

#### WESTERN ECOLOGICAL RESOURCE, INC.

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February 24, 2016

Matt Montgomery U.S. Army Corps of Engineers 400 Rood Avenue, Room 224 Grand Junction, CO 81501

RE: Wetland Delineation Report - ECO Trails Project, Minturn Segment

Dear Matt,

Please find enclosed a Wetland Delineation Report for the Minturn Segment of the ECO Trails Project in Eagle County. ECO Trails and the Town of Minturn are proposing to construct approximately 5,247 linear feet of trail within and adjacent to the County Road 14 right-of-way. We delineated wetlands along the proposed trail corridor in October, 2015 along a survey area that encompassed approximately 12.75 acres.

As summarized in the attached report, waters of the U.S. were identified along Game Creek, a perennial tributary of the Eagle River. Within the boundary of the delineation, 908 ft<sup>2</sup> of forested riparian wetlands and 1,002 ft<sup>2</sup> of aquatic habitat were identified, for a total of 1,910 ft<sup>2</sup> (0.04 acre) of waters of the U.S. No other wetlands or waters of the U.S. occur within the project area.

ECO Trails and the Town of Minturn request a preliminary jurisdictional determination for the trail project area.

Please call if you have questions.

Sincerely,

Heather Houston Ecologist

cc: Ellie Caryl Willy Powell Jeff Spanel Jim Kunkel

**Enclosure** 



# Wetland Delineation ECO Trails Project – Minturn Segment

Eagle County, Colorado

prepared for:

**ECO Trails** 

P.O. Box 1070, Gypsum, CO 81637

&

Town of Minturn

P.O. Box 309, Minturn, CO 81645

prepared by:

Western Ecological Resource, Inc.

711 Walnut Street, Boulder, CO 80302

February 2016

### **Executive Summary**

ECO Trails program, in partnership with the Town of Minturn, is planning construction of the Minturn Segment of the regional trail system in Eagle County. The Minturn Segment encompasses approximately 5,247 linear feet of proposed trail to be constructed within and adjacent to the County Road 14 right-of-way.

To aid in project planning, a wetland delineation was conducted in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and the Regional Supplement for the Western Mountains, Valleys and Coast. The boundary of the delineation along the proposed trail corridor measures approximately 12.75 acres.

As summarized in the following report, waters of the U.S. were identified along Game Creek, a perennial tributary of the Eagle River. Within the boundary of the delineation, 980 ft<sup>2</sup> of forested riparian wetlands and 1,002 ft<sup>2</sup> of aquatic habitat were identified, for a total of 1,910 ft<sup>2</sup> (0.04 acre) of waters of the U.S.

## **Table of Contents**

Section / Title	Page
1.0 Introduction	1
2.0 Environmental Setting	1
3.0 Delineation Methods	1 5
4.0 Wetlands Present  4.1 Game Creek Wetland  4.1.1 Location.  4.1.2 Classification.	5 5
4.1.3 Vegetation	5
5.0 Analysis of Jurisdictional Status	7
6.0 Photos	8
7.0 Tables	14
6.0 References	18
Appendix A. Field Data Forms	19

## List of Figures

Number / Title	<u>Page</u>
Figure 1. Project Location Map.	2
Figure 2. Wetland Map, Sheet 1 of 2.	3
Figure 2. Wetland Map, Sheet 2 of 2.	
Figure 3. Game Creek Wetland Detail	
List of Tables	
Number / Title	<u>Page</u>
Table 1. Waters of the U.S. Summary	15
Table 2. Vascular Plant Species List	16
List of Photos	
Number / Title	<u>Page</u>
Photo 1. Overview of the trail project area, view to the north. (10/26/15)	9
Photo 2. Overview of the trail project area, view to the south. (10/26/15)	9
Photo 3. The Minturn trail segment will begin in a disturbed area east of the CR14 Bridge.	10
Photo 4. Proposed trail corridor adjacent to Pit 2. (10/26/15)	10
Photo 5. The orange stake marks the proposed trail centerline. (10/26/15)	11
Photo 6. Proposed trail alignment through the upland mountain shrub community. (10/26)	6/15)11
Photo 7. Section of the proposed trail in an area with the noxious weed toadflax. (10/26/	15)12
Photo 8. Game Creek is a perennial tributary of the Eagle River. (10/26/15)	12
Photo 9. Paired soil pits 3 and 4 at the margin of the Game Creek Wetland. (10/26/15)	13
Photo 10. Reed canarygrass is abundant in the herbaceous wetland understory. (10/26/15)	)13

#### 1.0 Introduction

ECO Trails program, in partnership with the Town of Minturn, is planning construction of the Minturn Segment of the regional trail system in Eagle County. The Minturn Segment encompasses approximately 5,247 linear feet of proposed trail to be constructed adjacent to the County Road 14 right-of-way (ROW), and it will cross lands owned by the U.S. Forest Service, the Colorado State Land Board, and the Union Pacific Railroad. Specifically, the northern end of the proposed trail would begin just east of the County Road 14 Bridge over the Eagle River, approximately 1,300 feet southeast of Dowds Junction. The trail would extend to the southeast toward the junction of  $6^{th}$  Avenue and County Road 14. Specifically, the Minturn Trail segment is located in Sections 22, 23 and 26 of Township 5 South and Range 81 West in Eagle County, Colorado (Figure 1). To aid in project planning, wetlands were delineated on along a  $\pm$ 100-foot-wide corridor centered on the proposed trail alignment, which was staked in the field to facilitate the delineation. Where necessary, the corridor width varied to encompass the proposed trail work area. The boundary of the delineation measures approximately 12.75 acres.

This report describes the vegetation, soils, and hydrology of the Game Creek Wetland, located along a perennial tributary of the Eagle River that crosses the proposed trail. Please note, all Figures are located with the text; Photos are in Section 6.0 and Tables are in Section 7.0.

