

# I-70 Floyd Hill to Veterans Memorial Tunnels Wetlands and Aquatic Resources Delineation

November 2022





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#### **ACRONYMS**

above mean sea level	amsl
Antecedent Precipitation Tool	APT
Clean Water Act	CWA
Colorado Department of Transportation	CDOT
Construction Manager/General Contractor	CMGC
Environmental assessment	EA
facultative	FAC
facultative wetlands	FACW
Federal Highway Administration	FHWA
Finding of No Significant Impact	FONSI
geographic information system	GIS
global positioning system	GPS
hydrologic unit code	HUC
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mile	mi
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#### 1.0 Introduction

In July 2021, the Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) released an Environmental Assessment (EA) for the Interstate 70 (I-70) Floyd Hill to Veterans Memorial Tunnels Project (Project). Since the release of the EA, CDOT has been following a Construction Manager/General Contractor (CMGC) process for Project delivery. The purpose of the CMGC process is to optimize efficiency in design, schedule, and cost, minimize environmental impacts, manage risk, and ensure constructability.

Design innovations that have been identified through the CMGC process have resulted in refinements to the EA Preferred Alternative, which are described and illustrated in the *I-70 Floyd Hill to Veterans Memorial Tunnels Project Finding of No Significant Impact* (FONSI). The FONSI conveys the FHWA and CDOT decision to implement the CMGC Refined Preferred Alternative for the Project, provides updates to the Project since the release of the EA, and describes and evaluates the innovations (design modifications and refinements) included in the Project after the EA Preferred Alternative was published.

Wetlands and waters of the US were re-delineated in August of 2022 for the Central and West Sections of the Project to support the environmental reevaluation and future Section 404 permitting. This report documents the methods, results, and conclusions of the updated survey. It is used to determine the presence of potentially jurisdictional waters of the United States (WUS). The delineated wetland boundaries were used to evaluate impacts of the design modifications of the CMGC Refined Preferred Alternative as documented in the FONSI.

#### 2.0 Methods

This section summarizes the methods used to perform the desktop review and field survey.

#### 2.1 Desktop Review

The Project is located approximately 22 miles west of Denver in Clear Creek County (**Figure 1** in **Appendix A**). The Survey Area was formed by buffering expected Project work areas. As shown on **Figure 2** in **Appendix A**, it lies within the United States Geological Survey (USGS) quadrangle map Squaw Pass, which was reviewed for drainage features. The Project lies within the Clear Creek watershed and the river ranges in elevation from about 7,380 feet above mean sea level (amsl) at the western end of the Survey Area to 7,200 feet in the eastern end.

The Survey Area falls within the 10th-level Hydrologic Unit Code (HUC) Middle Clear Creek watershed (HUC10 1019000402), and more locally within the 12th-level City of Idaho Springs- Clear Creek watershed (HUC12 101900040207, **Figure 3** in **Appendix A**). Geographic Information Systems (GIS) data from the National Wetlands Inventory (NWI) (United States Fish and Wildlife Service [USFWS], 2022) and National Hydrology Dataset (NHD) (USGS, 2022) were overlaid on the Survey Area to identify a set of preliminary potential aquatic resources.

Aerial images available through ArcGIS online services (ESRI, 2022) were reviewed to identify features in addition to those shown in the NWI and NHD datasets that should be investigated for WUS during the field survey. No additional features were identified as part of this effort.

The Antecedent Precipitation Tool (APT) (United States Army Corps of Engineers [USACE], 2022) was used to compare precipitation in the 90 days prior to the field surveys against historical precipitation



records. The APT determined the area was in wetter than normal in the months prior to survey; however, long-term conditions were still dry with a Palmer Drought Severity Index (PDSI) of Extreme Drought (Appendix B).

Natural Resources Conservation Service (NRCS) soil survey data was acquired for the Survey Area (**Figure 4** in **Appendix A**) (NRCS, 2022). The NRCS data indicates five primary soil types (**Table 1**). The majority of the area is Cathedral-Rock Outcrop, Resort-Cathedral-Rock Outcrop, and Mammoth-Ohman-Rock Outcrop complexes. Overall, soils are rocky and coarser-textured derived from the eroding hillsides. None of the soils are indicated as hydric; however, alluvial deposits associated with the creek are too localized to be mapped.

Soil Type	Typical Profile <sup>1</sup>	Parent Material	Landform	Drainage	Hydric Rating	
Rock outcrop- Cathedral-Resort complex, 30 to 70 percent slopes	R - 0 to 60 inches: unweathered bedrock	Igneous and metamorphic Rock	Ridges, mountain slopes, cliffs	Well drained	No	
Cathedral-Rock outcrop complex,	A - 0 to 3 inches: very cobbly coarse sandy loam	Micaceous residuum	Mountain slopes, cliffs,	Well	tain Well s, cliffs, drained	
30 to 70 percent slopes	AB - 3 to 6 inches: very gravelly sandy loam		ridges			
	Bw - 6 to 11 inches: very gravelly sandy loam					
	R - 11 to 15 inches: unweathered bedrock					
Mammoth- Ohman- Rock	Oi - 0 to 1 inches: slightly decomposed plant material	Micaceous colluvium	Mountain slopes	Well drained	No	
30 to 60 percent slopes	E - 1 to 10 inches: very gravelly sandy loam					
	E and Bt1 - 10 to 16 inches: gravelly loam					
	E and Bt2 - 16 to 22 inches: very gravelly loamy sand					
	E and Bt3 - 22 to 32 inches: very gravelly sandy loam					
	E and Bt4 - 32 to 59 inches: very gravelly sandy loam					
	C - 59 to 67 inches: stony loamy coarse sand					

#### Table 1 – Soils



Soil Type	Typical Profile <sup>1</sup>	Parent Material	Landform	Drainage	Hydric Rating
Arents-Dumps, mine complex, 5	C1 - 0 to 24 inches: very cobbly loamy coarse sand	Mine spoil or earthy fill	Mountain slopes	Somewhat excessively	No
to 80 percent slopes	C2 - 24 to 28 inches: gravelly sandy loam			drained	
	C3 - 28 to 33 inches: extremely				
	cobbly loamy sand				
	C4 - 33 to 60 inches: extremely cobbly loamy sand				
Resort-Cathedral- Rubble land	Oi - 0 to 1 inches: slightly decomposed plant material	Micaceous sandy residuum	Ridges, mountain slopes	Somewhat excessively drained	No
percent slopes	A1 - 1 to 6 inches: very stony sandy loam			dramed	
	A2 - 6 to 14 inches: extremely cobbly loamy sand				
	Cr - 14 to 18 inches: weathered				
	bedrock				

1 O = Organic horizon; A = Topsoil or surface mineral horizon; B = Horizon of soil development; E = Horizon depleted of organic matter and nutrients; C = Soil parent material; R = Bedrock

#### 2.2 Field Survey

The field survey was performed on July 26 and 27, August 2, and September 7, 2022. The objectives of the survey were to:

- Investigate all potential waters shown in the NWI and NHD datasets to determine if wetland or ordinary high water mark (OHWM) indicators are present.
- Investigate all additional potential waters that were identified on aerial images to determine if wetland or OHWM indicators are present.

Using aerial images, NWI and NHD mapping, and visual observations, biologists performed a pedestrian survey throughout the Survey Area. All potential waters were examined for the presence of wetland and OHWM indicators. Wetlands were evaluated in accordance with the Wetland Delineation Manual (USACE, 1987) and Western Mountains, Valleys, and Coast Region, Regional Supplement (USACE, 2010). Methods for identification of the OHWM followed USACE guidance for the mountain west (USACE, 2014). Photo points and OHWMs were mapped using a handheld global positioning system (GPS) unit with submeter accuracy.



#### 3.0 Results

A total of 38 aquatic resources were mapped within the Survey Area. Of those 38 resources, 33 are wetlands and 5 are non-wetland waters. Common wetland vegetation is presented in **Table** 

2. Table 3 presents the summary information for the 33 wetlands; Table 4 presents the five nonwetland waters. Wetlands were given unique identifiers, e.g., WL1, to facilitate reference. Nonwetland waters, unless named, were given Other Waters (OW) identifiers. All mapped features are shown on Figure 5 in Appendix A. Wetland datasheets from Appendix C and Photo Points indicated on Figure 5 correspond to photos in Appendix D. Features are presented west- to-east.

Scientific Name	Common Name	Indicator Status <sup>1</sup>
Agrostis stolonifera	Spreading Bent	FAC
Betula occidentalis	Water Birch	FACW
Calamagrostis canadensis	Bluejoint	FACW
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex nebrascensis	Nebraska Sedge	OBL
Eleocharis palustris	Common Spike-Rush	OBL
Equisetum arvense	Field Horsetail	FAC
Juncus balticus	Baltic Rush	FACW
Juncus dudleyi	Dudley's Rush	FAC
Populus angustifolia	Narrow-Leaf Cottonwood	FACW
Salix bebbiana	Gray Willow	FACW
Salix exigua	Narrow-Leaf Willow	FACW

Table 2 -	Common	Wetland	Vegetation

<sup>1</sup>OBL = Obligate, Plants that occur almost always in wetlands under natural conditions; FACW = Facultative Wetland, Plants that occur usually in wetlands, but also occur in non-wetlands; FAC = Facultative, Plants with similar likelihood of occurring in both wetlands and non-wetlands

#### 3.1 Wetlands

As the Survey Area is narrowly focused around Clear Creek, wetlands are primarily associated with the creek. Most wetlands are small, less than 0.10 acre, and are confined to the banks and immediate floodplain. Narrow-leaf willow, water birch, and gray willow are the most common hydric shrub species, while Baltic rush, Nebraska sedge, and leafy tussock sedge are common herbaceous species (**Table 2**). Soils are typically shallow, sandy alluvial deposits that in many instances lacked hydric soils indicators due to their young age. Where soil was present, i.e., more than cobbles or rip rap, in locations that typically support hydric soil conditions, hydric soils were granted as Problematic Soils, and noted on the datasheet. Wetland hydrology is primarily associated with the perennial Clear Creek, presenting as shallow water table and saturation.

Wetlands WL1 through WL4 are small wetlands near the Veterans Memorial Tunnels (**Figure 5, Sheet 1,** in **Appendix A,** and **Photo Points 1 through 3** in **Appendix D**). Hydric vegetation and soils are limited to the narrow floodplain that quickly transitions to uplands. As Clear Creek turns east after



the tunnels, it enters a heavily-channelized reach for about a half mile. **Photo Points 4 and 5** illustrate this condition precluding the development of fringe or floodplain wetlands through this reach.

**Figure 5, Sheet 2** presents the bend in the creek at the Central City exit off I-70. Wetlands are present on the outside bend (WL5, WL6, WL10, and WL13) as well as the inside bend (WL7, WL8, WL9, WL11, WL12, WL 14, and WL15, **Photo Points 6 through 14**).

Downstream (east) of the Central City exit, Clear Creek enters more channelized reaches (**Figure 5**, **Sheet 3**). Wetlands WL16, WL17, and WL18 (**Photo Points 15 and 16**) line both banks before an 1,100-foot reach stabilized with rip rap on both banks (**Photo Point 17**). Following the channelized reach, WL19 (island) and WL20 (inside bend) are present at a bend (**Photo Points 18 and 19**).

**Photo Point 20** on **Figure 5**, **Sheet 4** shows another channelized 1,500-foot reach of Clear Creek stabilized by rip rap along I-70 on the left bank and a trail/utility line that follows the right bank. More natural floodplains are present downstream of this reach, supporting wetlands WL21 through WL25 around a bend (**Photo Points 22 through 25**).

The creek enters another channelized reach of about 2,000 feet (Photo Point 26) before reaching a bend at the US 6 interchange (Figure 5, Sheet 5). Most of this reach has been channelized by rip rap on both banks, with some concrete walls supporting roadway infrastructure. A small wetland, WL26 (Photo Point 27), lies on the outside bend, but most of this reach does not support wetland development (Photo Point 28). Channelized conditions continue downstream (Figure 5, Sheet 6, Photo Point 29).

Wetlands WL27 through WL31 are located around a bend in the creek (Figure 5, Sheet 6, Photo Points 30 and 31). WL30, on the inside bend, is the largest wetland in the Survey Area at 0.55 acres.

Feature/ Data Point	Acres within Survey Area	Latitude	Longitude	Reference Datasheet	Cowardin Classification <sup>1</sup>
WL1	0.01	39.74353	-105.47327	WL1	PSS
WL2	0.01	39.74799	-105.47339	WL2	PSS
WL3	0.01	39.743814	-105.47323	WL1	PSS
WL4	0.01	39.74457	-105.47308	WL4	PSS
WL5	0.02	39.74690	-105.46507	WL5	PSS
WL6	0.01	39.74766	-105.46459	WL6	PEM
WL7	0.34	39.74831	-105.46299	WL7	PSS
WL8	0.02	39.748220	-105.46297	WL8	PEM
WL9	0.04	39.74819	-105.46233	WL9	PSS
WL10	0.32	39.74807	-105.46152	WL10	PSS
WL11	0.01	39.74797	-105.46181	WL11	PSS
WL12	0.11	39.74742	-105.46106	WL12	PSS
WL13	0.05	39.747196	-105.46045	WL10	PSS
WL14	0.04	39.74677	-105.46036	WL14	PSS
WL15	0.01	39.74675	-105.46044	WL15	PEM
WL16	0.30	39.74482	-105.45785	WL16	PSS

#### Table 3 – Wetlands

Feature/ Data Point	Acres within Survey Area	Latitude	Longitude	Reference Datasheet	Cowardin Classification <sup>1</sup>
WL17	0.02	39.74483	-105.45814	WL17	PSS
WL18	0.01	39.74460	-105.45774	WL17	PSS
WL19	0.08	39.74291	-105.45399	WL19	PSS
WL20	0.20	39.74282	-105.45303	WL20	PSS
WL21	0.05	39.74372	-105.49604	WL21	PSS
WL22	0.02	39.74324	-105.44537	WL22	PSS
WL23	0.11	39.743071	-105.44396	WL23	PSS
WL24	0.13	39.74275	-105.44379	WL24	PSS
WL25	0.20	39.74291	-105.44324	WL23	PSS
WL26	0.01	39.74642	-105.43599	WL26	PEM
WL27	0.01	39.742229	-105.43135	WL27	PEM
WL28	0.01	39.74198	-105.43143	WL27	PEM
WL29	0.01	39.74185	-105.43145	WL27	PEM
WL30	0.55	39.741443	-105.43098	WL31	PSS
WL31	0.04	39.741726	-105.43085	WL31	PSS
WL32	0.24	39.737890	-105.43249	WL32	PEM
WL33	0.10	39.737889	-105.43258	WL33	PSS
Total	3.06				

1 PEM = Palustrine Emergent; PSS = Palustrine Scrub-Shrub

Johnson Gulch is an intermittent stream that flows to the east, meeting I-70 at the southern end of the Study Area (**Figure 5, Sheet 7**). Where the gulch meets the highway, a culvert conveys flow under the road; however, the inlet is partially blocked, creating wetlands WL32 and WL33 (**Photo Points 32 and 33**). There is no channel on the upstream (west) side of I-70; however, Johnson Gulch continues at the downstream side of the culvert, see **Section 3.2**.

#### 3.2 Non-Wetland Waters

Five non-wetland waters were mapped: four stream channels and one pond. **Table 4** presents the details for each feature.

