b>																		
1. <u>Bassia scoparia</u>	<u>40%</u>	<u>Y</u>	<u>FAC</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.														
2. <u>Convolvulus arvensis</u>	<u>40%</u>	<u>Y</u>	<u>NI</u>															
3. <u>Chenopodium album</u>	<u>10%</u>	<u>N</u>	<u>FACU</u>															
4. <u>unidentifiable grass (no reproductive structures)</u>	<u>50%</u>	<u>N</u>	<u>NA</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
_____ = Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. _____																		
2. _____																		
_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>5%</u> _____ = Total Cover																		
Remarks: <u>* Sampled entire plant community</u>																		



## SOIL

Sampling Point: 4

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>		
0-3	10YR 2/2	100%					sandy loam	dry
3-9.5	10YR 2/2	100%					sandy loam	moist
9.5-38	10YR 2/2	99%	10YR 3/6	1%	C	PL	sandy clay	compacted, dry

<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.)

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                         |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                     |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                 |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                     |
| <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)                   |

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)

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

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): 15"

Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): >38"

Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

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

Remarks:

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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 5/14/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 5  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
 Landform (hillslope, terrace, etc.): alluvium Local relief (concave, convex, none): concave Slope (%): 12-5  
 Subregion (LRR): D Lat: 38°46.43N Long: 104°36.64W Datum: NAD83  
 Soil Map Unit Name: Sampson loam NWI classification: R4SBC  
 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"/>	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 checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Moderate drought in area during assessment (drought.gov)</u>		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
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>0</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>16</u> x 3 = <u>30</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species _____ x 5 = _____ Column Totals: <u>20</u> (A) <u>70</u> (B) Prevalence Index = B/A = <u>3.5</u>
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <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' <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.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>4</u> )				
1. <u>unidentifiable grass (no reproductive structures)</u>	<u>40%</u>	<u>Y</u>	<u>NA</u>	
2. <u>Convolvulus arvensis</u>	<u>20%</u>	<u>Y</u>	<u>NI</u>	
3. <u>Chenopodium album</u>	<u>10%</u>	<u>N</u>	<u>FACU</u>	
4. <u>Bassia scoparia</u>	<u>10%</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>20%</u> = Total Cover				
Remarks: <u>*sampled entire plant community</u>				



## SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4.5	10YR 2/2						sandy clay moist	
4.5-7.5	10YR 2/2	98%	7.5YR 3/4	27%	C	PL	sandy clay compacted	
7.5-11	10YR 2/2	97%	7.5YR 3/4	31%	C	PL	sandy clay	
11-19	10YR 2/2	97%	10YR 3/6	31%	C	M	sandy clay	↓ dry
19-21	10YR 3/1	93%	10YR 3/6	77%	C	M	sandy clay	
21-22	10YR 5/4	95%	10YR 3/6	51%	C	M	sandy loam	
22-38	10YR 5/4	100%					sandy loam dry	

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<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)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 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)**

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

**Secondary Indicators (2 or more required)**

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

**Field Observations:**

Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt; 38"</u>
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt; 38"</u>

Wetland Hydrology Present? Yes ☒ No ☒ SBT

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

Remarks:



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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 8/7/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 6  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S12T15S R65W  
 Landform (hillslope, terrace, etc.): drainage channel for <sup>anote</sup> well Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR): D Lat: N38° 45.642' Long: W104° 37.478' Datum: NAD83  
 Soil Map Unit Name: Sampson loam NWI classification: None

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input 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:		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
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. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	
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>03</u> x 3 = <u>189</u>
5. _____	_____	_____	_____	FACU species <u>18</u> x 4 = <u>72</u>
_____ = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>81</u> (A) <u>261</u> (B)
				Prevalence Index = B/A = <u>3.22</u>
Herb Stratum (Plot size: <u>1</u> _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Hordeum jubatum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Bassia scoparia</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	+ 2 - Dominance Test is >50%
3. <u>Chenopodium album</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	- 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Cirsium arvense</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	- 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. <u>Convolvulus arvensis</u>	<u>2</u>	<u>N</u>	<u>NI</u>	- 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. <u>Cuscuta approximata</u>	<u>2</u>	<u>N</u>	<u>NI</u>	- Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. <u>Rumex crispus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. <u>Andropogon gerardii</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
9. <u>Helianthus annuus</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
10. <u>Verbesina encelioides</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
11. _____	_____	_____	_____	
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20%</u>				
Remarks: <u>* Sampled entire plant community</u>				



## SOIL

Sampling Point: 10

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 2/2	100					Sandy loam	
4-6	10YR 2/2	97	10YR 3/6	3%	C	PL		Prominent
6-10	10YR 2/2	95	10YR 3/6	5%	C	PL		
10-16	10YR 2/2	93	10YR 3/6	2%	C	PL		
16-22	10YR 3/2	97	10YR 4/6	3%			Sandy clay	prom.
22-27	10YR 4/2	95	10YR 4/6	5%	C	PL	sandy clay	
27-30	10YR 4/2	99	10YR 4/6	1%	C	M	loamy sand	

<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.)