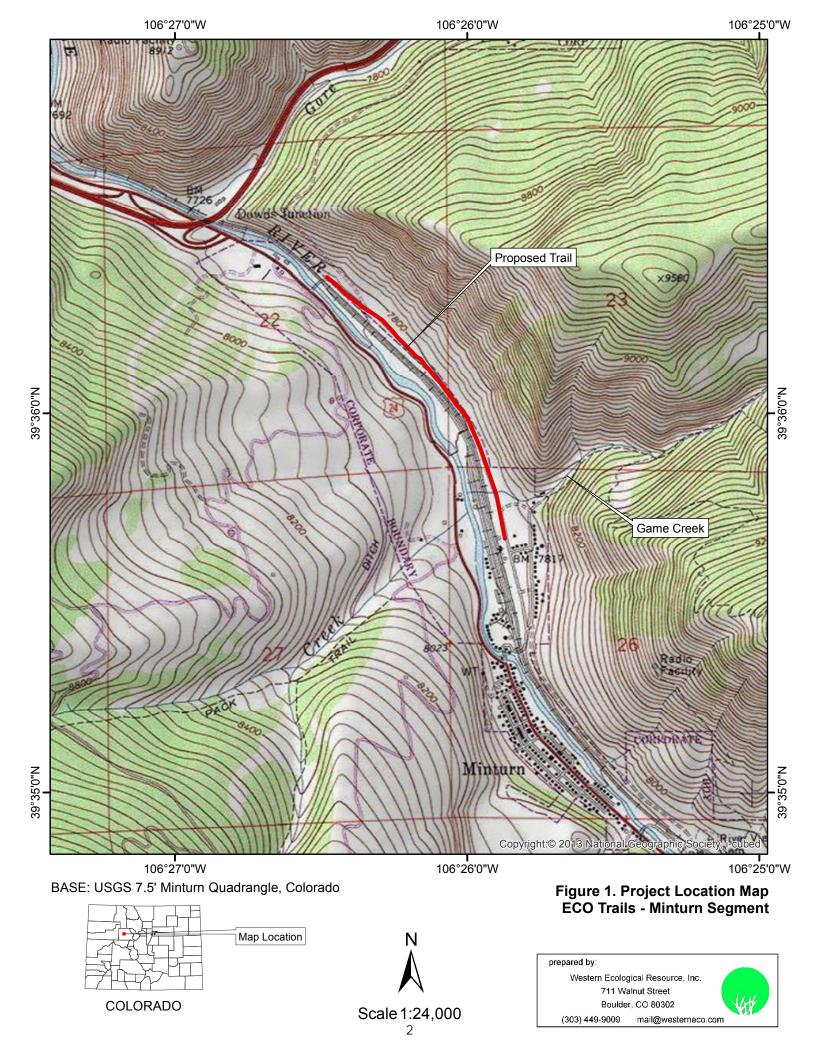
### 2.0 Environmental Setting

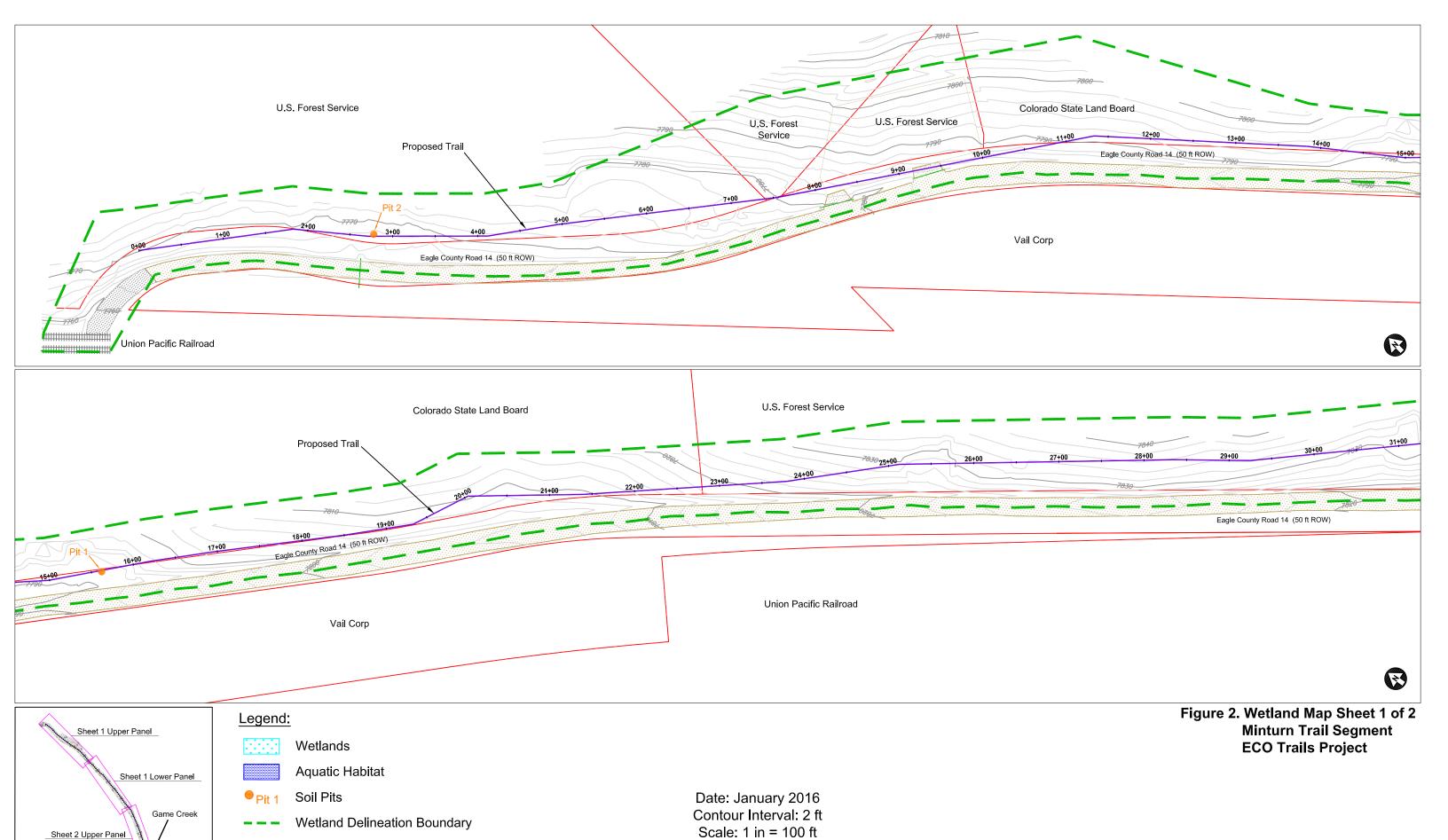
The proposed Minturn Segment of the ECO Trail system would be located east of County Road 14, and would approximately parallel the road (Photos 1 & 2). Portions of the trail would be located within the County Road 14 ROW, however as illustrated by Figure 2, it would also cross onto properties owned by the U.S. Forest Service, the Colorado State Land Board, and the Union Pacific Railroad. As described above, the northern end of the trail would begin in a disturbed area just east of the Union Pacific Railroad and the County Road 14 Bridge over the Eagle River (Photo 3). The majority of the proposed trail would be constructed through mountain shrublands and small stands of aspen in a lightly disturbed area just east of the unpaved County Road (Photos 4-6). However, in some areas the plant community has been degraded by invasive noxious weeds such as toadflax (*Linaria vulgaris*) (Photo 7).

Game Creek, a perennial tributary of the Eagle River, crosses the proposed trail corridor approximately 850 feet north of the junction of 6th Avenue and Minturn Road (Photo 8). The creek flows into a culvert below County Road 14, continues west below the railroad, and joins the Eagle River approximately 430 feet to the west of County Road 14. Elevations of the wetland delineation area range from a high of approximately 7,848 feet at the upstream end of Game Creek to a low of 7,770 feet in the north.

#### 3.0 Delineation Methods

Wetlands were delineated by Heather Houston of Western Ecological Resource, Inc. and David Buscher of Buscher Soil & Environmental Consulting, Inc. in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (1987) and the Regional Supplement for Western Mountains, Valleys and Coastal Region (May 2010) on October 26, 2015. In general, wetland boundaries were delineated and flagged based upon the prevalence of hydrophytic vegetation, hydric soils and indicators of a wetland hydrology. Field forms for the four test pits with vegetation, soil and hydrology data are included in Appendix A. These test pits are located in both wetland and upland habitats along the proposed trail alignment. In general, plant species names follow Weber and Whitmann (1992). The wetland status of plants follows the 2014 National List for the Western Mountains, Valleys and Coastal Region. Classification of wetlands follows Cowardin et al. (1979). Wetland flagging was surveyed by Inter-Mountain Engineering of Avon, Colorado.