Clear Creek is a perennial river that passes through the entire Survey Area. The creek ranges from about 30 feet wide at narrow, channelized reaches, to 150 feet at the wide bends. The creek totals 3.0 miles and 18.3 acres within the Survey Area (**Figure 5, Sheets 1 through 6**). OHWMs include a clear bank and change in vegetation. Where the banks have been stabilized with rip rap, the OHWM is indicated by staining on the rocks.

Feature	Linear Feet within Survey Area	Width (Feet)	Acres within Survey Area	Latitude	Longitude	Cowardin Classification1
Clear Creek	15,865	50	18.44	39.74424	-105.44761	R5UBH
OW1	NA	NA	0.26	39.74781	-105.46406	PUBH
Sawmill Gulch	607	3	0.04	39.74295	-105.4485	R5UBH
OW2	164	4	0.03	39.74249	-105.44381	R5UBH
Johnson Gulch	65	3	0.07	39.73882	-105.43046	R5UBH
		Total	18.84			

#### Table 4 – Non-Wetland Waters

1 R5UBH = Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded; PUBH = Palustrine

Unconsolidated Bottom. Sawmill Gulch, OW2, and Johnson Gulch are indicated as perennial in the NWI; however, they are intermittent (R4).

A 0.27-acre pond, OW1, is part of the City of Blackhawk's water supply system (**Figure 5, Sheet 2**). The artificial pond is fed by an inlet in the right bank of the creek and is drained by an outlet at the downstream end. The pond is rip rap lined and does not support fringe wetlands.

Sawmill Gulch is an intermittent stream flowing north to Clear Creek (**Figure 5, Sheet 4, Photo Point 21**). The gulch is about 607 feet long within the Survey Area, totaling 1,809 square feet (0.04 acre). OHWMs average three feet wide, indicated by clear bed and bank. The gulch meets a multiuse trail south of Clear Creek and is conveyed via culvert to the creek's floodplain.

OW2 is an unnamed intermittent drainage that flows north to Clear Creek (**Figure 5, Sheet 4, Photo Point 34**). The drainage is about 164 feet long within the Survey Areas, totaling 1,162 square feet (0.03 acre). OHWMs are three to four feet wide, indicated by clear bed and bank and an incised channel. The gulch meets a multiuse trail south of Clear Creek and is conveyed via culvert to wetland WL24 on the floodplain of Clear Creek.

At the southern end of the Survey Area, Johnson Gulch passes below I-70 (**Figure 5, Sheet 7**). Wetlands WL32 and WL33 are formed on the west side of I-70 where a culvert inlet is partially blocked. There is no channel through this wetland complex. At the outlet on the east side of I-70, a short reach of Johnson Gulch lies within the Survey Area, about 65 feet of channel three feet wide (0.01 acre).

#### 4.0 Conclusion

All 33 wetlands and five non-wetland waters are tributaries to or are immediately adjacent to Clear Creek, itself a main tributary to the South Platte River. As such, all mapped aquatic resources would be considered jurisdictional WUS. Impacts to WUS will be authorized pursuant to the Clean Water Act (CWA) as administered by the USACE.



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## Appendix A

Figures



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	Page 7 of 7

### Appendix B

### Antecedent Precipitation Tool (APT) Report





Datasheets

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	orps of Eng - Western M proponent a	<b>gineers</b> ountains, Va gency is CE	lleys, and C CW-CO-F	Coast Region Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cour	nty: Clear C	Creek County Sampling Date: 7/26/22
pplicant/Owner: CDOT - Region 1			-	State: CO Sampling Point: WL1
vestigator(s): Fillipi and Kizlinski		Section, T	ownship, Ra	ange: SW4 S32, T3S, R72W
andform (hillside, terrace, etc.); floodplain		Local relief (co	oncave, conv	vex, none): flat Slope (%): 0
ubregion (LRR): LRR E, MLRA 48A Lat: 39.7	4353		Long: -	105.47327 Datum: NAD83
oil Map Unit Name: Rock outcrop-Cathedral-Resor	t complex			NWI classification: upland
vre climatic / hydrologic conditions on the site typica vre Vegetation, Soil, or Hydrology vre Vegetation, SoilX_, or Hydrology SUMMARY OF FINDINGS - Attach site r	I for this time of significantly naturally pro	of year? disturbed? A blematic? (i ng samplin	Yes <u>X</u> we "Normal ( If needed, e) <b>g point lo</b>	No (If no, explain in Remarks.) Circumstances <sup>¬</sup> present? Yes X No xplain any answers in Remarks.) pocations, transects, important features, e
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	a Sampled A n a Wetland	Area 1? Yes <u>X</u> No
Remarks:				
EGETATION – Use scientific names of	Absolute	Dominant	Indicator	1
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksheet:
. Pseudotsuga menziesii	5	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A
3.				Total Number of Dominant Species
L)				Across All Strata:4_(E
Sapling/Shrub Stratum (Plot size: 15	_)	=Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A
1. Salix exigua	60	Yes	FACW	
2	$\langle - \rangle$			Prevalence Index worksheet:
				OBL species 15 v1 = 15
5				FACW species $80 \times 2 = 160$
-	60	=Total Cover		FAC species 0 x 3 = 0
erb Stratum (Plot size: 5 )	1			FACU species 5 x 4 = 20
Juncus balticus	20	Yes	FACW	UPL species 0 x 5 = 0
2. Eleocharis palustris	10	Yes	OBL	Column Totals: 100 (A) 195 (E
Carex nebrascensis	5	No	OBL	Prevalence Index = B/A =1.95
		·		Hydrophytic Vegetation Indicators:
				1 - Ranid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations (Provide support
0	<u> </u>	<u></u>		data in Remarks or on a separate sheet)
11	-			5 - Wetland Non-Vascular Plants
Woody Vine Stratum (Plot size: 5	_)	=Total Cover		Problematic Hydrophytic Vegetation' (Explain) 'Indicators of hydric soil and wetland hydrology mu
				be present, unless disturbed or problematic.
<i>c</i> ,		=Total Cover		Hydrophytic Vegetation
74 Para Ground in Harb Stratum	1	5		Present? Vas V No

SOIL

ches) Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Text	ure		Remarks	
0-5 10YR 3/3	85	7.5YR 4/4	15	C	M	San	dv	Faint re	edox concentr	ations
5-15 10YR 4/2	75	7.5YR 4/4	25		M	San	dy.	Distinct	cedox concen	rations
		7.0111 4/4		_			<u></u>	Distilici		ations
	3		Ξ	_	$\Xi$	_		-		
	$\equiv$		Ξ	Ξ	Ξ	=				
ype: C=Concentration, D=Dep	letion, RM	=Reduced Matrix, (	CS=Cove	red or Co	oated Sa	nd Grains.	<sup>2</sup> Loca	tion: PL=Por	e Lining, M=N	latrix.
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) 1 cm Muck (A9) (LRR D, G) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (	e (A11) S2) (LRR (	Sandy Gle X Sandy Re Stripped M Loamy Mu Loamy Gl Depleted Redox Da Depleted 3) Redox De	erwise m eyed Mati dox (S5) Matrix (S6 ucky Mine eyed Mat eyed Mat Matrix (F Matrix (F Matrix (F Matrix Surfac Dark Surfac	rix (S4) aral (F1) trix (F2) 3) ce (F6) face (F7) s (F8)	(except	MLRA 1)	2 cm Iron-M Red F Very S Other <sup>3</sup> Indicators wetlar unless	Muck (A10) (I Manganese M Parent Materia Shallow Dark (Explain in R cof hydrophyl nd hydrology i s disturbed or	LRR A, E) lasses (F12) ( al (F21) Surface (F22 lemarks) tic vegetation must be prese problematic.	LRR D) ) and ent,
strictive Laver (if observed):			p. r.quere	- 4	- 1					
Type: Rock/cob	ble									
Depth (inches): emarks: oung floodplain depositis	15	-				Hydric So	il Present	,	Yes <u>X</u>	No
Depth (inches): emarks: oung floodplain depositis	15	-				Hydric So	il Present	,	Yes X	No
Depth (inches): emarks: oung floodplain depositis //DROLOGY /etland Hydrology Indicators:	15	iradi abadi ali ibat	apply)			Hydric So	Secondary	?	Yes X	No
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Depth (inches): marks: bung floodplain depositis <b>DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)	15. one is requi	ired; check all that. 	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 48)	(except	Hydric So	il Present Secondar Water 4A Draina	/ Indicators (/ -Stained Lea , and 4B) age Patterns	Yes X 2 or more req ves (B9) (ML (B10)	No aired) RA 1, 2
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Depth (inches): emarks: oung floodplain depositis (DROLOGY (etland Hydrology Indicators: rimary Indicators (minimum of c 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial I Sparsely Vegetated Concave reld Observations: urface Water Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye	magery (B a Surface ( as as a gauge, mo	red: check all that Water-Sta MLRA Sait Crust Aquatic In Hydrogen X Oxidized R Presence Recent Irc Stunted or 7) Other (Ex B8) No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olaim in R Depth (i Depth (i Depth (i d photos,	ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants temarks) nches): nches): nches):	(except Living Rc (C4) Iled Soils (D1) (LF 9 s inspect	Hydric So bots (C3) s (C6) RR A) Wetlanc	Secondan Water 4A Draina Dry-S Satura Shalic X FAC-1 Raise Frost-	y Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible of orphic Positio w Aquitard (I Neutral Test ( d Ant Mound: Heave Humm y Present?	Yes X 2 or more requires (B9) (ML (B10) Table (C2) on Aerial Imagon (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No aired) RA 1, 2 ery (C9)
Depth (inches): emarks: oung floodplain depositis <b>PDROLOGY</b> fettand Hydrology Indicators: fimary Indicators (minimum of of 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 I Sparsely Vegetated Concave (eld Observations: urface Water Present? Ye fater Table Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye includes capillary fringe) escribe Recorded Data (stream	15. one is requi magery (B a Surface ( as as a gauge, mo	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X No X No A No A	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc on Reduc Stresse plain in R Depth (i Depth (i Depth (i I photos,	ves (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( ition in Ti d Plants (emarks) ches): nches): nches): nches):	(except Living Rc (C4) lied Soils (D1) (LF 9	Hydric So bots (C3) s (C6) RR A) Wetlanc	Secondan Water 4A Draina Dry-S Satura Geom Shalld X FAC-1 Raise Frost-	y Indicators (2 -Stained Lea , and 4B) age Patterns eason Water ation Visible of orphic Positio w Aquitard (I veutral Test ( d Ant Mound: Heave Humm y Present?	Yes X 2 or more required ves (B9) (ML (B10) Table (C2) on Aerial Imagon (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No

ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	orps of Eng – Western Me proponent a	jineers ountains, Va gency is CE	lleys, and C ECW-CO-I	Coast Region	OME Control #: 0710-0024, E: Requirement Control Symb (Authority: AR 335-15, para	(p: 11/30/2024 of EXEMPT: graph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	07-26-202
pplicant/Owner: CDOT - Region 1				State: CO	Sampling Point:	WL2
vestigator(s): Fillipi and Kizlinski		Section,	Township, Ra	ange: SW4 S32, T38	6, R72W	
andform (hillside, terrace, etc.): Floodplain		Local relief (c	oncave, con	vex, none): Flat	Slo	pe (%):
ubregion (LRR): LRR E, MLRA 48A Lat: 39.1	4799		Long: -	105.47339	Datum:	NAD83
oil Map Unit Name: Rock outcrop-Cathedral-Resor	t complex, 30 t	o 70 percent	slopes	NWI cla	ssification: Upland	-
re climatic / hydrologic conditions on the site typica	I for this time o	f vear?	Yes X	No (lf no.	explain in Remarks.)	-
re Vegetation Soil or Hydrology	significantly	disturbed?	Are "Normal	Circumstances" prese	nt? Yes X N	0
re Vegetation Soil X or Hydrology	naturally pro	blematic? (	If needed, et	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS - Attach site	- nap showir	ng samplin	g point lo	cations, transec	ts, important fea	tures, etc
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls th with	e Sampled / n a Wetland	Area 1? Yes_)	< No	
Remarks: Small wetland fringe on the bank of Clear Creek	2					
EGETATION – Use scientific names of	plants.					
	Absolute	Dominant	Indicator	1 Same diama		-
ree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test v	vorksheet:	
·		<u> </u>		Are OBL FACW of	nt Species That	2 (A)
3.				Total Number of D	ominant Species	
4.				Across All Strata:		2 (B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domina Are OBL, FACW, o	nt Species That or FAC: 10	0.0% (A/
1. Salix exigua	- 80	Yes	FACW	Design from the first	Constant and a	
3				Total % Cove	vorksneet. Multiply	v hv
				OBL species	$0 \qquad x1 =$	0
5.			-	FACW species	120 x 2 =	240
	80	=Total Cover	-	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5_)				FACU species	5 x 4 =	20
Juncus balticus		Yes	FACW	UPL species	0 x 5 =	0
Achiliea millefolium		No	FACU	Column Totals:	125 (A)	260 (B)
		<del>```</del>		Prevalence inde	ax = b/A =2.0	0
				Hydrophytic Vege	tation Indicators:	_
	1.000			1 - Rapid Test	for Hydrophytic Veget	ation
1	-			X 2 - Dominance	Test is >50%	
				X 3 - Prevalence	Index is ≤3.0 <sup>1</sup>	
				4 - Morphologie	cal Adaptations (Provi	de supporti
0				Gata in Rem	arks of on a separate	sneer)
11	45	=Total Cover		Problematic H	vdrophytic Vegetation	(Explain)
Noody Vine Stratum (Plot size: 5.	_)	Poter COVE		<sup>1</sup> Indicators of hydri be present, unless	c soil and wetland hyd disturbed or problema	Irology mus
2.				Hydrophytic		
		=Total Cover		Vegetation		
% Bare Ground in Herb Stratum 0				Present? Y	es X No	