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Histosol (A1)                     | <input checked="" type="checkbox"/> Sandy Redox (S5)                         |
| <input checked="" type="checkbox"/> Histic Epipedon (A2)              | <input checked="" type="checkbox"/> Stripped Matrix (S6)                     |
| <input checked="" type="checkbox"/> Black Histic (A3)                 | <input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4)             | <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)                 |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3)                     |
| <input checked="" type="checkbox"/> Thick Dark Surface (A12)          | <input checked="" type="checkbox"/> Redox Dark Surface (F6)                  |
| <input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)          | <input checked="" type="checkbox"/> Depleted Dark Surface (F7)               |
| <input checked="" type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input checked="" type="checkbox"/> 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: ± 3/4 2 5% disc/prom in upper 12"

## HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 0-11"

Water Table Present? Yes ☐ No ☐ Depth (inches): > 48"

Saturation Present? Yes ☐ No ☐ Depth (inches): > 48"

(Includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:



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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 8/7/21  
Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 7  
Investigator(s): T. Walsh and A. Davis Section, Township, Range: S12T15S R65W  
Landform (hillslope, terrace, etc.): end of drainage channel Local relief (concave, convex, none): none-concave Slope (%): 23%  
Subregion (LRR): D Lat: N 38° 45.625' Long: W 104° 37.456' Datum: NAD84  
Soil Map Unit Name: Sampson loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?    Yes _____ No <input checked="" type="checkbox"/>		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 _____ No <input checked="" type="checkbox"/>		
Remarks: <i>No drought at time of assessment in El Paso (drought.gov)</i>		

**VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		_____ = Total Cover		

Herb Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Bouteloua gracilis</i>	30%	Y	NI
2.	<i>Bassia scoparia</i>	30%	Y	FAC
3.	<i>Chenopodium album</i>	20%	N	FACU
4.	<i>Cuscuta <del>sp.</del> <i>approximata</i></i>	10%	N	NI
5.	<i>Poa <del>annua</del></i>	10%	N	FAC
6.	<i>Panicum miliaceum</i>	5%	N	NI
7.	<i>Helianthus <del>annuus</del></i>	2%	N	FACU
8.	<i>Verbesina encelioides</i>	2%	N	FACU
9.	<i>Paspalum <del>smithii</del></i>	1%	N	FACU
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
		110 = Total Cover		

Woody Vine Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		_____ = Total Cover		

% Bare Ground in Herb Stratum 0

**Remarks:**

*\*Sampled entire plant community*

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:	
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>40</u>	x 3 =	<u>120</u>
FACU species	<u>25</u>	x 4 =	<u>100</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>65</u> (A)		<u>220</u> (B)

Prevalence Index = B/A = 3.40

**Hydrophytic Vegetation Indicators:**

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☒ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- ☒ 5 - Wetland Non-Vascular Plants<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No ☒



## SOIL

Sampling Point: 7

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>		
0-9	10YR2/2	100%					sandy clay	
9-16	10YR2/2	99%	10YR3/6	1%	C	PL	sandy clay	iron
16-30	10YR2/2	99%	10YR3/6	1%	C	M	clayey	calcium deposits

<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.)**

<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) (except MLRA 1)	<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)	
<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)	

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<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:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<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 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 type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<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)		

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;30"</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

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

Remarks: \_\_\_\_\_



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

Project/Site: Rolling Hills - East Tributary to Jimmy Camp Creek City/County: Colorado Springs - El Paso County Sampling Date: 8/2/21  
 Applicant/Owner: Murray Fountain LLC State: CO Sampling Point: 8  
 Investigator(s): T. Walsh and A. Davis Section, Township, Range: S1 T15S R65W  
 Landform (hillslope, terrace, etc.): fluvial trib. boundary Local relief (concave, convex, none): none Slope (%): 0-2%  
 Subregion (LRR): D Lat: 38°45.735' Long: W104°37.478' Datum: NAD83  
 Soil Map Unit Name: Sampson loam NWI classification: R4SBC  
 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"/>	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:			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>      </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0</u> (A/B) <b>Prevalence Index worksheet:</b> Total % Cover of: <u>61</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>8</u> x 3 = <u>24</u> FACU species <u>53</u> x 4 = <u>212</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>61</u> (A) <u>296</u> (B) Prevalence Index = B/A = <u>3.87</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.
1. <u>Bouteloua gracilis</u>	<u>50%</u>	<u>Y</u>	<u>N1</u>	
2. <u>Chenopodium album</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Amaranthus retroflexus</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Matricaria discolor</u>	<u>10%</u>	<u>N</u>	<u>FACU</u>	
5. <u>Bassia scoparia</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>	
6. <u>Verbesina encelioides</u>	<u>3%</u>	<u>N</u>	<u>FACU</u>	
7. <u>Rumex crispus</u>	<u>2%</u>	<u>N</u>	<u>FAC</u>	
8. <u>Convolvulus arvensis</u>	<u>1%</u>	<u>N</u>	<u>N1</u>	
9. <u>Cirsium arvense</u>	<u>1%</u>	<u>N</u>	<u>FAC</u>	
10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
11. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>112</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>      </u>)</b> 1. <u>      </u> 2. <u>      </u> = Total Cover				
<b>% Bare Ground in Herb Stratum</b> <u>0</u> Remarks:				



## SOIL

Sampling Point: 8

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>		
0-13	10YR 2/2	100%				clay loam	dry
13-30	10YR 3/2	100%				silty loam	
30-48	10YR 3/2	100%				sandy loam	

<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.)**

<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) (except MLRA 1)	<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)	
<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)	

<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)**

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

**Secondary Indicators (2 or more required)**

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

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____ No _____	Depth (inches): <u>&gt;48"</u>
Saturation Present?	Yes _____ No _____	Depth (inches): <u>&gt;48"</u>

(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No ☒

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

Remarks: \_\_\_\_\_