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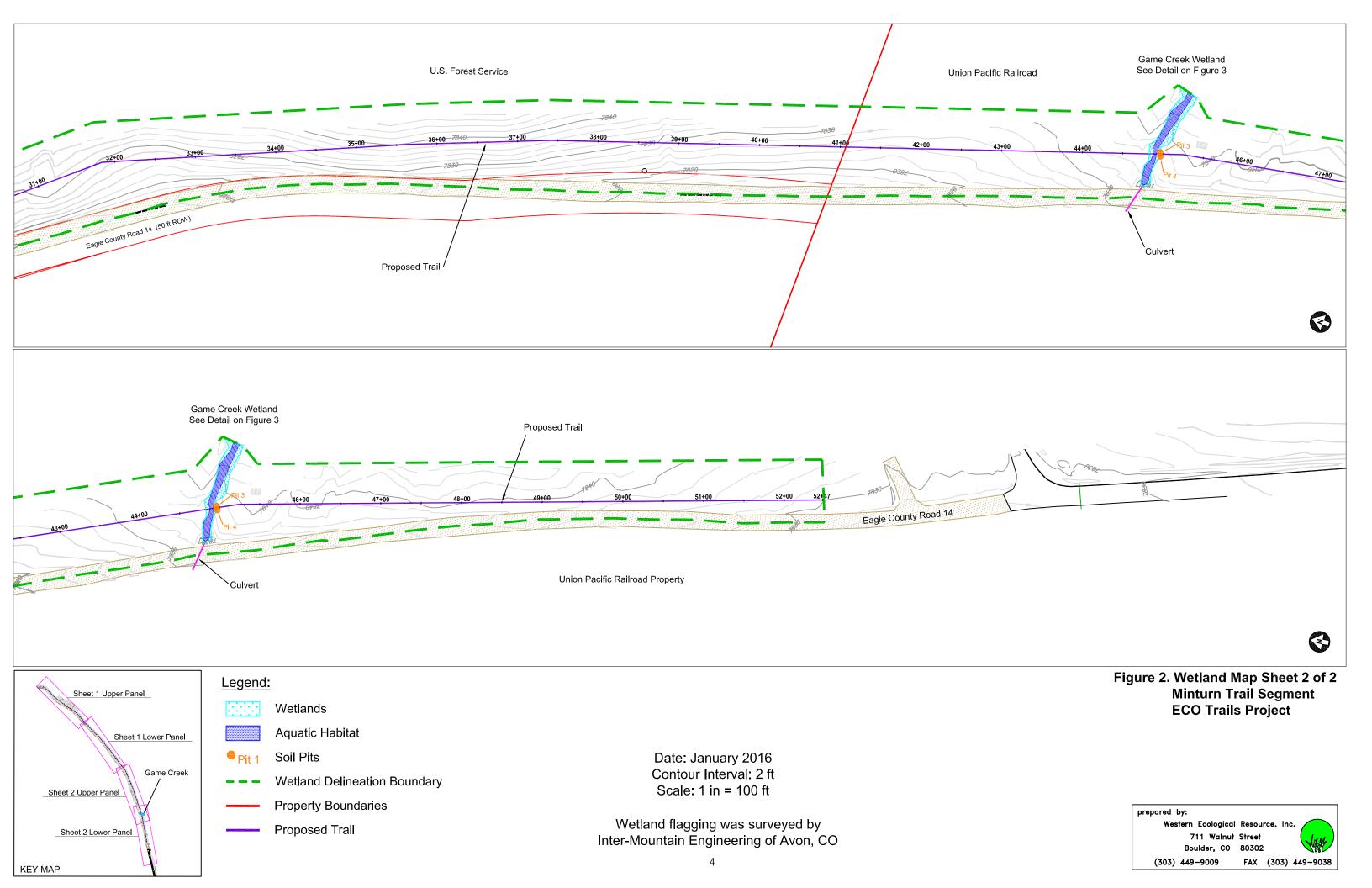
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**Property Boundaries** 

**Proposed Trail** 

Sheet 2 Lower Panel

**KEY MAP** 



#### 3.1 Agency Coordination

The U.S. Army Corps of Engineers has not yet visited the project site to review the flagged wetland boundary.

#### 4.0 Wetlands Present

#### 4.1 Game Creek Wetland

The Wetland Map (Figure 2, Sheets 1 and 2) illustrates the boundary of the wetland delineation and the four soil pits evaluated along the proposed trail alignment. Wetlands were identified along Game Creek, a perennial stream that crosses the proposed trail near station 45+00. Approximately 908 square feet of riparian forested wetlands and 1,002 square feet of aquatic habitat were delineated along Game Creek within the trail project area, as illustrated by Figure 3.

#### 4.1.1 Location

Riparian wetlands were delineated along the banks of Game Creek and on a small floodplain within the Minturn Trail project area.

#### 4.1.2 Classification

The Game Creek Wetland is in the Palustrine System, Forested Wetland Class, with a Broad-Leaved Deciduous dominance type, according to Cowardin et al. (1979).

#### 4.1.3 Vegetation

Within the Minturn Trail project area, the Game Creek Wetland has a riparian overstory that is dominated by narrowleaf cottonwood (*Populus angustifolia*) and balsam poplar (*Populus balsamifera*) trees, with a few aspen (*Populus tremuloides*) (Photos 8 & 9). The diverse shrub layer includes mountain and Drummond willows (*Salix monticola; S. drummondiana*), redosier dogwood (*Cornus serecia*), thinleaf alder (*Alnus incana ssp. tenuifolia*), snowberry (*Symphoricarpos rodundifolius*), and serviceberry (*Amelanchier alnifolia*). The herbaceous wetland understory is dominated by reed canarygrass (*Phalaris arundinacea*), an aggressive introduced species (Photo 10). Orchard grass (*Dactylis glomerata*), a facultative upland grass, is common in the shady areas of the understory. Table 2 lists the vascular plant species observed in the Minturn Trail project area during the wetland delineation.

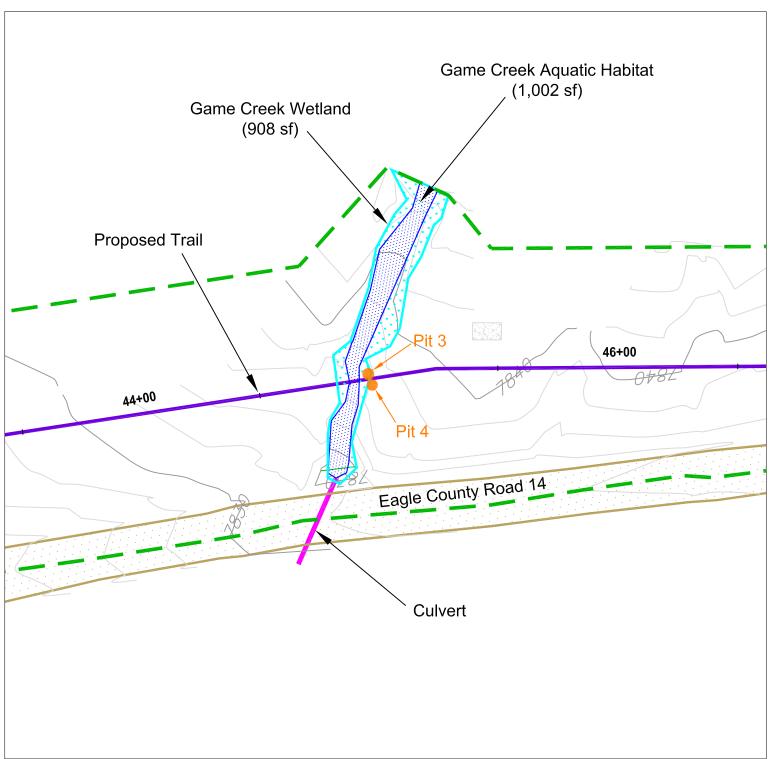
#### 4.1.4 Hydrology

Perennial stream flows in Game Creek create saturated soil conditions that facilitate wetland development on the banks and floodplain. In addition, seasonally high groundwater associated with the alluvial aquifer likely contributes to the wetland hydrology.