SOIL

ling Point: WL2

inches) Col	or (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Textu	ire		Remarks
0-2 1	YR 3/3	100					San	du -		Lit we we
2.42 40		100				-	Con	dy		
2-12 1	JTIX 4/4		_		-	-	Jan	<u>uy</u> –		
		-			-	-			_	
					<u> </u>	$\leq$	-	- 22		
		$\square$		_	$\equiv$		_		-	
	-		_	-		-	-		-	
ype: C=Concentra	tion, D=Depl	etion, RM	Reduced Matrix,	CS=Cove	ered or Co	pated Sa	nd Grains.	<sup>2</sup> Locatio	on: PL=Pore	Lining, M=Matrix.
ydric Soil Indicato	ors: (Applica	ble to all	LRRs, unless oth	erwise n	oted.)			Indicators	for Problem	atic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gl	eyed Mat	trix (S4)			2 cm M	luck (A10) (L	RR A, E)
Histic Epipedon	(A2)		Sandy Re	dox (S5)	-			Iron-Ma	anganese Ma	isses (F12) (LRR D)
Black Histic (A3)	C 11		Stripped I	Matrix (Si	6)			Red Pa	rent Materia	(F21)
Hydrogen Sulfide	e (A4)		Loamy M	Jcky Min	eral (F1)	(except l	WLRA 1)	Very St	hallow Dark	Surface (F22)
1 cm Muck (A9)	(LRR D, G)		Loamy G	eyed Ma	trix (F2)			Other (	Explain in Re	emarks)
Depleted Below	Dark Surface	(A11)	Depleted	Matrix (F	3)					
Thick Dark Surfa	ice (A12)		Redox Da	rk Surfa	ce (F6)			<sup>9</sup> Indicators	of hydrophyti	c vegetation and
Sandy Mucky Mi	neral (S1)		Depleted	Dark Sur	face (F7)			wetland	hydrology n	nust be present,
2.5 cm Mucky P	eat or Peat (8	52) (LRR	G) Redox De	pression	is (F8)			unless	disturbed or	problematic.
estrictive Laver (if	observed):									
and the second										
Туре:	- augetta 20									
Type: Depth (inches): Remarks: Problematic soils / rij	prap; Multiple	e despositi	on layers				Hydric Soi	il Present?		Yes <u>X</u> No
Type: Depth (inches): emarks: roblematic soils / rij	prap; Multiple	e despositi	on layers				Hydric Soi	il Present?		Yes <u>X</u> No_
Type: Depth (inches): emarks: roblematic solis / rij YDROLOGY /etland Hydrology	prap; Multiple	despositi	on layers				Hydric Soi	il Present?		Yes <u>X</u> No_
Type: Depth (inches): lemarks: roblematic soils / rij YDROLOGY Vetland Hydrology rimary Indicators (n	prap; Multiple Indicators:	e despositi	on layers	apply)			Hydric Soi	il Present? Secondary	Indicators (2	Yes X No
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etfand Hydrology rimary Indicators (n Surface Water (/	Indicators:	e despositi	on layers red: check all that Water-Sta	apply)	aves (B9)	(except	Hydric Soi	il Present? Secondary Water-	Indicators (2 Stained Leav	Yes X No or more required) res (B9) (MLRA 1, 2
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (n 	Indicators: ninimum of o A1) e (A2)	: despositi ne is requi	on layers red; check all that Water-Sta MLRA	apply) ained Lea	aves (B9) , and 48)	(except	Hydric Sol	il Present? Secondary Water- 4A,	Indicators (2 Stained Leav and 4B)	Yes X No or more required) res (B9) (MLRA 1, 2
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (n Surface Water (/ K High Water Tabl X Saturation (A3)	Indicators: ninimum of o A1) e (A2)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crus	apply) ined Lea 1, 2, 4A : (B11)	aves (B9) , and 4B)	(except	Hydric Sol	il Present? Secondary Water-1 4A, Drainag	Indicators (2 Stained Leav and 4B) ge Patterns (	Yes X No or more required) res (B9) (MLRA 1, 2 B10)
Type: Depth (inches): Remarks: roblematic solis / rij YDROLOGY Ydtland Hydrology Yrimary Indicators (m Surface Water (A X High Water Tabl X Saturation (A3) Water Marks (B'	Indicators: ninimum of o A(1) e (A2)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir	apply) ained Lez 1, 2, 4A (B11) vertebra	aves (B9) , and 4B) tes (B13)	(except	Hydric Sol	Secondary Water-4 4A, Drainag Dry-Se	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2)
Type: Depth (inches): Problematic solis / rij Problematic solis / rij Problema	Indicators: ninimum of o A1) e (A2) i) its (B2)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide (	aves (B9) , and 4B) tes (B13) Odor (C1)	(except	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible o	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9
Type: Depth (inches): lemarks: roblematic soils / rij YDROLOGY Yotland Hydrology trimary Indicators (m Surface Water (A X High Water Tabl X Saturation (A3) Water Marks (B' X Sediment Deposits (B X Drift Deposits (B	Indicators: ninimum of o A1) e (A2) i) its (B2) 3)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph	aves (B9) , and <b>4B</b> ) Odor (C1) heres on I	(except	Hydric Soi	Secondary Water 4A, Drainag Dry-Se Saturat Geomo	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible o prohic Positio	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2)
Type: Depth (inches): Iemarks: Iroblematic soils / rij YDROLOGY Yottand Hydrology Irimary Indicators (m Surface Water (A X High Water Tabl X Saturation (A3) Water Marks (B' X Sediment Deposits (B Algal Mat or Cru	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Redu	aves (B9) , and <b>4B</b> ) odor (C1) heres on I ceel Iron (	(except	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallow	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible o prphic Positio v Aquitard (D	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3)
Type: Depth (inches): Irroblematic soils / rij YDROLOGY Yetland Hydrology Irimary Indicators (n Surface Water (A X High Water Tabl X Saturation (A3) Water Marks (B' X Sediment Deposits (B Algal Mat or Cru Iron Deposits (B	Indicators: ninimum of o A1) e (A2) i) sits (B2) 3) st (B4) 5)	: despositi	on layers red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Presence Recent In	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc	aves (B9) , and 4B) des (B13) Odor (C1) heres on 1 ced Iron ( stion in Ti	(except Living Ra C4)	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible of prphic Positio v Aquitard (D eutral Test (1	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5)
Type: Depth (inches): Problematic soils / rij Problematic soils / rij Problema	Indicators: ninimum of o A1) e (A2) i) sits (B2) 3) st (B4) 5) cks (B6)	e despositi	on layers red: check all that Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted c	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc stresse	aves (B9) , and 4B) tes (B13) Odor (C1) heres on 1 ced Iron ( ction in Ti ad Plants	(except Living Ra C4) Iled Soils (D1) (LR	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni Raised	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible o prphic Positio v Aquitard (D eutral Test (I Ant Mounds	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) in Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A)
Type: Depth (inches): Problematic soils / rij Problematic soils / rij YDROLOGY Ydtland Hydrology Primary Indicators (n Surface Water (A X High Water Tabl X Saturation (A3) Water Marks (B' X Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl	Indicators: ninimum of o A1) e (A2) i) sits (B2) 3) st (B4) 5) cks (B6) e on Aerial Ir	: despositi në is requi	on layers red: check all that Water-Sta MLRA Salt Crust Aquatic lr Hydrogen Oxidized Presence Recent lr Stunted c 7) Other (Ex	apply) ained Lez 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F	aves (B9) , and 4B) tes (B13) Odor (C1) heres on 1 ced Iron ( ction in Ti ad Plants Remarks)	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible of rphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) in Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7)
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (n Surface Water (i/ K High Water Tabl X Saturation (A3) Water Marks (B' X Sediment Deposits Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibil Sparsely Vegeta	Indicators: ninimum of o A1) e (A2) i) its (B2) 3) st (B4) 5) cks (B6) ie on Aerial In ted Concave	ne is requi ne srequi nagery (B Surface (	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ira Stunted of 7) Other (Ex 88)	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduo on Reduo r Stresse plain in F	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( ction in Ti ad Plants Remarks)	(except iving Ro C4) lied Soils (D1) (LR	Hydric Soi ots (C3) (C6) R A)	Secondary Water 4A, Drainag Dry-Se Saturat Geomo Shallow X FAC-No Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible of rphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7)
Type: Depth (inches): emarks: roblematic soils / rij /DROLOGY /etland Hydrology rimary Indicators (m Surface Water (A) Suface Water Tabl Saturation (A3) Water Marks (B) Sediment Deposits Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl Sparsely Vegeta	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) ie on Aerial Ir ted Concave	ne is requi nagery (B Surface (	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted c 7) Other (Ex B8)	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( stion in Ti ad Plants Remarks)	(except Living Ro C4) Iled Soits (D1) (LR	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible o orphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7)
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (m Surface Water (A) Water Marks (B) Gediment Deposits Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl Sparsely Vegeta teld Observations urface Water Prese	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) re on Aerial In ted Concave ant? Ye	ne is requi nagery (B Surface ()	on layers red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted c 7) Other (Ex B8)	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( stion in Ti ad Plants Remarks) inches):	(except Living Ro C4) Iled Soits (D1) (LR	Hydric Soi	Secondary Water 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible o orphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7)
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (m Surface Water Tabl Gaturation (A3) Water Marks (B' Sediment Deposits Gaturation (A3) Water Marks (B' Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl Sparsely Vegeta teld Observations urface Water Present /ater Table Present	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) ie on Aerial In ted Concave : mt? Ye ? Ye	ne is requi nagery (B Surface ( s	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted c 7) Other (Ex B8) No	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F Depth ( Depth (	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( stion in Ti ad Plants Remarks) Remarks): inches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soi	Secondary Water-4 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ni Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water ion Visible o orphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7)
Type: Depth (inches): emarks: roblematic soils / rij YDROLOGY /etland Hydrology rimary Indicators (n Surface Water (A Saturation (A3) Water Marks (B' Saturation (A3) Water Marks (B' Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl Sparsely Vegeta ield Observations urface Water Present aturation Present?	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) ie on Aerial In ted Concave : ent? Ye ? Ye Ye	ne is requi magery (B Surface ( ssX	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o 7) Other (Ex B8) No No No No	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F Depth ( Depth ( Depth (	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( ction in Ti ad Plants Remarks) anches):_ inches):_ inches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soi ots (C3) (C6) R A) Wetland	Secondary Water-1 4A, Drainag Dry-Se Saturat Geomo Shallow X FAC-Ne Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible of orphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm Present?	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) 05) (D6) (LRR A) ocks (D7) Yes X No
Type: Depth (inches): Problematic soils / rij YDROLOGY /etfand Hydrology /imary Indicators (in Surface Water (in X High Water Table X Saturation (A3) Water Marks (Br X Sediment Deposits Algal Mat or Cru Iron Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibl Sparsely Vegeta ield Observations urface Water Present aturation Present? ncludes capillary fin	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) ie on Aerial In ted Concave : ent? Ye ? Ye Ye nge)	ne is requi ne is requi surface ( ss	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o 7) Other (Ex B8) No No No No No	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F Depth ( Depth (	aves (B9) , and 4B) tes (B13) Odor (C1) heres on I ced Iron ( ction in Ti ad Plants Remarks) ad Plants Remarks): 	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soi	Secondary Water-1 4A, Drainag Dry-Se Saturat Geomo Shallov X FAC-Ne Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible of orphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm Present?	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) 05) (D6) (LRR A) ocks (D7) Yes X No
Type: Depth (inches): Problematic soils / rij PDROLOGY Partiand Hydrology Partiand Hydrology Partiand Hydrology Partiand Hydrology Partiand Hydrology Partiand Hydrology Partiana Hydrology Mater Marks (B' X Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibil Sparsely Vegeta Ield Observations urface Water Present aturation Present? ncludes capillary frii escribe Recorded D	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) le on Aerial In ted Concave ent? Ye Ye ye nge) Data (stream	ne is requi ne is requi nagery (B Surface ( s	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ira Stunted of Other (Ex B8) No	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduo r Stresse plain in F Depth ( Depth ( Depth ( al photos	aves (B9) , and 4B) tes (B13) Odor (C1) teres on I ced Iron ( tion in Ti ad Plants Remarks) anches): inches): inches):	(except iving Ro C4) lied Soils (D1) (LR 10 6 s inspect	Hydric Soi	Secondary Water- 4A, Drainag Dry-Se Saturat Geomo Shallow X FAC-No Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible of rphic Positio v Aquitard (D eutral Test (I Ant Mounds leave Humm Present?	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) D5) (D6) (LRR A) ocks (D7) Yes X No
Type: Depth (inches): Problematic soils / rij Problematic soils / rij Surface Water Table X Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visibli Sparsely Vegeta Ield Observations urface Water Present aturation Present? ncludes capillary fri rescribe Recorded D	Indicators: ninimum of o A1) e (A2) i) iits (B2) 3) st (B4) 5) cks (B6) ie on Aerial In ted Concave ent? Ye ye nge) Data (stream	ne is requi ne is requi nagery (B Surface ( s s X gauge, mo	on layers  red: check all that Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (Ex B8) No	apply) ained Lea 1, 2, 4A (B11) vertebra Sulfide ( Rhizosph of Reduo r Stresse plain in F Depth ( Depth ( Depth (	aves (B9) , and 4B) Ddor (C1) heres on I ced Iron ( tion in Ti ad Plants Remarks) inches): inches): , previous	(except Living Ro C4) Iled Soits (D1) (LR	Hydric Soi	Secondary Water 4A, Drainag Dry-Se Saturat Geomo Shallow X FAC-No Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns ( ason Water 1 ion Visible o v Aquitard (D eutral Test (I Ant Mounds leave Humm Present?	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) 25) (D6) (LRR A) ocks (D7) Yes X No

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WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	– Western Ma proponent ag	puntains, Va gency is CE	lleys, and C ECW-CO-F	Coast Region R	OMB Control #: 0710-4 Requirement Contro (Authority: AR 335-	0024, Exp: 11/ I Symbol EXE 15, paragraph	30/2024 EMPT: 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling I	Date: 07	-26-202
pplicant/Owner: CDOT - Region 1		1.1		State: CO	Sampling F	Point:	WL4
vestigator(s): Fillipi and Kizlinski		Section,	Township, Ra	ange: SW4 S32, T38	5, R72W		
andform (hillside, terrace, etc.): Floodplain		Local relief (c	oncave, conv	vex, none); Flat		Slope (%	%); 1-;
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	74457		Lona: 1	05.47308	Da	tum: N/	AD83
oil Man Unit Name: Rock outcrop-Cathedral-Reso	t complex 30 t	o 70 percent	slopes	NWI cla	ssification: UPL		
e climatic / budelogic conditions on the site buies	I for this time o	fupar?	Vac V	No. //f.po	evolain in Dama	eke )	
				NO (II IIO,		(N.S.)	
Soli , or Hydrology	signmeanity i		Are Norman	circumstances prese	alty res_A	- 110	-
re vegetation, Soli _ A, or Hydrology	naturally prof	plematic? (	in needed, ex	xprain any answers in	Remarks.)		1
UMMARY OF FINDINGS – Attach site	map showin	ng samplin	g point lo	cations, transec	ts, importan	t feature	es, et
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No	ls th with	e Sampled A in a Wetland	Area 1? Yes_3	X. No	÷.	
Remarks: ringe and floodplain wetland on the bank of Clear	Creek						
EGETATION – Use scientific names of	f plants.	-			_		-
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:		
. Populus angustifolia	20	Yes	FACW	Number of Domina	ant Species That		
			<u> </u>	Are OBL, FACVV, C	or FAG:	3	(A)
	- ·			Total Number of D	ominant Species	5	(B)
Seoling/Shaub Stratum (Plot size: 15	20	=Total Cover		Percent of Domina	Int Species That	60.0%	(A)
1. Betula occidentalis	- 30	Yes	FACW	Concerning of the			
2. Rosa woodsii	10	Yes	FACU	Prevalence Index	worksheet:		
3.				Total % Cove	rof: N	lultiply by:	
			c	OBL species	0 x1=	0	
				FACW species	80 x 2 =	160	<u> </u>
	40	=Total Cover		FAC species	10 x 3 =		-
(Plot size: 5 )	20	Vec	FACIAL	FACU species	20 x 4 =	100	
Bromus inermis		Ves	HPI	Column Totals:	130 (A)	370	
Equisetum arvense	10	No	FAC	Prevalence Inde	ex = B/A =	2.85	_(0)
Pascopyrum smithii	10	No	FACU	10020200000000			- 1
				Hydrophytic Vege	etation Indicator	s:	
				1 - Rapid Test	for Hydrophytic	Vegetation	1
)				X 2 - Dominance	Test is >50%		
		$\rightarrow$		X 3 - Prevalence	Index is ≤3.0		
				4 - Morphologi	cal Adaptations (	Provide si	upporti
1				5 Wetland M	on Vaccular Dian	te <sup>1</sup>	o.()
· 1	70	=Total Cover		Problematic H	vdrophytic Venel	ation <sup>1</sup> (Ev	plain
Noody Vine Stratum (Plot size: 5	_)	- Poter COVEL		Indicators of hydri	c soil and wellan	d hydrolog	gy mus
2.				Indexed at		- Contraction	
		=Total Cover		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum				Present /	es X Me		