#### 4.1.5 Soils

Four soil pits were evaluated during the wetland delineation. Pits 1 and 2 are located in upland areas within the northern portion of the Minturn Trail project site. Pit 1 is in a poorly developed drainage swale that has hydrophytic vegetation, but lacks hydric soil and indicators of a wetland hydrology. Pit 2 is in another poorly developed swale through a stand of aspen (Photo 4). Pit 2 also lacked hydric soil and indicators of a wetland hydrology.

Pits 3 and 4 are paired pits located along Game Creek (Photo 9). Pit 3 is located on a small floodplain area on the south side of the channel. The hydric soil in Pit 3 had a redox dark surface, and was saturated below a depth of 11 inches on the date of the delineation. Pit 4 is located in the upland position adjacent to Game Creek. Pit 4 is approximately six inches higher in elevation than Pit 3. Pit 4 lacked hydric soil and indicators of a wetland hydrology.



#### Legend:

Wetlands

Aquatic Habitat

Pit 1 Soil Pits

– – Wetland Delineation Boundary

Proposed Trail



Date: January 2016 Contour Interval: 2 ft Scale: 1 in = 40 ft Figure 3. Game Creek Wetland Detail Minturn Trail Segment ECO Trails Project

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## 5.0 Analysis of Jurisdictional Status

Game Creek is a perennial tributary of the Eagle River, which flows into the Colorado River, an interstate water. Therefore, the Game Creek Wetland is jurisdictional.

6.0 Photos



**Photo 1.** Overview of the trail project area, view to the north along the east side of County Road 14. (10/26/15).



**Photo 2.** Overview of the trail project area, view to the south along the east side of County Road 14. (10/26/15).



**Photo 3.** The northern end of the Minturn trail segment will begin in a disturbed area just east of the railroad and the County Road 14 Bridge over the Eagle River. (10/26/15).



**Photo 4.** Proposed trail corridor adjacent to Pit 2, which did not meet the vegetation, soil, or hydrology criteria of the Corps manual. (10/26/15).



**Photo 5.** The orange stake marks the proposed trail centerline through the mountain shrub community east of County Road 14. (10/26/15).



**Photo 6.** Proposed trail alignment through the upland mountain shrub community. (10/26/15).



**Photo 7.** This section of the proposed trail would cross an area with a high cover of the noxious weed toadflax. (10/26/15).



**Photo 8.** Game Creek is a perennial tributary of the Eagle River. (10/26/15).



Photo 9. Paired soil pits 3 and 4 at the margin of the Game Creek Wetland. (10/26/15).



**Photo 10.** Reed canarygrass is the most abundant herbaceous species in the wetland understory. This is an aggressive, introduced grass. (10/26/15).

7.0 Tables

## TABLE 1 Waters of the U.S. Summary ECO Trails Project Minturn Segment

Water of the U.S. (WUS)	Surveyed Area	<u>Classification</u>
Game Creek Wetland	908 ft <sup>2</sup> (0.02 ac)	Perennial Stream
Game Creek Aquatic Habitat	1,002 ft <sup>2</sup> (0.02 ac)	Palustrine Forested
GRAND TOTAL WUS	1,910 ft <sup>2</sup> (0.04 ac)	

## TABLE 2 Vascular Plant Species List ECO Trails Project Minturn Segment

Scientific Name	Common Name	<u>Family</u>	Origin*	Wetland Status**
Trees				
Populus angustifolia	Narrowleaf cottonwood	Salicaceae	Ν	FACW
Populus balsamifera	Balsam poplar	Salicaceae	Ν	FAC
Populus tremuloides	Aspen	Salicaceae	Ν	FACU
Shrubs				
Alnus incana ssp. tenuifolia	Thinleaf alder	Betulaceae	Ν	FACW
Amelanchier alnifolia	Serviceberry	Rosaceae	Ν	FACU
Artemisia tridentata var. vaseyana	Mountain big sagebrush	Asteraceae	Ν	NL
Chrysothamnus parryi	Parry's rabbitbrush	Asteraceae	Ν	NL
Cornus sericea (C. stolonifera)	Redosier dogwood	Cornaceae	Ν	FACW
Crataegus rivularis	Hawthorn	Rosaceae	Ν	FACW
Distegia involucrata	Bush honeysuckle	Caprifoliaceae	Ν	FAC
Juniperus communis ssp. alpina	Common juniper	Cupressaceae	Ν	UPL
Prunus virginiana var. melanocarpa	Choke cherry	Rosaceae	Ν	FACU
Purshia tridentata	Bitterbrush	Rosaceae	Ν	NL
Ribes inerme	Whitestem gooseberry	Grossulariaceae	Ν	FAC
Rosa woodsii	Woods' rose	Rosaceae	Ν	FACU
Salix drummondiana	Drummond willow	Salicaceae	Ν	FACW
Salix monticola	Mountain willow	Salicaceae	Ν	OBL
Symphoricarpos rotundifolius	Snowberry	Caprifoliaceae	Ν	NL
Perennial Graminoids				
Agrostis gigantea (A. alba)	Redtop	Poaceae	I	FAC
Bromus inermis	Smooth brome	Poaceae	I	FAC
Dactylis glomerata	Orchard grass	Poaceae	I	FACU
Distichlis spicata	Saltgrass	Poaceae	Ν	FACW
Elymus cinereus	Basin wild rye	Poaceae	I	FAC
Elymus trachycaulus	Slender wheatgrass	Poaceae	Ν	FAC
Festuca ovina	Sheep fescue	Poaceae	1	UPL
Festuca rubra	Red fescue	Poaceae	Ν	FAC
Oryzopsis hymenoides	Indian ricegrass	Poaceae	Ν	UPL
Phalaris arundinacea	Reed Canarygrass	Poaceae	I	FACW
Phleum pratense	Timothy	Poaceae	I	FAC
Poa compressa	Canada bluegrass	Poaceae	I	FACU

### TABLE 2 Vascular Plant Species List ECO Trails Project Minturn Segment

Scientific Name	Common Name	<u>Family</u>	Origin*	Wetland Status**
Perennial Forbs				
Achillea millefolium	Yarrow	Asteraceae	Ν	FACU
Aster foliaceus	Leafy bracted aster	Asteraceae	Ν	FACU
Cirsium arvense	Canada thistle	Asteraceae	I +	FAC
Fragaria virginiana	Mountain strawberry	Rosaceae	Ν	FACU
Geranium richardsonii	Richardson's Geranium	Geraniaceae	Ν	FAC
Linaria vulgaris	Toadflax	Scrophulariaceae	l +	NL
Medicago lupulina	Black medic	Fabaceae	1	FACU
Oligosporus dracunculus	Tarragon	Asteraceae	Ν	NL
Penstemon strictus	Rocky Mountain	Scrophulariaceae	Ν	NL
	penstemon			
Potentilla hippiana	Woolly cinquefoil	Rosaceae	Ν	NL
Potentilla pulcherrima	Beautiful cinquefoil	Rosaceae	Ν	FAC
Taraxacum officinale	Dandelion	Asteraceae	1	FACU
Vicia americana	American vetch	Fabaceae	Ν	FAC
Annual/Biennial Forbs				
Carduus acanthoides	Plumeless thistle	Asteraceae	1+	NL
Carduus nutans ssp.	Musk thistle	Asteraceae	1+	UPL
macrolepis				
Cynoglossum officinale	Houndstongue	Boraginaceae	l +	FACU
Lactuca serriola	Prickly lettuce	Asteraceae	l	FACU
Melilotus officinalis	Yellow sweet clover	Fabaceae	1	FACU
Tragopogon dubius	Salsify	Asteraceae	1	NL
Verbascum thapsus	Great mullein	Scrophulariaceae	l +	FACU

N = Native

I = Introduced

I+ = Colorado State Noxious Weed

#### \*\* Wetland Status

OBL = Obligate Wetland FACW = Facultative Wetland

FAC = Facultative

FACU = Facultative Upland UPL = Obligate Upland

NO/NL = No Status in this Region

<sup>\*</sup> Origin

#### 8.0 References

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- Colorado Natural Heritage Program (CNHP). 2003. Field Guide to the Wetland and Riparian Plant Associations of Colorado. Colorado Natural Heritage Program, Fort Collins, Colorado.
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- University of Colorado Herbarium (COLO). Specimen Database of Colorado Vascular Plants. http://cumuseum.colorado.edu/Research/Botany/Databases/search.php
- Weber, W. A. and R. C. Whitmann. 2012. Colorado Flora: Western Slope, Fourth edition. University Press of Colorado. Boulder, Colorado.
- Weber, W.A. & R.C. Wittmann, 1992. Catalog of the Colorado Flora: a Biodiversity Baseline. University Press of Colorado. Niwot, Colorado. Including most recent addenda available from CU Herbarium (COLO), Boulder, Colorado.

Appendix A. Field Data Forms

	wountains, valleys, and Coast Region
Project/Site: MINTUN Trail City/County: El	State CO Sampling Date: 10/26/15
Applicant/Owner: Em Trails/Town of Minturn	State: CO Sampling Point: Pt 1
Investigator(s): Houston & Buscher Section, Township	p, Range: <u>SeC &amp; ZZ T5S R8 IW</u>
Landform (hillslope, terrace, etc.): Swale Local relief (conc	ave, convex, none): Slope (%):
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)
	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 po	int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Tryund don't resent:	npled Area Vetland? Yes No
vvetiand Hydrology Present? Yes No	retaild? TesNo
bottom of faint drainage suggestions	below stoep slope - Ftrail alignment
VEGETATION – Use scientific names of plants.	J
Absolute Dominant Indic	
Tree Stratum (Plot size:)	Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
2.	3
3	Total Number of Dominant Species Across All Strata: (B)
4	Percent of Dominant Species 67%
= Total Cover	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: $0 \times 10$ )  1. (NVVSO NUM N(/S DOV/V) 5 Y N	Prevalence Index worksheet:
1. UNIV. DUTTION DUTTION DE LA TOUR	Total % Cover of: Multiply by:
3	OBL species x 1 =
4.	FACW species x 2 =
5.	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 10 X 10)	UPL species x 5 =
1. testuca rubra coll. 75 y FA	Column Totals: (A) (B)
2 Cirsium avvense 2 1/ FA	rievalence index = b/A =
3.740	Hydrophytic Vegetation Indicators:
5. Ricomus inermis 30 y FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Dactylis alomerator 2 N FAC	2 - Dominance Test is >50%
7	0-1 Tovalidate index is 25.0
8	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
9	5 - Wetland Non-Vascular Plants <sup>1</sup>
10	Problematic Hydrophytic Vegetation¹ (Explain)
11	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	be present, unless distances of problematic.
1	Hydrophytic
2.	Vegetation
└	Present? Yes // No
No Bare Greater In Freib Circlett	
Remarks:	

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
0-4 10423 60	704149 4 0 M	- grade Combon
1 10-8/23/2 40		
4-12 1042312 100	THYNON ARMY AND HAVE	gel ch
		/
		· · · · · · · · · · · · · · · · · · ·
T O. O	- Darland Matter 00 Coursed to Control Control	2) another Di-Dave Linian M-Matrix
Hydric Soil Indicators: (Applicable to all	=Reduced Matrix, CS=Covered or Coated Sand Gi	rains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
Thick Dark Surface (A12)	Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):	Redux Depressions (Fo)	unless disturbed of problematic.
Type:		Hydric Soil Present? Yes No demand
Depth (inches):	of faint dearn	Hydric Soil Present? Yes No
Depth (inches):	of faint dearn	
Depth (inches):Remarks: ### 60################################	of faint dearn	
Depth (inches):	of faint dearn	
Depth (inches):Remarks: A+ bottom		
Depth (inches):	d; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2,
Depth (inches):  Remarks:	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Depth (inches):	d; check all that apply)  Water-Stained Leaves (B9) (except  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)
Depth (inches):	d; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2,  4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)	d; check all that apply)  Water-Stained Leaves (B9) (except  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	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)
Depth (inches):	d; check all that apply)  Water-Stained Leaves (B9) (except	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) ots (C3) Geomorphic Position (D2)
Depth (inches):  Remarks:  IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)	d; check all that apply)  — 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 Roce — Presence of Reduced Iron (C4)	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) ots (C3) Geomorphic Position (D2)  Shallow Aquitard (D3)
Depth (inches):  Remarks:  IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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)	d; check all that apply)  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 Roule Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Called Soils	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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)	d; check all that apply)  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 Roundle Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Called Stunted or Stressed Plants (D1) (LRR 4)	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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 (B	d; check all that apply)  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 Roman Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Castron Stunted or Stressed Plants (D1) (LRR 4)  Stunted 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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
Depth (inches):  Remarks:  IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require)  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 (E	d; check all that apply)  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 Roman Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Castron Stunted or Stressed Plants (D1) (LRR 4)  Stunted 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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 (Based of the Sparsely Vegetated Concave Surface of the Sparsely Vegetated Concave Sparsely Vegetated Concave Sparsely Vegetated Concave Sparsely Vegetated	d; check all that apply)  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 Roule Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (C4)  Stunted or Stressed Plants (D1) (LRR 4)  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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 (B4)  Sparsely Vegetated Concave Surface (B4)  Field Observations:  Surface Water Present?	d; check all that apply)  — 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 Roumann Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils (Canada Stanta Stant	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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 (Based of the control of the cont	d; check all that apply)  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 Roundle Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Company Stanted or Stressed Plants (D1) (LRR 4)  Styles (B8)  No Depth (inches):  Depth (inches):	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) ots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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 (E  Sparsely Vegetated Concave Surface of Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)	d; check all that apply)  — 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 Roman Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils (Compared on Stressed Plants (D1) (LRR 4)  Stunted or Stressed Plants (D1) (LRR 4)  Other (Explain in Remarks)  No Depth (inches):  No Depth (inches):  No Depth (inches):  Wet	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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 (E  Sparsely Vegetated Concave Surface of Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)	d; check all that apply)  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 Roundle Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Company Stanted or Stressed Plants (D1) (LRR 4)  Styles (B8)  No Depth (inches):  Depth (inches):	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Depth (inches):  Remarks:  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  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 (E  Sparsely Vegetated Concave Surface of Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)	d; check all that apply)  — 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 Roman Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils (Compared on Stressed Plants (D1) (LRR 4)  Stunted or Stressed Plants (D1) (LRR 4)  Other (Explain in Remarks)  No Depth (inches):  No Depth (inches):  No Depth (inches):  Wet	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) ots (C3)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA F	FORM - We	estern Mount	tains, Valleys, and Coast Region		
Project/Site: Minturn Trail	City/Cou	unty: <u>Mint</u>	UNN/Eggle Sampling Date: 10	1/26/13	
Applicant/Owner: ECO Trails / Town of Min					
Investigator(s): HOUSTON of BUSCHEN					
Landform (hillslope, terrace, etc.): 5 Wale					
Subregion (LRR): Lat	t	Co. man	Long: Datum: _		
Soil Map Unit Name:		. /	NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes			-	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology natural			ded, explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map show	_	ling point lo	cations, transects, important featu	ıres, etc.	
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: 1 5 WOLL TWV OS POW W	X Is		Area 17 Yes No VQi   Qliqument		
			J		
VEGETATION – Use scientific names of plants.					
1/1/1/1/	solute Domin Cover Specie	nant Indicator	Dominance Test worksheet:		
1. MODULUS TREMUJOIDES C			Number of Dominant Species That Are OBL, FACW, or FAC:	(A)	
2	(3		Total Number of Dominant	(D)	
3			Species Across All Strata:	(B)	
Sapling/Shrub Stratum (Plot size: 10x10')	20 = Total	l Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 25/	<u>O</u> (A/B)	
1/melanchier alnifolia 3	<u>0 X</u>	FACU	Prevalence Index worksheet:		
2. Chrysothamnus parryi 5		1/1			
3. Symphoxicarpos votunditolius 5	<u> </u>	- N L	FACW species x 2 =		
4. Kiloes idente	<u> </u>	FACCI	FAC species x 3 =		
5. Primis virginiana	55 Total	TAILU	FACU species x 4 =		
POSIWOODS IN DXIO STREET	Total	l Cover	UPL species x 5 =		
1. Bromus inevimis 31	<u>0 Y</u>		Column Totals: (A)	(B)	
2. Dotemilla ancherrima 11	0 1	FAC	Prevalence Index = B/A =		
3. Potatilla x hippionia	<u>N</u>	_ NL	Hydrophytic Vegetation Indicators:		
	5 N	FACU	1 - Rapid Test for Hydrophytic Vegetation	n	
5. Pag Campressa 2		_ FACU	2 - Dominance Test is >50%		
6. Gevanium victorol sonic 1	0 1	_ FAC	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide	supporting	
8			data in Remarks or on a separate sh	eet)	
9			5 - Wetland Non-Vascular Plants <sup>1</sup>		
10			Problematic Hydrophytic Vegetation¹ (E.		
11	5 = Total	Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrolc be present, unless disturbed or problematic.	gy must	
Woody Vine Stratum (Plot size:)		Cover			
1			Hydrophytic	/	
2			Vegetation Present? Yes No		
% Bare Ground in Herb Stratum	= Total	Cover		_	
Remarks:					