Depth	Matrix	to the dep	Dodo	E Cookur		tor or c	John in the	absence o	i indicators.		
(inches)	Color (moist)	D/.	Color (moist)	04	Type	Loc <sup>2</sup>	Tes	ture		Remarke	
0.4	10VD 3/3	100	color (morar)		1700			adu		Acittaina	
4.40	1018 3/3		EVE 4/C					nuy	Distantion		
4-13	10118 4/3		51 K 4/6		_			nay	Prominen	Tedax conce	antrations
		Ξ		H	Ξ	Ē	_	=	-		
Type: C=Cor	ncentration, D=Depl	letion, RM=	Reduced Matrix, C	S=Cove	red or Co	bated S	and Grains.	<sup>2</sup> Local	ion: PL=Por	e Lining, M=I	Matrix.
Histic Epil Black Hist Hydrogen 1 cm Muc Depleted Thick Dar Sandy Mu 2.5 cm Mt Restrictive L	pedon (A2) Suffide (A4) ki (A9) (LRR D, G) Below Dark Surface k Surface (A12) ucky Mineral (S1) ucky Peat or Peat (S aver (if observed):	e (A11) S2) (LRR G	Sandy Red Stripped N Loamy Mu Loamy Gle Depleted N Redox Dar Depleted I Redox Der	dox (S5) latrix (S6 cky Mine yed Matrix Matrix (F3 k Surfac Dark Surfac	) rial (F1) rix (F2) 3) e (F6) ace (F7) s (F8)	(except	MLRA 1)	Iron-M Red F Very S Other Indicators wetlar unless	langanese M larent Materia Shallow Dark (Explain in R cof hydrophy ad hydrology c disturbed or	asses (F12) ( al (F21) Surface (F22 emarks) tic vegetation must be pres problematic	(LRR D) 2) and ent,
Type: Depth (ind Remarks: Problematic s	Cobble:	s 13 nal layer, y	oung soil, hydric gr	anted			Hydric S	oil Present	2	Yes <u>X</u>	No_
Type: Depth (inc Remarks: Problematic si	Cobble ches):	s 13 nal layer, y	oung soil, hydric gi	anted			Hydric S	oil Present	,	Yes <u>X</u>	No
Type: Depth (ind Remarks: Problematic si IYDROLOC	Cobble ches): oil, sandy deposition GY rology Indicators:	s 13 nal layer, y	oung soil, hydric gi	anted			Hydric S	oil Present	,	Yes <u>X</u>	No_

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

Remarks:

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(includes capillary fringe)

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western Mo proponent ag	untains, Va gency is Cl	lleys, and C ECW-CO-I	Coast Region	OMB Control #: 0710-002 Requirement Control S (Authority: AR 335-15,	4, Exp: 11/30/2024 ymbol EXEMPT: paragraph 5-2a)
roject/Site: Floyd Hill to Veterans Memorial Tunne	t	City/Cou	nty: Clear C	Creek County	Sampling Da	te: 07-26-202
pplicant/Owner: CDOT - Region 1		1.1.8		State: CO	Sampling Po	nt: UP004
vestigator(s): Fillipi and Kizlinski		Section,	Township, Ra	ange: SW4 S32, T3	S, R72W	
andform (hillside, terrace, etc.): hillside		Local relief (c	oncave, con	vex. none): flat		Slope (%); 3-;
ubregion (LRR): LRR E. MLRA 48A Lat: 39	74463		Lona: 1	05.47311	Datu	m: NAD83
oil Map Unit Name: Rock outgrop-Cathedral-Resc	ort complex, 30 to	o 70 percent	slopes	NWI cla	assification: UPL	
re alimatic / hudralasis associtions as the site built	al for this time of	funor?	Vac V	No. //f.no.	ovelais is Demark	- 1
re cimate / hydrologic conditions on the site typic	ar for this time o	i yearr	105		explain in Remark	s.)
re vegetation, soil, or Hydrology	significantly o	disturbed / /	are Normal	circumstances prese	entr res X	
re Vegetation, Soil, or Hydrology	naturally prot	plematic? (	If needed, et	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site	map showin	ig samplin	ig point lo	ocations, transed	cts, important f	eatures, etc
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No X No X No X	ls th with	e Sampled / in a Wetland	Area 1? Yes	NoX	
Remarks: Jpland point for WL4, abrupt transition from flood;	plain to upland.					
EGETATION – Use scientific names o	f plants.					
	Absolute	Dominant	Indicator	10.5 J. 10.5	1000	
(Plot size: 30 )	% Cover	Species?	Status	Dominance Test	worksheet:	
. Populus angustifolia		Yes	FACW	Number of Domina	ant Species That	
2. Pseudosuga menziesii	5	Yes	FACU	Are OBL, FACW,	or FAC:	3 (A)
h		<u> </u>		Total Number of D	Iominant Species	7 (0)
		Total Cover	_	Across All Strata.	-	/(B)
Sapling/Shrub Stratum (Plot size: 15	1	- Total Sover		Are OBL, FACW,	or FAC:	42.9% (A/
1. Betula occidentalis	15	Yes	FACW	Concernation of the	-	
2.				Prevalence Index	worksheet:	
3.			-	Total % Cove	er of: Mul	tiply by:
4.				OBL species	0 x1=_	0
5.				FACW species	35 x 2 =	70
	15	=Total Cover		FAC species	10 x 3 =	30
terb Stratum (Plot size: 5)	1.52	A.4		FACU species	<u>25</u> x 4 = _	100
Bromus inermis		Yes	UPL	UPL species	20 x 5 =	100
Circlum christian		Vac	FACU	Dravalanas lad	90 (A)	300 (B)
Achillee millefolium		Ves	FAC	Prevalence ind	lex = B/A =	5.55
		163	-1400	Hydrophytic Veg	etation Indicators:	
				1 - Rapid Tes	t for Hydrophytic Ve	egetation
				2 - Dominance	e Test is >50%	
				3 - Prevalence	e index is ≤3.0 <sup>1</sup>	
).			-	4 - Morphologi	ical Adaptations (Pr	ovide supportin
0_				data in Ren	narks or on a separ	ate sheet)
1,				5 - Wetland N	on-Vascular Plants	1
	50	=Total Cover		Problematic H	lydrophytic Vegetat	ion (Explain)
Noody Vine Stratum (Plot size: 5	_)			Indicators of hydr	ic soil and wetland disturbed or proble	hydrology must matic.
2.				in present, unless	a a a cara a a proble	
		=Total Cover		Hydrophytic		
				* vgotation		

SOIL

ampling Point: UP004

inches) Co	olor (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Textur	e		Remarks
0-3	10YR 4/4	100				_	Sandy	,		
3-14	10YR 3/4	100				-	Sandy		_	
<u> </u>				-		-	- Curra			
		-				_				
						<u> </u>	-			
		_		-		-				
		-		-		-				
						<u> </u>	-	-+Q		
ype: C=Concentr	ation, D=Depl	etion, RM	Reduced Matrix, (	CS=Cove	ered or Co	pated Sa	nd Grains.	<sup>2</sup> Locatio	n: PL=Pore	Lining, M=Matrix.
ydric Soil Indicat	ors: (Applica	ble to all	LRRs, unless oth	erwise n	oted.)		- 4	ndicators f	or Problema	tic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gle	eyed Mat	rix (S4)			2 cm Mu	ick (A10) (LF	RRA, E)
Histic Epipedon	(A2)		Sandy Re	dox (S5)			1	Iron-Mai	nganese Mas	ses (F12) (LRR D)
Black Histic (A3	3)		Stripped M	Aatrix (Se	5)		-	Red Par	ent Material	(F21)
Hydrogen Sulfic	de (A4)		Loamy Mu	icky Min	eral (F1)	(except	MLRA 1)	Very Sh	allow Dark S	urface (F22)
1 cm Muck (A9	) (LRR D, G)	1444	Loamy Gl	eyed Ma	trix (F2)		-	Other (E	xplain in Rei	marks)
Depieted Below	Dark Surface	(A11)	Depieted	Matrix (F	3) (EG)		9	in disators a	f huden bidies	unashelles and
Sandy Mucky M	Aineral (S1)		Redux Da	Dark Sur	(FO)			wetland	hydrology m	ust be precent
2.5 cm Mucky R	Peat or Peat (5	2) (LRR (	G) Redox De	pression	s (F8)			unless	listurhed or n	roblematic
Restrictive Laver (	if observed):				~ (	- 1			and a rate of b	
testitetive Layer (	i observeu).									
Type:										
Type: Depth (inches): Remarks: Soil is dry	-		<u>-</u>				Hydric Soil	Present?		Yes No
Type: Depth (inches): Remarks: Soll is dry YDROLOGY			<u> -</u>				Hydric Soil	Present?		YesNo
Type: Depth (inches): Remarks: Soil is dry YYDROLOGY Wefland Hydrolog	y Indicators:		÷				Hydric Soil	Present?		YesNo
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrolog Primary Indicators (	y Indicators: minimum of o	ne is requi	ired; check all that	apply)			Hydric Soil	Present?	ndicators (2 c	Yes <u>No</u> or more required)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Wetland Hydrology Primary Indicators ( Surface Water	y Indicators: minimum of o (A1)	ne îs requi	ired: check all that Water-Sta	apply) ined Lez	ives (B9)	(except	Hydric Soil	Present? Gecondary II	ndicators (2 c	Yes No or more required) as (B9) (MLRA 1, 2
Type: Depth (inches): Remarks: Soll is dry YDROLOGY YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water High Water Tat	y Indicators: minimum of o (A1) ole (A2)	ne îs requi	ired; check all that Water-Sta MLRA	apply) ined Lea	ives (B9) , and 4B)	(except	Hydric Soil	Present? Gecondary I Water-S 4A, a	ndicators (2 d tained Leave and 4B)	Yes No or more required) os (B9) (MLRA 1, 2
Type: Depth (inches): Remarks: Soll is dry YDROLOGY YDROLOGY Vetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3)	y Indicators: minimum of o (A1) ole (A2)	ne is requi	ired: check all that Water-Sta Salt Crust	<u>apply)</u> ined Lea 1, 2, 4A, (B11)	ives (B9) and 4B)	(except	Hydric Soil	Present? Secondary II Water-S 4A, a Drainag	ndicators (2 d tained Leave and 4B) e Patterns (E	Yes No or more required) es (B9) (MLRA 1, 2
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E	y Indicators: minimum of o (A1) ole (A2) 81)	ne îs requ	rred: check all that Water-Sta MLRA Salt Crust Aquatic In	apply) ined Lea 1, 2, 4A, (B11) vertebra	ives (B9) and 4B) tes (B13)	(except	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea	ndicators (2 a tained Leave ind 4B) e Patterns (E son Water T	Yes No or more required) es (B9) (MLRA 1, 2 (10) able (C2)
Type: Depth (inches): Remarks: Soil is dry YYDROLOGY Netland Hydrolog Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo	y Indicators: minimum of o (A1) ole (A2) 81) sits (B2) 82)	ne îs requi	ired; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lez 1, 2, 4A, (B11) vertebra Sulfide (	ives (B9) and 4B) tes (B13) Odor (C1)	(except	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturatio	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on Visible on	Yes <u>No</u> or more required) as (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Wefland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Alral Mat or Cri	y Indicators: minimum of o (A1) ole (A2) 31) sits (B2) B3) (st (B4)	ne is requi	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph	ives (B9) , and 4B) tes (B13) Odor (C1) eres on I	(except	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturatio Geomor Shallow	ndicators (2 d tained Leave and 4B) e Patterns (B son Water T on Visible on phic Position Anuitard (D	Yes <u>No</u> or more required) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (C6 (102)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (( Algal Mat or Cri Iron Deposits ()	y Indicators: minimum of o (A1) ble (A2) B1) bsits (B2) B3) ust (B4) 35)	ne îs requi	ired; check all that. Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduo n Reduo	ives (B9) , and 4B) tes (B13) Odor (C1) eres on I eres on I eres on I tion in T	(except iving Ro C4) lied Soils	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturatio Geomor Shallow FAC-Ne	ndicators (2 c tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D	Yes <u>No</u> or more required) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) 5)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Wetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr	y Indicators: minimum of o (A1) ble (A2) B1) bsits (B2) B3) ust (B4) 35) acks (B6)	ne îs requi	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc stresse	ives (B9) and 4B) des (B13) Odor (C1) ieres on I ced Iron ( ction in Ti d Plants	(except Living Rc C4) Iled Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds (	Yes <u>No</u> or more required) os (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) 5) D6) (LRR A)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Wetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit	y Indicators: minimum of o (A1) ble (A2) 81) sits (B2) B3) ust (B4) 35) acks (B6) ble on Aerial In	ne is requi	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o 7) Other (Ex	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc stresse blain in F	ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tition in Ti d Plants Remarks)	(except iving Ro C4) lied Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised / Frost-He	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> <u>or more required</u> ) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) 5) (D6) (LRR A) icks (D7)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Ydrand Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Crn Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget	y Indicators: minimum of o (A1) ble (A2) 81) vsits (B2) B3) ust (B4) 35) acks (B6) ble on Aerial In ated Concave	ne is requi nagery (B Surface (	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Ins Stunted o 7) Other (Ex B8)	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F	tes (B9) and 4B) Ddor (C1) eres on I ced Iron ( tition in Ti d Plants Remarks)	(except Living Rd C4) Iled Soils (D1) (LR	Hydric Soil	Present? Secondary II Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised / Frost-He	ndicators (2 a tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> <u>or more required</u> ) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS ((D2) 5) (D6) (LRR A) bcks (D7)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Crn Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget	y Indicators: minimum of o (A1) ole (A2) 31) osits (B2) B3) ust (B4) 35) acks (B6) ole on Aerial In ated Concave s:	ne is requi nagery (B Surface (	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent In Stunted o 7) Other (Ex B8)	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse olain in F	ives (B9) and 4B) tes (B13) Odor (C1) ieres on I ced Iron ( tition in Ti d Plants Remarks)	(except iving Rc C4) Iled Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised J Frost-He	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> or more required) to (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) () () () () () () () () () (
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cm Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget	y Indicators: minimum of o (A1) ole (A2) (A1) sists (B2) B3) ust (B4) 35) acks (B6) ole on Aerial In ated Concave s: sent? Ye	ne is requi nagery (B Surface ( s	red: check all that Water-Sta MLRA Sait Crust Aquatic In Hydrogen Oxidized R Presence Recent Irc Stunted o 7) Other (Ex B8)	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F	ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants Remarks)	(except iving Ro C4) lied Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised / Frost-He	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> or more required) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (C6 (D2) 5) (D6) (LRR A) icks (D7)
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Ydland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget Field Observations Surface Water Prese Vater Table Preser	y Indicators: minimum of o (A1) ole (A2) 81) 83) ust (B2) 83) ust (B4) 35) acks (B6) ole on Aerial In ated Concave s: sent? Ye	ne is requi nagery (B Surface () s	ired; check all that. Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc r Stresse plain in F Depth ( Depth (	ives (B9) , and 4B) tes (B13) Odor (C1) eres on I ceed Iron ( tition in Ti d Plants Remarks) remarks) inches): _inches):	(except iving Rc C4) lied Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised J Frost-He	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> or more required) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) 5) (D6) (LRR A) bcks (D7)
Type: Depth (inches): Remarks: Soil is dry Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsety Veget Field Observations Surface Water Preser Saturation Present?	y Indicators: minimum of o (A1) ole (A2) B3) ust (B2) B3) ust (B4) 35) acks (B6) ole on Aerial Ir ated Concave s: sent? Ye ht? Ye	ne is requi magery (B Surface ( ss	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrai Sulfide ( Rhizosph of Reduo n Reduo r Stresse olain in F Depth (i Depth (i	ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tition in Ti d Plants Remarks) anches): inches): inches):	(except Living Ro C4) lied Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised J Frost-He Hydrology I	ndicators (2 ( tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo	Yes <u>No</u> <u>or more required</u> ) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) (D6) (LRR A) icks (D7) Yes <u>No</u>
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vetland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget Field Observations Surface Water Prese Vater Table Preser Saturation Present? includes capillary fi	y Indicators: minimum of o (A1) ble (A2) 31) bits (B2) B3) ust (B4) 35) acks (B6) ble on Aerial Ir ated Concave s: sent? Ye her? Ye Ye bit? Ye	ne is requi magery (B Surface ( ss	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc r Stresse olain in F Depth (i Depth (i	ives (B9) and 4B) des (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants Remarks) inches): inches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised J Frost-He Hydrology I	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo Present?	Yes <u>No</u> <u>or more required</u> ) es (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) )) 5) (D6) (LRR A) icks (D7) Yes <u>No</u>
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Wetland Hydrology Primary Indicators ( Surface Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget Field Observations Surface Water Preser Saturation Present? includes capillary fi Describe Recorded	y Indicators: minimum of o (A1) ble (A2) 31) ble (A2) 83) Jst (B2) 83) Jst (B4) 35) acks (B6) ble on Aerial In ated Concave s: sent? Ye her Ye inge) Data (stream	ne is requi nagery (B Surface ( s s gauge, mo	ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrai Sulfide ( Rhizosph of Reduc r Stresse blain in F Depth (i Depth (i Depth (i I photos	ives (B9) and 4B) tes (B13) Odor (C1) teres on I ced Iron ( tion in Ti d Plants (emarks) (inches): inches): inches):	(except Living Rc C4) Iled Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised / Frost-He Hydrology I tbie:	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo Present?	Yes <u>No</u> <u>or more required)</u> 25 (B9) (MLRA 1, 2 110) able (C2) Aerial Imagery (C9 (D2) 5) D6) (LRR A) bcks (D7) Yes <u>No</u>
Type: Depth (inches): Remarks: Soil is dry YDROLOGY Vefland Hydrology Primary Indicators ( Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget Field Observations Surface Water Prese Vater Table Present Saturation Present? includes capillary fi Describe Recorded Remarks:	y Indicators: minimum of o (A1) ole (A2) (A1) sits (B2) B3) Just (B4) 35) acks (B6) ole on Aerial In ated Concave s: sent? Ye ht? Ye ye ninge) Data (stream	nagery (B Surface ( s s gauge, mo	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebra Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in F Depth (i Depth (i Depth (i	ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants Remarks) (inches): inches): inches):	(except iving Rc C4) Iled Soils (D1) (LR	Hydric Soil	Present? Gecondary II Water-S 4A, a Drainag Dry-Sea Saturation Geomor Shallow FAC-Ne Raised J Frost-He Hydrology I able:	ndicators (2 d tained Leave and 4B) e Patterns (E son Water T on Visible on phic Position Aquitard (D3 utral Test (D Ant Mounds ( eave Hummo Present?	Yes <u>No</u> or more required) to (B9) (MLRA 1, 2 (10) able (C2) Aerial Imagery (CS (D2) () 5) (D6) (LRR A) toks (D7) Yes <u>No</u>

ENG FORM 6116-9, JUL 2018

Project/Site: Floyd Hill to Veterans Memorial Tunnel       Dity/County:       Clear Creek County       Sampling Date:       7/         Applicant/Owner:       CDOT - Region 1       State:       CO       Sampling Point:         Investigator(s):       Filipi and Kzilinski       Section. Township, Range:       Net 432, 135, R72W         Landform (hillside, terrace, etc.):       Terrace       Locat relief (concave, convex, none):       filat       Slate:	26/2022 WL5 (D83
pplicant/Owner:       CDDT - Region 1       State:       CO       Sampling Point:         vestigator(s): Fillipi and Kizlinski       Section Township, Range:       NE4 532, T35, R72W         andform (hilside, terrace, etc.):       Terrace       Local relief (concave, convex, nore):       ftat       Slope (*)         ubregion (LRR):       LRR E, MLRA 48A       Lat:       39.74690       Long:       105,46507       Datum: N         re dimatic / hydrologic conditions on the site typical for this time of year?       Yes       No	WL5 (D83
vestigator(s): Fillipit and Kizlinski	6): <u>1-</u>
Indiom (hillside, terrace, etc.): Terrace       Local relief (concave, convex, none):       ftat       Slope (indicator)         Id Map Unit Name:       Cathedral-Rock outcrop complex, 30 to 70 percent slopes       NW/ classification:       UPL         e dimatic / hydrologic conditions on the site typical for this time of year?       Yes X       No       (if no, explain in Remarks.)         e vegetation	6): <u>1-</u> ;
abregion (LRR):       LRR E, MLRA 48A       Lat: 39.74690       Long: -105.46507       Datum: N         all Map Unit Name:       Cathedral-Rock outcrop complex, 30 to 70 percent stopes       NW/ classification: UPL       No	AD83
bill Map Unit Name: Cathedral-Rock outcrop complex, 30 to 70 percent slopes       NVU classification: UPL         e climatic / hydrologic conditions on the site typical for this time of year?       Yes X       No	
e climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) e Vegetation Soil or Hydrology significantly disturbed? Are 'Normal Circumstances' present? Yes X No (If no, explain in Remarks.) e Vegetation Soil X or Hydrology neturally problematic? (If needed, explain any answers in Remarks.) UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature tydrophytic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.) UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature tydrophytic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.) Vettand Hydrology Present? Yes X No (If needed, explain any answers in Remarks.) termarks: ringe wetland along Clear Creek EGETATION – Use scientific names of plants. Tee Stratum (Plot size: 30 ) % Cover Species? Status Status (Plot size: 15 ) % Cover Species? (If a Number of Dominant Species That Are OBL, FACW, or FAC: 3 Total Number of Dominant Species That Are OBL, FACW, or FAC: 100.07 Static arigue (Plot size: 15 ) Static arigue (Plot size: 5 ) Eleocharts paluétris (Plot size: 5 ) Leto Stratum (Plot size: 5 ) Leto Stratus albe 5 No UPL Multiply by Multiply by Multiply ang (Plot size: 5 ) (If Yes OBL Multiply and (Cover of Multiply by Coll species 10 x 1 = 10 UPL species 5 x 5 = 25 Column Totals: 115 (A) 236 Prevalence Index = BA = 2.04 Hydrophytic Vegetation Indicators:	
e Vegetation	-
e VegetationSoilX_ or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.) UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature Hydrophytic Vegetation Present? YesX_ No	
UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature         tydrophytic Vegetation Present?       Yes       X       No       Is the Sampled Area         tydrophytic Vegetation Present?       Yes       X       No       within a Wetland?       Yes       X       No         Vettand Hydrology Present?       Yes       X       No       within a Wetland?       Yes       X       No         Vettand Hydrology Present?       Yes       X       No       within a Wetland?       Yes       X       No         Vettand Hydrology Present?       Yes       X       No	9.57
Hydrophytic Vegetation Present?       Yes       X       No       Is the Sampled Area         Hydric Soil Present?       Yes       X       No       within a Wetland?       Yes       X       No         Remarks:       indicator       Yes       X       No       Mo       Wetland Hydrology Present?       Yes       X       No       Mo         Remarks:       indicator       Mo       Dominant       Indicator       Dominant       Dominant Species       No       Mo         Itee Stratum       (Plot size:       30       )       Mo Cover       Species?       Status       Dominant Species That Are OBL, FACW, or FAC:       3         Sapling/Shrub Stratum       (Plot size:       15       )       =       Total Cover       Prevalence Index worksheet:       100.01         Sapling/Shrub Stratum       (Plot size:       15       )       =       Total Cover       FACW       Prevalence Index worksheet:       100.01         Sapoling/Shrub Stratum       (Plot size:       5       )       =       100       Yes       FACW       Prevalence Index worksheet:       100.01         Sapoling/Shrub Stratum       (Plot size:       5       )       =       100       Yes       FACW       Prevalence Index work	s, etc
Remarks:         Fringe weltland along Clear Creek         EGETATION – Use scientific names of plants.         Image: Statum (Plot size:)       Absolute Dominant indicator Species? Status         Dominance Test worksheet:         Image: Note of Dominant Species       Number of Dominant Species That Are OBL, FACW, or FAC:	
EGETATION – Use scientific names of plants.         Tree Stratum (Plot size: 30 )       Absolute Dominant indicator Species? Status         Image: Stratum (Plot size: 30 )       Absolute Species? Status       Dominance Test worksheet:         Image: Stratum (Plot size: 15 )       Image: Stratum (Plot size: 16 ) </th <th></th>	
Absolute       Dominant       Indicator         ree Stratum       (Plot size: 30 )       0       96 Cover       Species?       Status       Dominante Test worksheet:         Number of Dominant Species That       Are OBL, FACW, or FAC: 3       3         Total Number of Dominant Species       Across All Strata: 3       3         ==Total Cover       ==Total Cover       Percent of Dominant Species That         Salix exigue       80       Yes       FACW         Salix exigue       80       Yes       FACW         Salix exigue       80       Yes       FACW         Prevalence Index worksheet:       100.04         Total % Cover of:       Multiply by:         0BL species       10       x 1 =       10         9       =Total Cover       FACW       FACW, or FAC: 200       200         9       Facus pacies       10       x 1 =       10         9       Facus pacies       0       x 2 =       200         9       FACW       Species       0       x 3 =       0         9       FACU species       0       x 4 =       0         9       Eleocharis palustris       10       Yes       OBL       UPL species       5 </td <td></td>	
Image: Stratum (Plot size: 15)       Image: Stratum (Plot size: 16)       Image: Stratum (Plot size: 115)       Image: Stratum (Plot size: 11	
Are OBL, FACW, or FAC:       3         Are OBL, FACW, or FAC:       3         Total Number of Dominant Species       3         Across All Strata:       3         Percent of Dominant Species That       3         Are OBL, FACW, or FAC:       3         Salix exigua       80       Yes         Salix exigua       80       Yes         Salix exigua       80       Yes         Prevalence Index worksheet:       100.00         Total % Cover of:       Multiply by:         OBL species       10         Salix exigua       80         Salix exigua       80         Yes       FACW         Prevalence Index worksheet:       100.00         Total % Cover of:       Multiply by:         OBL species       10       x 1 = 10         FACW species       100       x 2 = 200         FAC species       0       x 3 = 0         FACU species       0       x 4 = 0         UPL species       5       x 5 = 25         Column Totals:       115       (A)       235         Prevalence Index = B/A =       2.04       100         Melliotus elba       5       No       UPL </td <td></td>	
image: stapping/Shrub Stratum       (Plot size: 15)       image: stapping/Shrub Stratum       (Plot size: 15)       image: stapping/Shrub Stratum       image: stapping/Sh	(A)
appling/Shrub Stratum       (Plot size: 15)         Salix exigua       80       Yes       FACW         Prevalence Index worksheet:       100.04         Total % Cover of:       Multiply by:         OBL species       10       x1 =       10         Sector aris palustris       10       Yes       OBL       FACW         Prevalence Index worksheet:       Total % Cover of:       Multiply by:       OBL species       10       x1 =       10         Sector aris palustris       5       10       Yes       OBL       FACW       Yes       5       0       X4 =       0         Melliotus alba       5       No       UPL       Fevalence Index = B/A =       2.04       Prevalence Index worksheet:       100.04         Melliotus alba       5       No       UPL       Prevalence Index worksheet:       10       10         Melliotus alba       5       No       UPL       FACW species       0       x3 =       0         FACU species       5       No       UPL       UPL species       5       x5 =       25         Column Totals:       115       (A)       235       Prevalence Index = B/A =       2.04	(B)
Salix exigua       80       Yes       FACW         Salix exigua       80       Yes       FACW         Prevalence Index worksheet:       Total % Cover of:       Multiply by:         OBL species       10       x1 =       10         Selix exigua       80       Yes       FACW       FACW         Prevalence Index worksheet:       Total % Cover of:       Multiply by:         OBL species       10       x1 =       10         FACW species       00       x2 =       200         FAC species       0       x3 =       0         FACU species       0       x4 =       0         UPL species       5       No       UPL         Prevalence Index = B/A =       2.04       2.04	_,_,
Salix exigua       80       Yes       FACW         Prevalence Index worksheet:	a_(A/
Prevalence Index worksheet:         Total % Cover of:       Multiply by:         OBL species       10       x1 =       10         FACW species       10       x2 =       200         FACW species       0       x3 =       0         FACU species       0       x4 =       0         UPL species       0       x4 =       0         UPL species       5       x5 =       25         Melliotus alba       5       No       UPL         Hydrophytic Vegetation Indicators:       Hydrophytic Vegetation Indicators:	
Image: Section of the section of th	
Bit       Bit       Bit       FACW species       100       x 2 =       200         FACW species       0       x 3 =       0         FACW species       0       x 3 =       0         FACW species       0       x 4 =       0         FACU species       0       x 4 =       0         UPL species       5       x 5 =       25         Column Totals:       115       (A)       235         Melliotus alba       5       No       UPL         Hydrophytic Vegetation Indicators:       Hydrophytic Vegetation Indicators:	
lerb Stratum       (Plot size: 5)       5       5       0       x 3 = 0         Eleocharis palustris       10       Yes       OBL       FACU species       0       x 4 = 0         Upl species       5       20       Yes       FACW       0       235         Melliotus alba       5       No       UPL       Prevalence Index = B/A = 2.04         Hydrophytic Vegetation Indicators:       10       Yes       Hydrophytic Vegetation Indicators:	_
International conditional condition	_
Eleocharis palustris       10       Yes       OBL       UPL species       5       x.5 =       25         Juncus balticus       20       Yes       FACW       Column Totals:       115       (A)       235         Melilotus alba       5       No       UPL       Prevalence Index = B/A =       2.04         Hydrophytic Vegetation Indicators:       115       115       115       115	
Juncus balticus     20     Yes     FACW     Column Totals:     115     (A)     235       Melilotus alba     5     No     UPL     Prevalence Index = B/A =     2.04       Hydrophytic Vegetation Indicators:	
Melilotus alba     5     No     UPL     Prevalence Index = B/A =     2.04       Hydrophytic Vegetation Indicators:	(B)
Hydrophytic Vegetation Indicators:	- Y
X 1 - Rapid Test for Hydrophytic Vegetation	
X_2 - Dominance Test is >50%	
X 3 - Prevalence Index is ≤3.0	
4 - Morphological Adaptations (Provide s	pporti
1 5 - Wetland Non-Vascular Plants <sup>1</sup>	tì
35 =Total Cover Problematic Hydrophytic Vegetation (Ex	t)
Voody Vine Stratum (Plot size:)  Voody Vine Stratum (Plot size:) be present, unless disturbed or problematic	t) Ilain)
	t) )lain) y mus
6 Bare Ground in Herb Stratum = Total Cover Vegetation Present? Yes X No	t) xlain) y mus
000