SOIL	Minter	n tro	inl	10/26	110			Sampling Point:
Profile Des	cription: (Describe	to the dept			dicator	or confirm t	he absence	of indicators.)
Depth	Matrix			x Features	Tuno	_Loc²_	Toyturo	Domarka
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type'	LOC	Texture #	Remarks
0-10	Intellection in	- 237.3					B	
13-16	10 Million	- The same	effective days.	· LICEN	Applica	1254511	_	
			116					***
								<del></del>
1							2,	
	Indicators: (Applic					ed Sand Grai		ration: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils <sup>3</sup> :
Histoso		able to all t	Sandy Redox (		u.,			n Muck (A10)
	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
	listic (A3)		Loamy Mucky	. 151	(except	t MLRA 1)	-	Shallow Dark Surface (TF12)
Hydrog	en Sulfide (A4)		Loamy Gleyed	Matrix (F2)		378		er (Explain in Remarks)
	ed Below Dark Surface	ce (A11)	Depleted Matri	The second second			•	
_	ark Surface (A12)		Redox Dark Su					rs of hydrophytic vegetation and
	Mucky Mineral (S1) Gleyed Matrix (S4)		Depleted Dark Redox Depress		()			nd hydrology must be present, s disturbed or problematic.
	Layer (if present):		Nedox Depress	510115 (1 0)		Т	unics	s disturbed of problematic.
Type:								
Depth (ir	nches):						Hydric Soil	Present? Yes No 4
Remarks:	March 1981 Brown Brown		aluvial	17	-	Fa		, a
		,			- 20			
IYDROLO	2.0000000000000000000000000000000000000							
	drology Indicators		11 <b>4</b> 1 <b>4</b>	L. A			0	-dl-did (0 i d)
102	icators (minimum of	one required			- (DO) (-			ndary Indicators (2 or more required)
Name of the latest of the late	e Water (A1)		The second secon	ained Leave	The second second	except	— v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
	ater Table (A2) ion (A3)		Salt Crust		iiu 46)		D	rainage Patterns (B10)
	Marks (B1)			vertebrates	(B13)			ry-Season Water Table (C2)
Carried Contraction of	ent Deposits (B2)			Sulfide Od				aturation Visible on Aerial Imagery (C9
The second secon	eposits (B3)					Living Roots		Geomorphic Position (D2)
	lat or Crust (B4)			of Reduced		The second secon		hallow Aquitard (D3)
	eposits (B5)		Recent In	on Reductio	n in Tille	d Soils (C6)	F	AC-Neutral Test (D5)
Surface	e Soil Cracks (B6)		Stunted o	r Stressed I	Plants (D	)1) (LRR A)	R	taised Ant Mounds (D6) (LRR A)
Inundat	tion Visible on Aerial	Imagery (B7	Other (Ex	plain in Rer	marks)		F	rost-Heave Hummocks (D7)
Sparse	ly Vegetated Concav	e Surface (E	38)				and the same of	
Field Obse			100					
Surface Wa	iter Present?	Yes 1	No Depth (ir	nches):		-1		
Water Table			No Depth (ir	nches):		_		
Saturation F	Present?	Yes 1		nches):		Wetlan	nd Hydrolog	y Present? Yes No
	apillary fringe) ecorded Data (strear	n gauge, mo	nitoring well, aerial	photos, pre	evious in:	spections), if	available:	
, =, =, =, 1, =, =, 1, 1		00						
Remarks:								

			ntains, valleys, and Coast Region
Project/Site: Minturn indi	City/Cou	nty: Mint	NN/Eagle Sampling Date: 10/26/15
Applicant/Owner: E(1) Trails I Town of	MINION	•	State: Sampling Point: Pit-3
Investigator(s): Hauston & Busche	Section,	Township, Ran	nge: Sec. 26 TSSR81W
Landform (hillslope, terrace, etc.): Floodplair			
Subregion (LRR):	_ Lat:	- Section 1	Long: Datum:
Soil Map Unit Name:			
Are climatic / hydrologic conditions on the site typical for this			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally problemation		eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing samp	ling point lo	ocations, transects, important features, etc.
			•
		the Sampled within a Wetlan	
Remarks: Game creek - 5m. floo	dolain so	tion	
OUNG CAREN - DAM. 1 00	apar		
VEGETATION – Use scientific names of plant	ts.		
- 10 ×10'		ant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 10 × 10')  1. Provis angustifolia	Cover Specie	es? Status FACW	Number of Dominant Species 5
1. Topolog aved supplied	20 -	_ IACW	That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Species Across All Strata:  (B)
4.			
late d/	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
Sapling/Shrub Stratum (Plot size: 10×10/)	15 Y	FAC	Prevalence Index worksheet:
1. Distegia involveronta	15 4	_ FAC	Total % Cover of: Multiply by:
2			OBL species x 1 =
3			FACW species x 2 =
5.			FAC species x 3 =
10.27	5 = Total	Cover	FACU species x 4 =
Herb Stratum (Plot size: 10x 2')	V ası	TACIAL	UPL species x 5 =
1. Phalaris armainacea	70 7	_ <del>121CU</del>	Column Totals: (A) (B)
3. Decty 1/5 glower on to	A W	FACU	Prevalence Index = B/A =
4. If, OSYEN FOLITICEOUS	- W AI	FACU	Hydrophytic Vegetation Indicators:
5. TOU COMPYESSON	6 1	FACIL	1 - Rapid Test for Hydrophytic Vegetation
6. BrCMUS INCOMIS	10 1/	TAC	2 - Dominance Test is >50%
7	W	_ 1710	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
9.	1 At-		5 - Wetland Non-Vascular Plants <sup>1</sup>
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total	Cover	be present, unless disturbed of problematic.
1			Liveranhydia
2.			Hydrophytic Vegetation
72	= Total	Cover	Present? Yes No
% Bare Ground in Herb Stratum 27  Remarks:			
Pit is right on WL	eolge - a	narroi	N Strip next to Chamne

1000 - a 1 tols - 1860 -

Marie La 48000

rofile Description: (Describe to the de		****
Depth Matrix inches) Color (moist) %	Redox Features Color (moist) % Type¹ Loc	Texture Remarks
0-6 104/13/1 /m	Color (moist) % Type Loc	Texture Remarks
The same of the sa		
0 -10 W4K41 (An)		
0-13 10-1211 180	12714 2 C 141	- X 16/50/
1) lance place		
· ·		
Funo: C=Concentration D=Depletion B	M=Reduced Matrix, CS=Covered or Coated Sand	d Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR/	A 1) Very Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3hodicators of hudran hotic constation and
_ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)  Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if present):		
Туре:		
Depth (inches):	flookplain of e	Hydric Soil Present? Yes No
CARPACITY NO.	Aborplain of C	
emarks: ON Narveru	floolplain of e	
remarks: ON Narveru	ê.	
YDROLOGY Wetland Hydrology Indicators:	ê.	Secondary Indicators (2 or more required)
POROLOGY Vetland Hydrology Indicators:  rimary Indicators (minimum of one requi	red; check all that apply)	Secondary Indicators (2 or more required)
VDROLOGY Vetland Hydrology Indicators:  rimary Indicators (minimum of one requi  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	red; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)
POROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one requirement)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	red; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)
VETAL PROLOGY Vetland Hydrology Indicators:  Inimary Indicators (minimum of one requirement)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)	red; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	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)
Vetland Hydrology Indicators:  Irimary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	red; check all that apply)  — 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	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)  Roots (C3) Geomorphic Position (D2)
VOROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	red; check all that apply)  — 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 — Presence of Reduced Iron (C4)	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)
VDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one requi 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)	red; check all that apply)  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  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)
VDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one requi 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)	red; check all that apply)  — 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 — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils — Stunted or Stressed Plants (D1) (LR	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)
Verland Hydrology Indicators:  Imary Indicators (minimum of one requi  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	red; check all that apply)  — 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 — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils — Stunted or Stressed Plants (D1) (LR	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)
VDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one requi 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)	red; check all that apply)  — 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 — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils — Stunted or Stressed Plants (D1) (LR	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)
Verland Hydrology Indicators:  Immary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface	red; check all that apply)  — 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  — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils  — Stunted or Stressed Plants (D1) (LR (B7))  — Other (Explain in Remarks)  e (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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)
Verland Hydrology Indicators:  Imary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface (B1) Indicated Concave Surface (B1) Surface Water Present? Yes	red; check all that apply)  — 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  — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils  — Stunted or Stressed Plants (D1) (LR (B7))  (B7)  — Other (Explain in Remarks)  e (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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)
Verland Hydrology Indicators:  Imary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface (Bid Observations: Surface Water Present?	red; check all that apply)  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  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils  Stunted or Stressed Plants (D1) (LR (B7)  Other (Explain in Remarks)  (B8)  No  Depth (inches):	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators:  Immary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface (Sield Observations: Surface Water Present? Ves Saturation Present? Ves Includes capillary fringe)	red; check all that apply)  — 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  — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils  — Stunted or Stressed Plants (D1) (LR (B7))  — Other (Explain in Remarks)  — (B8)  — No — Depth (inches):  — No — Depth (inches):  — No — Depth (inches):	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators:  Immary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface (Sield Observations: Surface Water Present? Ves Saturation Present? Ves Includes capillary fringe)	red; check all that apply)  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  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils  Stunted or Stressed Plants (D1) (LR (B7)  Other (Explain in Remarks)  (B8)  No  Depth (inches):	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators:  Immary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface (Sield Observations: Surface Water Present? Ves Saturation Present? Ves Includes capillary fringe)	red; check all that apply)  — 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  — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soils  — Stunted or Stressed Plants (D1) (LR (B7))  — Other (Explain in Remarks)  — (B8)  — No — Depth (inches):  — No — Depth (inches):  — No — Depth (inches):	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)  Roots (C3) — Geomorphic Position (D2)  Shallow Aquitard (D3)  (C6) — FAC-Neutral Test (D5)  R A) — Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)

			ntains, valleys, and Coast Region
Project/Site: MINTUIN Trail	City/C	ounty: Mintu	VN / Gagle Sampling Date: 10/26/15
Applicant/Owner: ECO Trails /Town o	F Mintury	1	State: CO Sampling Point: P++
Investigator(s): Houston + Busche	Section Section	n, Township, Ran	ge: Sec. 26 T5 S 281W
Landform (hillslope, terrace, etc.):	Local	relief (concave, c	onvex, none): Slope (%):
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for the	this time of year? Y		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly distur	oed? Are "I	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	_ naturally problema	itic? (If ne	eded, explain any answers in Remarks.)
		pling point lo	ocations, transects, important features, etc.
Brown and the control of the control	No X	Is the Sampled within a Wetlan	Y
Remarks: Game Creek-Paire	of pit v	W/#3	
VEGETATION – Use scientific names of pla	ants.		
10×10		ninant Indicator	Dominance Test worksheet:
1. Tree Stratum (Plot size: 10×10) 1. TO DUIUS CAMO UST TO 1 0	Sover Spe	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
3.			Total Number of Dominant Species Across All Strata:  (B)
4	<u>ZO</u> = To	tal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 10076 (A/B)
Sapling/Shrub Stratum (Plot size: 10×10′)	6	/ FAC	Prevalence Index worksheet:
1. Diskertor Introduction		1710	Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5			FAC species x 3 =
10/10	5 = To	tal Cover	FACU species x 4 =
Herb Stratum (Plot size: 10×10)	110	1 TAC	UPL species x 5 =
1. Bromus inermis	$-\frac{40}{2}$	171C	Column Totals: (A) (B)
2. Cirsium arrense	- 18 A	Y FAC	Prevalence Index = B/A =
3. Pa compressa. 4. Phalaris arundinacea	$-\frac{10}{20}$	FACU	Hydrophytic Vegetation Indicators:
		171000	1 - Rapid Test for Hydrophytic Vegetation
5 6			2 - Dominance Test is >50%
7			3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants <sup>1</sup>
10.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	_ <u>80</u> = Tot	al Cover	be present, unless disturbed of problematic.
1			I hadron badio
2			Hydrophytic Vegetation
% Bare Ground in Herb Stratum	= Tot	al Cover	Present? Yes No
% Bare Ground in Herb Stratum			
Remarks:			

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M User Sulfide (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrogen Sundy Mucky Mineral (S1) Redox Dark Surface (F6) Indicators of hydrogen Sundy Mucky Mineral (S1) Depleted Dark Surface (F7) Wetland hydrolen Sandy Gleyed Matrix (S4) Redox Depressions (F8) Unless disturbed Restrictive Layer (if present):  Type: Depth (inches): Hydric Soil Present?  Remarks: Applicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of one required; check all that apply)	Remarks  =Pore Lining, M=Matrix. blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12)
Color (moist)  % Color (moist)  % Type' Loc' Texture    Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	=Pore Lining, M=Matrix. blematic Hydric Soils <sup>3</sup> : 10) aterial (TF2) Dark Surface (TF12) in Remarks)  ophytic vegetation and agy must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Atrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depl	=Pore Lining, M=Matrix. blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12) in Remarks)  ophytic vegetation and agy must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  2 Location: PL lydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A Red Parent M LRA 1)  Histosol (A2) Stripped Matrix (S6) Red Parent M LRA 1)  Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11) Depleted Matrix (F3)  Thick Dark Surface (A12) Redox Dark Surface (F6)  Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole sainty Gleyed Matrix (S4)  Redox Depressions (F8) unless disturbed the surface (F7)  Type: Depth (inches): Hydric Soil Present?  Type: Depth (inches): Hydrology Indicators:  Tymary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.    Coation: Plandicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Property of the property	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  2 Location: PL ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Black Histic (Dipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Very Shallow  Hydrogen Sulfide (A4)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F3)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Redox Depressions (F8)  Wetland Hydrology Indicators:  Type:  Depth (inches):  Hydric Soil Present:  Type:  Depth (inches):  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  2 Location: PL ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Black Histic (Dipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Very Shallow  Hydrogen Sulfide (A4)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F3)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Redox Depressions (F8)  Wetland Hydrology Indicators:  Type:  Depth (inches):  Hydric Soil Present:  Type:  Depth (inches):  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Advantage of the content of the cont	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Advantage of the content of the cont	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Algoric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A2) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) 3 Indicators of hydrogen Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole Startictive Layer (if present):  Type: Remarks: Hydric Soil Present?  Very Shallow Very Shallow Very Shallow Unless disturbed to the startictive Layer (if present):  Type: Hydric Soil Present?  Very Shallow Very Shallow Very Shallow Unless disturbed to the startictive Layer (if present):  Type: Hydric Soil Present?  Very Shallow Very Shallow Very Shallow Unless disturbed to the startictive Layer (if present):  Type: Hydric Soil Present?  Very Shallow Very Shallow Very Shallow Unless disturbed to the startic Very Shallow Unless disturbed to the starting Very Shallow Very Shallow Unless disturbed to the starting Very Shallow Unless disturbed to the	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Algoric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A2) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M2 Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole unless disturbed Restrictive Layer (if present): Type: Depth (inches): Depth (inches):  Type: Depth (inches): Semarks:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Indicators for Product (A1)  Red Carmarks:  Indicators (Product (A2) Red Parent M2 Very Shallow Very Shallow Very Shallow Persent Mucky Mineral (F1) (except MLRA 1) Poly (except MLRA 1	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Algoric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A2) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M2 Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole unless disturbed Restrictive Layer (if present): Type: Depth (inches): Depth (inches):  Remarks:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Indicators for Product (A12) Product (	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Algoric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Sandy Redox (S5) 2 cm Muck (A2) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M2 Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole unless disturbed Restrictive Layer (if present): Type: Depth (inches): Depth (inches):  Type: Depth (inches): Semarks:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Indicators for Product (A1)  Red Carmarks:  Indicators (Product (A2) Red Parent M2 Very Shallow Very Shallow Very Shallow Persent Mucky Mineral (F1) (except MLRA 1) Poly (except MLRA 1	blematic Hydric Soils <sup>3</sup> :  10)  aterial (TF2)  Dark Surface (TF12)  in Remarks)  ophytic vegetation and  gy must be present,
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrology Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed Restrictive Layer (If present): Type: Depth (inches): Depth (inches): Type: Depth (inches): Semarks:  Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)	aterial (TF2) Dark Surface (TF12) In Remarks) Ophytic vegetation and ogy must be present,
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent M Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrole unless disturbed sestrictive Layer (if present): Type: Depth (inches): Depth (inches): Type: Depth (inches): Semarks:  Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators	aterial (TF2) Dark Surface (TF12) in Remarks) ophytic vegetation and gy must be present,
Black Histic (A3)	Dark Surface (TF12) in Remarks) ophytic vegetation and gy must be present,
Depleted Below Dark Surface (A11) Depleted Matrix (F3)  Thick Dark Surface (A12) Redox Dark Surface (F6)  Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology Indicators of hydrocompleted Dark Surface (F7)  Redox Depressions (F8) unless disturbed and surface (F7)  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators  Semarks:  Depleted Matrix (F3)  Redox Dark Surface (F6)  Wetland Surface (F7)  Wetland Surface (F7)  Wetland F7  Wetland Hydrology Indicators:  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (Minimum of one required)  Secondary Indicators (Minimum of one required)  Secondary Indicators (Minimum of one required)	ophytic vegetation and ogy must be present,
Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology Indicators of hydrogen Secondary Indicators (Minimum of one required; check all that apply)  A population of hydrogen strategies and surface (F6)  Sendox Dark Surface (F6) wetland hydrology Indicators of hydrogen wetland hydrology Indicators of hydrogen strategies and surface (F6) wetland surface (F6) wetland surface (F6) wetland surface (F6) wetland surface (F7) wetland	gy must be present,
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology Indicators (Minimum of one required; check all that apply)  Depleted Dark Surface (F7) wetland hydrology Indicators (P7) wetland hydrology Indicators (Minimum of one required; check all that apply)  Secondary Indicators (Minimum of one required; check all that apply)	gy must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed Restrictive Layer (if present):  Type: Depth (inches): Hydric Soil Present?  Remarks:	
Restrictive Layer (if present):  Type: Depth (inches):  Remarks:  Primary Indicators (minimum of one required; check all that apply)  Hydric Soil Present?  A about 1  A bout 1  Secondary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of one required; check all that apply)	d of problematic.
Type:	
Depth (inches):	The second secon
Primary Indicators (minimum of one required; check all that apply)  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators	Yes No
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators	1
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indi	
Surface Water (A1) Water-Stained Leaves (R9) (except Water-Stained	cators (2 or more required)
	ned Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and	4B)
Saturation (A3) Salt Crust (B11) Drainage F	
	Water Table (C2)
	Visible on Aerial Imagery (CS
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorph Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Ac	The second second second
Algal Mat or Crust (B4)	and the second second
	Mounds (D6) (LRR A)
	e Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	, ,
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Nater Table Present? Yes No Depth (inches):	X**
Saturation Present? Yes No Depth (inches): Wetland Hydrology Presen	
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	? Yes No
Security (1.000, 400 Data (directiff gadge, file intering from a deficil priotos, provious inspections), it available.	? Yes No.
Remarks:	? Yes No
Σ	? Yes No
	? Yes No
	? Yes No