phila	Point	WLS
	A DESCRIPTION OF A DESC	

nches) Color (mois	t) %	Color (moist)	%	Type	Loc	Tex	ture		Remarks	
0-5 10YP 3/4	95	7.5YP 4/6	5			Sa	ndu	÷	(torriania)	_
5 14 10YP 4/4	75	5VD 4/6	- 25	-	-		ortu	-		_
0-14 101 K 4/4	/5	DTR 4/6	20	-	-		iuy	_		_
			-	i						_
			_	-	-	-				_
				-	-	_				_
			-	-	-	_				
			-	-	-	-		-		_
vne: C=Concentration D=	Depletion RM	=Reduced Matrix (	S=Cove	red or Co	neted Sa	nd Grains	<sup>2</sup> Local	ion' PI=Po	re Linino, M=Matrix	21
dric Soil Indicators: (Ap)	licable to all	LRRs, unless othe	erwise no	oted.)	Saled Sal	id Gluina.	Indicators	for Problem	matic Hydric Soils	3.2
Histosol (A1)		Sandy Gle	eyed Matr	ix (S4)			2 cm	Muck (A10)	(LRR A, E)	
Histic Epipedon (A2)		Sandy Re	dox (S5)				Iron-N	langanese N	Aasses (F12) (LRR	D)
Black Histic (A3)		Stripped N	Aatrix (S6	0			Red F	arent Materi	al (F21)	
Hydrogen Sulfide (A4)		Loamy ML	icky Mine	eral (F1)	(except l	ILRA 1)	Very	Shallow Dark	Surface (F22)	
1 cm Muck (A9) (LRR D	G)	Loamy Gl	eyed Mat	rix (F2)			Other	(Explain in F	Remarks)	
Depleted Below Dark Su	rface (A11)	Depleted I	Matrix (FS	3)						
Thick Dark Surface (A12	)	Redox Da	rk Surfac	e (F6)			<sup>9</sup> Indicators	of hydrophy	tic vegetation and	
Sandy Mucky Mineral (S	1)	Depleted I	Dark Surf	ace (F7)			wetlar	d hydrology	must be present.	
2.5 cm Mucky Peat or Pe	eat (S2) (LRR	G) Redox De	pressions	s (F8)			unless	disturbed o	r problematic.	
										_
estrictive Layer (if observ	ed):				111					
estrictive Layer (if observ Type:Co	ed): bble	_			11					
estrictive Layer (if observ Type: <u>Co</u> Depth (inches): emarks: roblematic soil, young depo	ed): <u>14</u> sit, faint but pi	resent redox				Hydric S	oil Present	2	Yes <u>X</u> No	
estrictive Layer (if observ Type: <u>Co</u> Depth (inches): emarks: roblematic soil, young depo	ed): bble 14 sit, faint but pi	resent redox				Hydric S	oil Present'	,	Yes <u>X</u> No	
estrictive Layer (if observ Type:Co Depth (inches): emarks: roblematic soil, young depo YDROLOGY /etland Hydrology Indicate	ed): 14 14 sit, faint but pi prs:	resent redox				Hydric S	oil Present	,	Yes <u>X</u> No	3
estrictive Layer (if observ Type:Co Depth (inches): emarks: roblematic soil, young depo YDROLOGY /etland Hydrology Indicator rimary Indicators (minimum	ed): bble 14 sit, faint but pr prs: of one is requ	resent redox	apply)			Hydric S	oil Present	/ Indicators (	Yes X No	) )
estrictive Layer (if observ Type:Co Depth (inches): emarks: roblematic soil, young depo YDROLOGY Yetland Hydrology Indicate rimary Indicators (minimum Surface Water (A1)	ed): bble 14 sit, faint but pr prs: of one is requ	resent redox ired: check all that X Water-Sta	apply)	ves (B9)	(except	Hydric S	oil Present Secondan Water	/ Indicators ( -Stained Lea	Yes X No 2 or more required aves (B9) (MLRA 1	) ) ,2
estrictive Layer (if observ Type:Co Depth (inches): emarks: roblematic soil, young depo /DROLOGY /etland Hydrology Indicate rimary Indicators (minimum Surface Water (A1) High Water Table (A2)	ed): 30ble 14 ssit, faint but pr ssit, faint but pr prs: of one is requ	resent redox irred: check all that X Water-Sta MLRA	apply) ined Lear 1, 2, 4A,	ves (B9) and <b>4B</b> )	(except	Hydric S	oil Present Secondar Water 4A	/ Indicators ( -Stained Lea , and 4B)	Yes X No 2 or more required aves (B9) (MLRA 1	) 12
estrictive Layer (if observ Type: Co Depth (inches): emarks: roblematic soil, young depo <b>(DROLOGY</b> etland Hydrology Indicate imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	ed): <u>14</u> sit, faint but pr ors: <u>of one is requ</u>	resent redox nired: check all that X Water-Sta MLRA Salt Crust	apply) ined Lear 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric S	oil Present Secondar Water 4A Draina	/ Indicators ( -Stained Lea , and 4B) age Patterns	Yes X No 2 or more required aves (B9) (MLRA 1 (B10)	) , 2
estrictive Layer (if observ Type: Co Depth (inches): emarks: oblematic soil, young depo <b>(DROLOGY</b> etland Hydrology Indicate imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed): <u>14</u> sit, faint but pr ors: <u>of one is requ</u>	resent redox <u>irred: check all that</u> <u>X</u> Water-Sta <u>MLRA</u> Salt Crust Aquatic In	apply) nined Lear 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B) es (B13)	(except	Hydric S	Secondan Water 4A Draina Dry-S	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2)	3 )2 , 2
estrictive Layer (if observ Type: Co Depth (inches): emarks: roblematic soil, young depo (DROLOGY fetland Hydrology Indicate timary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ed): <u>14</u> sit, faint but pr ors: <u>of one is requ</u>	resent redox	apply) ined Lear 1, 2, 4A, (B11) vertebråt Sulfide C	ves (B9) and 4B) es (B13) Odor (C1)	(except	Hydric S	Secondan Water 4A Draina Dry-S Satura	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery	) , 2 (C9)
estrictive Layer (if observ Type: Co Depth (inches): emarks: roblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ed): <u>14</u> sit, faint but pr ors: <u>of one is requ</u>	resent redox <u>irred: check all that</u> <u>X</u> Water-Sta <u>MLRA</u> Salt Crust <u>A</u> quatic In <u>H</u> ydrogen <u>X</u> Oxidized F	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphr	ves (B9) and 4 <b>B</b> ) es (B13) Ddor (C1) eres on I	(except	Hydric S	Secondan Water 4A Draina Dry-S Satura X Geom	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2)	) , 2 (C9)
estrictive Layer (if observ Type: Co Depth (inches): emarks: roblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ed): <u>14</u> st, faint but pr ors: <u>of one is requ</u>	resent redox <u>irred: check all that</u> <u>X</u> Water-Sta <u>MLRA</u> Salt Crust Aquatic In Hydrogen X Oxidized F Presence	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on I ered Iron (	(except	Hydric S	Secondan Water 4A Draina Dry-S Satura X Geom	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard (	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3)	) , 2 (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: roblematic soil, young depo (DROLOGY fetland Hydrology Indicati imary Indicators (minimum 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)	ed): <u>bble</u> 14 sit, faint but pr ors: <u>of one is requ</u>	resent redox	apply) inted Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospha of Reductor Reductor Reductor	ves (B9) and 4B) es (B13) Odor (C1) eres on L eed Iron ( tion in Til 4 Diction	(except ) Living Ro C4) Iled Soils	Hydric S ots (C3) (C6)	Secondan Water 4A Draina Dry-S Satura X Geom X FAC-1	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Jeutral Test	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) 4 (D0) (1 BB A)	)) , 2 (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: roblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum 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) Isurface Soil Cracks (B6)	ed): <u>bble</u> <u>14</u> st, faint but pr prs: <u>of one is requ</u>	resent redox	apply) inted Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduct on Reduct r Stresser on Reduct	ves (B9) and 4B) es (B13) Ddor (C1) eres on L eed Iron ( tion in Til d Plants emarke)	(except iving Ro C4) lied Soils (D1) (LR	Hydric S ots (C3) (C6) R A)	Secondan Water 4A Draine Dry-S Satura X Geom Shello X FAC-1 Raise	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) moder (D7)	) , 2 (C9
estrictive Layer (if observ Type: Ca Depth (inches): emarks: oblematic soil, young depo <b>(DROLOGY</b> etland Hydrology Indicati imary Indicators (minimum 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 Ae Sparsely Vegetated Con	ed): abble 14 asit, faint but pr asit, faint but pr brs: of one is requ of one is requ fial Imagery (E cave Surface (	resent redox ired: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or 37) Other (Exp (88)	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc on Reduc r Stresser plain in R	ves (B9) and 4B) dor (C1) eres on L red Iron ( tion in Til d Plants emarks)	(except Living Ro C4) Iled Soils (D1) (LR	Hydric S ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humn	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7)	1) , 2 (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: oblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum 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) Ihundation Visible on Ae Sparsely Vegetated Con eld Observations:	ed): abble 14 asit, faint but pr ors: of one is requ frial Imagery (E cave Surface (	resent redox <u>irred: check all that</u> <u>X</u> Water-Sta <u>MLRA</u> Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irco Stunted or 37)Other (Exp (B8)	apply) ined Lear 1, 2, 4A, (B11) vertebrati Sulfide C Rhizosphe of Reduct on Reduct r Stressea plain in R	ves (B9) and 4B) odor (C1) eres on L ed Iron ( tion in Til d Plants emarks)	(except Living Ro (C4) lied Soils (D1) (LR	Hydric S ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	And the season water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humi	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7)	)) , 2 (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: roblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum 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 Ae Sparsety Vegetated Con eld Observations; Inface Water Present?	ed): abble 14 asit, faint but pr asit, faint but pr ors: of one is requ fial Imagery (E cave Surface (	resent redox ired: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or 97) Other (Exp (B8)	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc of Reduc on Reduc r Stresser plain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I teed Iron ( tion in Til d Plants ermarks) nches);	(except Living Ro C4) Iled Soils (D1) (LR	Hydric S ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	And the search of the search o	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7)	)) (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: roblematic soil, young depo (DROLOGY etland Hydrology Indicate imary Indicators (minimum 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con eld Observations: Inface Water Present?	rial Imagery (E 24 25 25 25 25 25 25 25 25 25 25 25 25 25	resent redox <u>irred: check all that</u> <u>X</u> Water-Sta <u>MLRA</u> Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or 37) Other (Exp (B8) No <u>X</u> No X	apply) inted Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc of	ves (B9) and 4B) es (B13) Odor (C1) eres on I ied Iron ( tion in Til d Plants emarks) emarks): nches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric S ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humr	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7)	0) ), 2 (C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: roblematic soil, young depo (DROLOGY fetland Hydrology Indicati imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sotiface Voter (A1) Drift Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsety Vegetated Con eld Observations; urface Water Present? aturation Present?	rial Imagery (E cave Surface ( Yes Yes	resent redox irred: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or (B8) No X No X No X	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc of Reduc on Reducl on Re	ves (B9) and 4B) es (B13) Odor (C1) eres on L ied Iron ( tion in Til d Plants ermarks) ermarks) nches):_ nches):_	(except ) Living Ro (C4) Illed Soils (D1) (LR	Hydric S ots (C3) (C6) R A) Wetlan	Secondan Water 4A Draina Dry-S Satura X Geom X FAC-1 Raise Frost-	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humn y Present?	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7) Yes X No	0 ), 2 (C9)
Algal Mat or Crust (B4) Iron Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con eld Observations: Irface Water Present? aturation Present? atu	ed): bble 14 bsit, faint but pl brs: of one is requ fial Imagery (E cave Surface ( Yes Yes Yes	resent redox irred: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irre Stunted or 37) Other (Ex) (B8) No X No X No X	apply) ined Lear 1, 2, 4A, (B11) vertebråt Sulfide C Rhizospho of Reduc on Reduc r Stressea plain in R Depth (in Depth (in	ves (B9) and 4B) es (B13) Odor (C1) eres on L eed Iron ( tion in Til d Plants emarks) nches): nches):	(except iving Ro C4) lied Soils (D1) (LR	Hydric S ots (C3) (C6) R A) Wetlan	Secondan Water 4A Draine Dry-S Satura X Geom X FAC-1 Raise Frost-	/ Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humi y Present?	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) is (D6) (LRR A) mocks (D7) Yes X No	0 (C9)
estrictive Layer (if observ Type:Co Depth (inches): emarks: roblematic soil, young depo (DROLOGY fettand Hydrology Indicate imary Indicators (minimum 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsety Vegetated Con eld Observations: urface Water Present? aturation Present? aturation Present? aturation Present? aturation Present? aturation Present?	ed): abble 14 asit, faint but pr arial Imagery (E cave Surface ( Yes Yes Yes Yes eam gauge, m	resent redox ired: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or Stunted or Other (Exp (B8) No X No X No X No X No X	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc on	ves (B9) and 4B) odor (C1) eres on L ed Iron ( tion in Til d Plants emarks) nches): nches): previous	(except Living Ro C4) Iled Soils (D1) (LR	Hydric S ots (C3) (C6) R A) Wetlan	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	y Indicators ( -Stained Lea, , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humn y Present?	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7) Yes X No	(C9)
estrictive Layer (if observ Type: Cd Depth (inches): emarks: oblematic soil, young depo (DROLOGY etland Hydrology Indicati imary Indicators (minimum 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con eld Observations; urface Water Present? aturation Present? aturation Present? aturation Present? aturation Present? aturation Present? aturation Present?	rial Imagery (E Yes Yes Yes eam gauge, m	resent redox irred: check all that X Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or Stunted or (B8) No X No X No X No X No X No X No X	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc of Reduc on Reducl on Re	ves (B9) and 4B) es (B13) Odor (C1) eres on L ied Iron ( tion in Til d Plants ermarks) inches): nches): previous	(except ) Living Ro (C4) Iled Soils (D1) (LR	Hydric S ots (C3) (C6) R A) Wetlan	Secondan Water 4A Draina Dry-S Satura X Geom Shallo X FAC-1 Raise Frost-	y Indicators ( -Stained Lea , and 4B) age Patterns eason Water ation Visible orphic Positi w Aquitard ( Neutral Test d Ant Mound Heave Humn y Present?	Yes X No 2 or more required aves (B9) (MLRA 1 (B10) r Table (C2) on Aerial Imagery ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D7) Yes X No	)) ), 2 (C9

ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	orps of Eng - Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and C CW-CO-I	Coast Region R	OMB Control #: 0710-00 Requirement Control (Authority: AR 335-15	24, Exp: 11/30/2024 Symbol EXEMPT: paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel	1	City/Cou	nty: Clear C	Creek County	Sampling D	ate: 7/26/202
pplicant/Owner: CDOT - Region 1		2.10		State: C	O Sampling Po	int: WL6
vestigator(s): Fillipi and Kizlinski		Section, 7	ownship, Ra	ange: NE4 S32, T	3S, R72W	
andform (hillside, terrace, etc.):	7	Local relief (c	oncave, conv	vex, none):		Slope (%): 1-
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	74766		Long: 1	05.46459	Dati	m: NAD83
oil Map Unit Name: Cathedral-Rock outcrop comp	lex, 30 to 70 pe	rcent slopes	1000	NWI	classification: UPL	
re climatic / hydrologic conditions on the site typica	al for this time o	f vear?	Yes X	No (lfr	o, explain in Remark	s.)
re Vegetation Soil or Hydrology	significantly	disturbed? A	re "Normal"	Circumstances" pre	sent? Yes X	No
re Vegetation Soil X or Hydrology	naturally pro	blematic? (	If needed ex	xplain any answers	in Remarks.)	
UMMARY OF FINDINGS - Attach site	map showin	ng samplin	g point lo	ocations, trans	ects, important	features, et
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	a Sampled A n a Wetland	Area 1? Yes_	<u>X</u> No	
Remarks: Fringe wetland along Clear Creek						
EGETATION – Use scientific names o	f plants.				_	
Free Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	st worksheet:	
		<u> </u>		Number of Dom	inant Species That	
				Are OBL, FACM	, or FAC:	4 (A)
				Across All Strate	Dominant Species	A (B)
		=Total Cover	_	Percent of Dom	nant Species That	(L)
Sapling/Shrub Stratum (Plot size: 15	_)	160-	E A CIVAL	Are OBL, FACM	/, or FAC:	100.0% (A/
Salix exigua		Tes	FACVV	Prevalence Ind	ev worksheet	-
				Total % Co	verof: Mu	Itiply by:
í			_	OBL species	45 x 1 =	45
			-	FACW species	30 x 2 =	60
	20	=Total Cover		FAC species	15 x 3 =	45
erb Stratum (Plot size: 5)			5.	FACU species	0 x 4 =	0
Eleocharis palustris		Yes	OBL	UPL species	0 x 5 =	0
Carex nebrascensis		Yes	OBL	Column Totals:	90 (A)	150 (B
Carex atbrostachva	10	No	FACW	Prevalence	1dex = 6/A =	1.0/
				Hydrophytic Ve	getation Indicators	
	-			X 1 - Rapid Te	est for Hydrophytic V	egetation
				X 2 - Dominar	nce Test is >50%	
				X 3 - Prevaler	ice index is ≤3.0 <sup>1</sup>	
			_	4 - Morpholo	gical Adaptations (F	rovide supporti
0	-			data in R	emarks or on a sepa	rate sheet)
11		Taka		5 - Wetland	Non-Vascular Plants	f Had restored
Noody Vine Stratum (Plot size: 5	_)	= rotal Cover		Indicators of hy	Hydropnytic Vegeta dric soil and wetland ss disturbed or probl	uon (Explain) hydrology mus ematic
2			_	De present, diffe	as alataroed or probl	
% Bare Ground in Herb Stratum 0		=Total Cover		Hydrophytic Vegetation Present?	Yes X No	
COLORED STRATE TO COLORADIT U				L'INSELL L	NU NU	

nches) Color (moist)	%	Color (moist)	%	Type	Loc	Textu	ire		Remarks	
0-7 10YR 3/3	100	7.5YR 5/6	20	C	M	San	dy	Prominent	redox concentr	ations
				Z	Ξ.	_				
			_	Ξ						
	-	_	-	_	2	_		-		_
	$\equiv$		Ξ		$\equiv$					
ype: C=Concentration, D=Dep	letion, RM	Reduced Matrix, C	S=Cove	red or Co	pated Sar	nd Grains.	<sup>2</sup> Local	tion: PL=Pore	e Lining, M=Mat	rix.
dric Soil Indicators: (Applica	ble to all	RRs, unless othe	erwise no	oted.)	1.00	1.1.1	Indicators	s for Problem	natic Hydric So	ils <sup>3</sup> :
Histosol (A1)		Sandy Gle	yed Matr	ix (S4)			2 cm	Muck (A10) (L	RRA, E)	
Histic Epipedon (A2)		Sandy Re	dox (S5)				Iron-N	langanese Ma	asses (F12) (LR	RD)
Black Histic (A3)		Stripped N	latrix (S6	5)			Red F	Parent Materia	l (F21)	
Hydrogen Sulfide (A4)		Loamy Mu	cky Mine	eral (F1)	except N	ALRA 1)	Very	Shallow Dark	Surface (F22)	
1 cm Muck (A9) (LRR D, G)		Loamy Gle	eyed Mat	rix (F2)			Other	(Explain in Re	emarks)	
Depleted Below Dark Surface	e (A11)	Depleted I	Matrix (F3	3)			14 M.			
Thick Dark Surface (A12)		Redox Da	k Surfac	e (F6)			<sup>9</sup> Indicators	s of hydrophyt	ic vegetation an	d
Sandy Mucky Mineral (S1)		Depleted I	Dark Surf	face (F7)			wetlan	nd hydrology r	must be present	4
2.5 cm Mucky Peat or Peat (	S2) (LRR (	3)Redox De	pressions	s (F8)			unles	s disturbed or	problematic.	
estrictive Laver (if observed):										
entresses and as the mental state of the										
Type: Cobbles/G	ravel									
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits	ravel 7 s but clear	redox				Hydric Soi	il Present	?	Yes <u>X</u>	No
Type: Cobbles/Gi Depth (inches): emarks: oblematic soils, young deposits	ravel 7 s but clear	redox				Hydric Soi	il Present	2	Yes <u>X</u>	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic solls, young deposits /DROLOGY /etland Hydrology Indicators:	ravel 7 s but clear	redox				Hydric Soi	il Present	2	Yes <u>X</u>	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of c	ravel 7 s but clear	redox	apply)			Hydric Sol	il Present	? y Indicators (2	Yes X	No
Type:Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits //DROLOGY retland Hydrology Indicators: imary Indicators (minimum of c Surface Water (A1)	ravel 7 s but clear one is requi	redox red: check all that	apply)	ves (B9)	(except	Hydric Sol	il Present <sup>*</sup> Secondar Water	y Indicators (2 Stained Leav	Yes X	No
Type:Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits //DROLOGY fettand Hydrology Indicators: imary Indicators (minimum of co Surface Water (A1) High Water Table (A2)	ravel 7 s but clear	redox red: check all that Water-Sta MLRA	apply) ined Lea 1, 2, 4A,	ves (B9) and <b>4B</b> )	(except	Hydric Sol	il Present Secondar Water 4A	y Indicators (2 -Stained Leav , and 4B)	Yes X	ed)
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> retland Hydrology Indicators: imary Indicators (minimum of co Surface Water (A1) High Water Table (A2) (Saturation (A3)	ravel 7 s but clear	redox red: check all that Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and <b>4B</b> )	(except	Hydric Sol	il Present Secondar Water 4A Draina	y Indicators (2 -Stained Leav , and 4B) age Patterns (	Yes X	ed)
Type: Cobbles/Gi Depth (inches): emarks: roblematic solls, young deposits <b>(DROLOGY</b> retland Hydrology Indicators: imary Indicators (minimum of co Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ravel 7 s but clear	redox red: check all that Water-Sta MLRA Salt Crust 	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and <b>4B</b> ) es (B13)	(except	Hydric Sol	Secondan Water 4A Draina Dry-S	y Indicators (2 -Stained Leav , and 4B) age Patterns ( eason Water	Yes X Or more require ves (B9) (MLRA B10) Table (C2)	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic solls, young deposits <b>/DROLOGY</b> retland Hydrology Indicators: imary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ravel 7 s but clear	redox red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C	ves (B9) and 4B) es (B13) Ddor (C1)	(except	Hydric Sol	Secondan Water 4A Draina Dry-S Saturi	y Indicators (2 -Stained Leav , and <b>4B</b> ) age Patterns ( eason Water ation Visible o	Yes X or more requireves (B9) (MLRA B10) Table (C2) on Aerial Imager	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>/DROLOGY</b> retland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ravel 7 s but clear	redox red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi	ves (B9) and 4B) es (B13) Ddor (C1) eres on L	(except	Hydric Soi	Secondan Water 4A Draina Dry-S Satura X Geom	y Indicators (2 -Stained Leav , and <b>4B</b> ) age Patterns ( eason Water ation Visible o porphic Positic	Yes X or more require ves (B9) (MLRA B10) Table (C2) on Aerial Imager on (D2)	ed) 1, 2 y (C9
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> retland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) (Saturation (A3) Water Marks (B1) (Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ravel 7 s but clear	redox red; check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on L eres on L	(except iving Roc C4)	Hydric Soi	Secondan Water 4A Draina Dry-S Satura X Geom X Shallo	y Indicators (2 -Stained Leav , and 4B) age Patterns ( eason Water ation Visible o porphic Positic ow Aquitard (E	Yes X Cor more require ves (B9) (MLRA B10) Table (C2) on Aerial Imager on (D2) 03)	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of c 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)	ravel 7 s but clear	redox red; check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on L ed Iron ( tion in Til	(except viving Roc C4) lied Soits	Hydric Soi	Secondar Water 4A Drains Dry-S Saturs X Geom X Shalic X FAC-1	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o porphic Positic w Aquitard (D Neutral Test (1	Yes X Cormore require ves (B9) (MLRA B10) Table (C2) on Aerial Imager on (D2) 03) D5)	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ravel 7 s but clear	redox red; check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irco Stunted or	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc Stressed	ves (B9) and 4B) es (B13) Odor (C1) eres on L ed Iron ( tion in Til d Plants	(except viving Roc C4) led Soits (D1) (LR	Hydric Soi	Secondan Water 4A Drains Dry-S Saturs X Geom X Shallo X FAC-1 Raise	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o torphic Positic w Aquitard (D Neutral Test (I d Ant Mounds	Yes X Cormore require Ves (B9) (MLRA B10) Table (C2) on Aerial Imager on (D2) 03) D5) s (D6) (LRR A)	No
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of o 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) Ihundation Visible on Aerial In	ravel 7 s but clear one is requi	redox red; check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irco Stunted or 7) Other (Exp	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc Stressed lain in R	ves (B9) and 4B) es (B13) Ddor (C1) eres on 1 eed Iron ( tion in Til d Plants emarks)	(except Living Roc C4) Ied Soits (D1) (LR)	Hydric Sol ofs (C3) (C6) R A)	Secondar Water 4A Draina Dry-S Satura X Geom X Shallo X FAC-1 Raise Frost-	y Indicators (2 -Stained Leav , and 4B) age Patterns ( eason Water ation Visible o porphic Positic w Aquitard (D Veutral Test (I d Ant Mounds Heave Humm	Yes X Cormore require Performance (C2) (MLRA B10) Table (C2) (MLRA B10) Table (C2) (MLRA (C2) (MLRA) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2) (	ed) 1, 2 y (C9)
Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> <b>(etland Hydrology Indicators:</b> rimary Indicators (minimum of of 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 In Sparsely Vegetated Concave	ravel 7 s but clear one is requi	redox redi check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc Rhizosphi of Reduc Stressei Istressei Istressei	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants emarks)	(except Living Roc C4) Ied Soils (D1) (LRI	Hydric Soi ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Saturi X Geom X Shallo X FAC-I Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o lorphic Positic w Aquitard (D Neutral Test (I d Ant Mounds Heave Humm	Yes X Cormore require ves (B9) (MLRA B10) Table (C2) on Aerial Imager on (D2) 03) D5) 5 (D6) (LRR A) nocks (D7)	ed) 1, 2 y (C9)
Type: Cobbles/Gr Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> <b>(etland Hydrology Indicators:</b> <u>imary Indicators (minimum of co</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 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 II Sparsely Vegetated Concave eld Observations:	magery (B a Surface (I	redox red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc Stresse olain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on L eres on L tion in Til d Plants emarks)	(except living Roc C4) lied Soils (D1) (LRI	Hydric Sol ots (C3) (C6) R A)	Secondan Water 4A Drains Dry-S Saturs X Shallo X FAC-1 Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o loophic Positio w Aquitard (D Veutral Test (1 d Ant Mounds Heave Humm	Yes X Cormore require ves (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2) 03) D5) 5 (D6) (LRR A) loccks (D7)	ed) 1, 2 y (C9)
Type: Cobbles/Gr Depth (inches): emarks: roblematic soils, young deposits <b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of of 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 II Sparsely Vegetated Concave field Observations: urface Water Present?	magery (B S Surface (1 2010	redox red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduct Stressei olain in R Depth (ii	ves (B9) and 4B) es (B13) Odor (C1) eres on L ted Iron ( tion in Til d Plants emarks) emarks)	(except living Roc C4) lied Soils (D1) (LRI	Hydric Sol ots (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Saturi X Geom X Shalic X FAC-1 Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o loophic Positic w Aquitard (D Veutral Test (1 d Ant Mounds Heave Humm	Yes X Cormore require ves (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2) 03) D5) 6 (D6) (LRR A) locks (D7)	No 1, 2 y (C9)
Type: Cobbles/Gr Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> <b>(etland Hydrology Indicators:</b> imary Indicators (minimum of co 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 II Sparsely Vegetated Concave eld Observations: urface Water Present? Ye fater Table Present? Ye	magery (B Surface () Surface () Surface ()	redox red: check all that . Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduct n Reduct Stressei olain in R Depth (ii Depth (ii	ves (B9) and 4B) es (B13) Odor (C1) eres on L ied Iron ( tion in Til d Plants emarks) emarks): 	(except C4) lied Soits (D1) (LRI	Hydric Sol ofs (C3) (C6) R A)	Secondan Water 4A Draina Dry-S Saturi X Geom X Shalic X FAC-1 Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o orphic Positic w Aquitard (D Veutral Test (1 d Ant Mounds Heave Humm	Yes X or more required ves (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2) 13) D5) (D6) (LRR A) nocks (D7)	No ed) 1, 2 y (C9)
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Type: Cobbles/Gr Depth (inches): emarks: roblematic soils, young deposits <b>YDROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of of 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 II Sparsely Vegetated Concave ield Observations: urface Water Present? Ye faturation Present? Ye aturation Present? Ye	magery (B Surface (I Surface (I SS	redox red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or T) Other (Exp 38) No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc Stresses Islain in R Depth (in Depth (in	ves (B9) and 4B) es (B13) odor (C1) eres on L ered Iron ( tion in Til d Plants emarks) emarks) nches):	(except Living Roc C4) Iled Soits (D1) (LRI	Hydric Sol ots (C3) (C6) R A) Wetland	Secondan Water 4A Draina Dry-S Saturi X Geom X Shallo X FAC-t Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o torphic Positic w Aquitard (D Neutral Test (1 d Ant Mounds Heave Humm y Present?	Yes X or more required ves (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2) 03) D5) (D6) (LRR A) nocks (D7) Yes X	No
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Type: Cobbles/Gi Depth (inches): emarks: roblematic soils, young deposits <b>(DROLOGY</b> <b>(etland Hydrology Indicators:</b> <u>timary Indicators (minimum of co</u> 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 In Sparsely Vegetated Concave eld Observations: urface Water Present? Ye faturation Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye aturation Present? Ye	magery (B s Surface () ss gauge, me	redox red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or T) Other (Exp 38) No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C thizosphi of Reduc n Reduc Stressen lain in R Depth (in Depth (in Depth (in Depth (in	ves (B9) and 4B) es (B13) Odor (C1) eres on I eed Iron ( tion in Til d Plants emarks) nches): nches): nches): previous	(except Living Roc C4) Iled Soits (D1) (LR) 7	Hydric Soi ots (C3) (C6) R A) Wetland	Secondan Water 4A Drains Dry-S Saturs X Geom X Shallo X FAC-1 Raise Frost-	y Indicators (2 Stained Leav , and 4B) age Patterns ( eason Water ation Visible o porphic Positic w Aquitard (D Neutral Test (I d Ant Mounds Heave Humm y Present?	Yes X Cormore require Performance (C2) (MLRA (B10) Table (C2) (MLRA) (C2) (D6) (LRR A) (C6) (LRR A) (C6) (LRR A) (C6) (LRR A) (C6) (LRR A)	No

ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	orps of Eng – Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and C CW-CO-I	Coast Region R	OMB Control #: 0710-0024, Exp Requirement Control Symbo (Authority: AR 335-15, parag	o: 11/30/2024 I EXEMPT: raph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	7/27/2022
Applicant/Owner: CDOT - Region 1				State: CO	Sampling Point:	WL7
vestigator(s); Fillipi and Kizlinski		Section.	ownship, Ra	ange: NE4 S32, T35	5. R72W	
andform (billside, terrace, etc.); floodplain		Local relief (c	oncave con	vex none) flat	Sion	e (%): 1-5
Ubregion (LBB): LBB E MI BA 48A Lat: 39.7	74831		Long: 1	05 46299	Datum	NAD83
all Man Unit Name: Cathedral Book autoron camp	av 30 to 70 pa	reant clopes		N/M/L cl	Dotuin.	INADOJ
	ex, 50 to 70 pe	icent slopes	1. L. D.		assilication. OPE	_
re climatic / hydrologic conditions on the site typica	il for this time o	f year?	Yes X	No (lt no.	explain in Remarks.)	
re Vegetation, Soil, or Hydrology	significantly	disturbed? /	Are "Normal"	Circumstances" prese	ent? Yes X No	
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site I	map showir	ng samplin	g point lo	ocations, transed	cts, important feat	ures, etc
Hydrophytic Vegetation Present?         Yes         X           Hydric Soil Present?         Yes         X           Wetland Hydrology Present?         Yes         X	No No	ls the withi	a Sampled A n a Wetland	Area 1? Yes	<u>X.</u> No	
Remarks: arge wetland on floodplain on inside bend of Clear	Creek					
EGETATION – Use scientific names of	plants.					_
Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:	
	-	<u> </u>		Number of Domini Are OBL, FACW,	ant Species That or FAC:	4 (A)
3.				Total Number of D	Dominant Species	
ł./				Across All Strata:		4 (B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domina Are OBL, FACW,	ant Species That or FAC: 100	0.0% (A/
1. Salix exigua	30	Yes	FACW	1	100 million 100	-
2. Betula occidentalis	20	Yes	FACW	Prevalence Index	worksheet:	
5. Salix bebbiana	10	No	FACW	Total % Cove	er of: Multiply	by:
·				OBL species	20 x1=	20
		Talat Guess		FACW species	80 x 2 = 1	60
Jarh Stratum (Diot cize) 5		= Total Cover		FAC species	0 x 3 =	0
Elencharis nalustris	20	Vec	OBI	11PL species	0 x5=	0
Juncus balticus	20	Yes	FACW	Column Totals:	100 (A) 1	80 (B)
				Prevalence Inc	lex = B/A = 1.80	
						,
				Hydrophytic Veg	etation Indicators:	
5				X 1 - Rapid Tes	t for Hydrophytic Vegeta	tion
f				X 2 - Dominance	e Test is >50%	
				X 3 - Prevalence	e Index is ≤3.0 <sup>1</sup>	
•				4 - Morpholog	ical Adaptations (Provid	e supporti
0	_			data in Ren	narks or on a separate s	sheet)
1	-			5 - Wetland N	ion-Vascular Plants	-
Noody Vine Stratum (Plot size: 5	_)	=Total Cover		Problematic H	lydrophytic Vegetation ic soil and wetland hydr	(Explain) ology mus
		_		be present, unless	disturbed or problemat	ic.
2		=Total Cover		Hydrophytic Vegetation		

pling Point: WL7

cases/		Matrix.		Redo	a reatur	Timel	1.002	-	Describer
0-4         101K 3/2         100         7.5YK 5/8         20         C         M         Sandy         Prominent redox concentration           4-15         10YK 3/2         100         7.5YK 5/8         20         C         M         Sandy         Prominent redox concentration           ypa:         C-Concentration         D-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, fillowing Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, fillowing Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location: PL-Pore Lining M-Matrix, GS-Covered or Coated Sand Grains <sup>7</sup> Location PL-Pore Lining M-Matrix, GS-Cover	ncnes)	Color (moist)		Color (moist)	- 10	Type	LOC	Texture	Remarks
4-15       10YR 3/3       100       7.5YR 5/8       20       C       M       Sendy       Prominent redox concentration         ype:       C       C       M       Sendy       Prominent redox concentration         ype:       C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>7</sup> Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Solls?         Hidio Spieped Matrix, (SA)       Sandy Redox (S5)       Indicators for Problematic Hydric Solls?         Hidio Spieped Matrix, (SA)       Simped Matrix, (SB)       Red Parent Matarce (F2)         1 em Muck (AS) (LRR D, G)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A1)       Depleted Dark Surface (F2)       Other (Explain in Remarks)         2 som Mucky Mineral (S1)       Depleted Dark Surface (F2)       Indicators of hydrophytic vegetation and wetland hydrology must be present, uses disturbed or problematic.         2 som Mucky Mineral (S1)       Depleted Dark Surface (F2)       Water-Stained Leaves (B2) (except       Indicators (C2)         2 som Mucky Mater Table (A2)       Red Redux Depressions (F3)       Indicators (C2)       Yes X       No         2 som Mucky Mater Table (A2)       Matrix Matrix (F2)       Water-Stained Leaves (B3) (except       Indicators (C2)       Secondary Indicators (C2)       Secondary Indicators (C2)       Seconda	0-4	10YR 3/2	100	7.5YR 5/8		<u></u>		Sandy	Prominent redox concentrations
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains.       *Location: PL=Pore Lining, M=Matrix, for Solis*:         yrbic Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Poblematic Hydric Solis*:         Histos (A1)       Sandy Redox (S5)       Indicators for Poblematic Hydric Solis*:         Histos (A1)       Sandy Redox (S5)       Indicators for Problematic Hydric Solis*:         Histos (A1)       Loamy Gleyed Matrix (S2)       Problematic Hydric Solis*:         Hydro Post Surface (A12)       Charry Mucky Matrix (S1)       Problematic Hydric Solis*:         Depleted Both Dark Surface (A12)       Depleted Matrix (F3)       Other (Explain in Remarks)         Sandy Mucky Merai (G1)       Depleted Matrix (F3)       Indicators of hydrologymus be present.         25 cm Mucky Matrix To Page (G2) (LRR G)       Redox Dark Surface (F7)       unless disturbed or problematic.         Sandy Mucky Merai (G2) (LRR G)       Redox Dark Surface (F3)       unless disturbed or problematic.         Sandy Mucky Merai (G2) (LRR G)       Redox Dark Surface (F3)       unless disturbed or problematic.         Sandar (Water A1)       Water Asian (A12)       Aga and A19       Drama (A14)         Sandare (A12)       Matrix (Matrix (LR G)       Matrix (A14)       Aga and A19       Drama (A14)         Sandare (A12)       Matrix (Matrix (A14)<	4-15	10YR 3/3	100	7.5YR 5/8				Sandy	Prominent redox concentrations
ge: CConcentration, D-Depletion, RM-Reduced Metrix, CSCovered or Coeled Sand Grains       *Location: PL=Pore Lining, M=Metrix, disk         Histo Explection, CA       Sandy Cedox (S1)       Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators: for Problematic Hydric Solls':         Histo Explection, CA       Sandy Cedox (S3)       Inco. Manganese Masses (F12) (LRR D)       Red Parent Material (F21)         Back Hatic (A3)       Stripped Matrix (S5)       Inco. Manganese Masses (F12) (LRR D)       Red Parent Material (F21)         Depleted Datins Depleted Matrix (F2)       Other (Explain in Remarks)       Other (Explain in Remarks)         Depleted Datins Surface (F1)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetlan hydrology must be present.         asandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present.         astrictive Layer (If observed):       Type.       Hydrology Indicators:         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       Drainage Patterns (B10)       Dry-Beason Water Table (C2)         Surface Water (A1)       Aquatic Invertebrates (B13)       Dry-Beason (Dister Table (C2)       Stripped Matrix (S1)         Water Maks (B1)       Aquatic Invertebrates (B13)       Dry-Beason Viater Table (C2)       Stripped V			Ē						
pdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators: for Problematic Hydric Soils <sup>2</sup> :         Hilsos Epipedon (A2)       Sandy Redox (S5)       Indicators for Problematic Hydric Soils <sup>2</sup> :         Hilsos Epipedon (A2)       Sandy Redox (S5)       Inco. Manganese Mack (A10) (LRR A, E)         Hilsos Epipedon (A2)       Sandy Redox (S5)       Inco. Manganese Mack (A10) (LRR A, E)         Hilsos Epipedon (A2)       Sandy Redox (S5)       Inco. Manganese Masses (F12) (LRR D)         Perfeted Below Dark Surface (A11)       Depileted Matrix (F3)       Indicators of hydrophylic vegetation and wetlan hydrology must be present.         Bandy Mucky Mineral (S1)       Depileted Dark Surface (F7)       unless diaturbed or problematic.         Sandy Mucky Mineral (S1)       Depileted Dark Surface (F7)       unless diaturbed or problematic.         Sandy Rodox (Interes):       Type:       Hydrology Indicators:       Secondary Indicators (2 or more required).         Surface Water (A1)       Water-Stained Leaves (B9) (accept       Water-Stained Leaves (B13)       Dark Bark Surface (F1)         Surface Water (A1)       Aquatic Inverterbates (B13)       Drahage Patterns (B10)       Dry Season Water Table (C2)         Surface Water (A1)       Aquatic Inverterbates (B13)       Dry Season Water Table (C2)       Saturation (C3)         Water Ats (B1)       Aquatic Inverterbates (B13)       Dry Season Wa	ype: C=Conce	entration, D=Depl	etion, RM=	Reduced Matrix, C	CS=Cove	red or Co	pated Sar	d Grains.	Location: PL=Pore Lining, M=Matrix.
Histo Explosion (A2)       X Sandy Redax (S5)       2 cm Muck (A10) (LRR A, E)         Histo Explosion (A2)       X Sandy Redax (S5)       Inon-Manganese Massies (F12) (LRR D)         Black Histi (A3)       Stripped Matrix (S8)       Depleted Baterial (F2)         1 cm Muck (A9) (LRR D, G)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F22)         0 bepleted Bow Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and surface (F7)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       welfand hydrology must be present, unless disturbed or problematic.         25 cm Mucky Peet or Peet (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         strictive Layer (If observed):       Type:	ydric Soil India	cators: (Applica	ble to all L	RRs, unless othe	erwise n	oted.)		India	cators for Problematic Hydric Soils <sup>3</sup> :
Histic (A2)       X Sandy Redox (85)       Iron-Manganese Masses (F12) (LRR D)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12) (LRR D)         1 em Muck (A9) (LRR D, 6)       Leamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)       unless disturbed or problematic.         estrictive Layer (if observed):       Type:       unless disturbed or problematic.         estrictive Layer (if observed):       Type:       Hydric Soil Present?       Yes X       No         sung deposts, extremely cobbly, but meets S5       Secondary Indicators (20 more required)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MILRA 1, 2, 4A, and 4b       Drainage Pattern s (B10)       Dry-Season Water Table (C2)       Saturation (A3)       Saturation ka0, (D3)       Saturation (C1)       Saturation (C3)       Saturation (C4)       Shall Crust (B14)       Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C9         Secondary Indicators (B3)       Oxideed Rhizospheres on Living Roots (C3)       Droninage Pattern s (B10)       Saturation Visible on Aeri	Histosol (A1)	)		Sandy Gle	yed Mat	rix (S4)			2 cm Muck (A10) (LRR A, E)
Black Hatic (A3)       Stripped Matrix (S6)       Red Parent Materia (F21)         Hydrogen Sufide (A4)       Loamy Dieved Matrix (F3)       Very Shallow Dark Surface (F22)         Depleted Balow Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         25 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         26 of Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         26 of Mucky Peat or Peat (S2) (LRR G)       Muck 1, 2, 4, and 4B       Under Science (S1)       Dorinange Patterns (S10)         Surfator (N3)       Sait Crust (B1)       Aquat AB <td>Histic Epiped</td> <td>don (A2)</td> <td></td> <td>X Sandy Re</td> <td>dox (S5)</td> <td></td> <td></td> <td></td> <td>ron-Manganese Masses (F12) (LRR D)</td>	Histic Epiped	don (A2)		X Sandy Re	dox (S5)				ron-Manganese Masses (F12) (LRR D)
Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F22)         1 cm Muck (A9) (LR D, G)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Bork Surface (A12)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation and wetland hydrology must be present.         2.5 cm Mucky Mered (C11)       Depleted Dark Surface (F7)       wetland hydrology must be present.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         Stirlicite Layer (If observed):       Type.       Hydric Soil Present?       Yes X       No         Type.       Depth (inches):       Hydric Soil Present?       Yes X       No         Surface Water (A1)       Water-Stained Leaves (B9) (wccept       Water-Stained Leaves (B9) (MLRA 1, 2       4A, and 4B)       Muck (A)         Surface Water (A1)       Salt Crust (B11)       Salt Crust (B11)       Drainage Patterns (B10)       Dry Season Water Table (C2)         Stirlice Water Stable (A2)       Hydrogen Sulfide Odor (C1)       Salt and Aquitard (D3)       Salt Crust (B11)       Dry Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Salt and Aquitard (D3)       Salt Crust (B14)       Dry Season Water Table (C2)         Start Able Present (B2)       Recent Iron Reduction in Tilled So	Black Histic	(A3)		Stripped N	Aatrix (Se	5)			Red Parent Material (F21)
1 cm Muck (A9) (LR D, G)       Loamy Gleyed Matrx (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A1)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)       unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         Setrictive Layer (if observed):       Type.	Hydrogen St	ulfide (A4)		Loamy Mu	icky Mine	eral (F1)	(except f	ILRA 1)	Very Shallow Dark Surface (F22)
Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and welland hydrology wills be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)       welland hydrology wills be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         pept (inches):	1 cm Muck (	A9) (LRR D, G)		Loamy Gl	eyed Mai	rix (F2)			Other (Explain in Remarks)
Thick Dark Surface (A12)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation and wetland hydrology must be present; unless disturbed or problematic.         2.5 om Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         2.5 om Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         Strictive Layer (if observed):       Type:	Depleted Be	low Dark Surface	e (A11)	Depleted I	Matrix (F	3)			
Saddy Wucky Wineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         sestrictive Layer (if observed):       Type:       Hydric Soil Present?       Yes X <no< td="">         Depth (inches):       Hydric Soil Present?       Yes X<no< td="">       No         marks:       Secondary Indicators:       Water-Stained Leaves (B9) (except.       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C9         Off Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geemorphic Position (D2)       Saturation (C4)         Surface Water Present?       Yes X       No       Depth (inches):       To         Surface Water Present?       Yes X       No       Depth (inches):       To         Gedoment Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Saturation (C4)       Saturation (D2)         Surface Water Present?       Yes X       No       Depth (inches):       To         Surface Water Present?</no<></no<>	Thick Dark S	Surface (A12)		Redox Da	rk Surfac	e (F6)		<sup>9</sup> Indi	cators of hydrophytic vegetation and
_2.5 cm Mucky Peat or Peat (S2) (LRR G)	Sandy Muck	y Mineral (S1)		Depleted I	Dark Sur	face (F7)		1	vetland hydrology must be present,
estrictive Layer (if observed):       Type:	2.5 cm Muck	ty Peat or Peat (8	52) (LRR 0	3)Redox De	pression	s (F8)	100		unless disturbed or problematic.
Type:       Hydric Soil Present?       Yes X       No         emarks:       boung deposts, extremely cobbly, but meets S5         PCROLOGY         ettand Hydrology Indicators:         imary Indicators (minimum of one is required: check all that apply)       Secondary Indicators.(2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B1)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Onth Deposits (B3)       Oxid/zed Rilizospheres on Living Roots (C3)       Geemorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Crecks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):	estrictive Laye	er (if observed):	-	100					
Depth (inches):       Hydric Soil Present?       Yes X       No         emarks:       ouing deposts, extremely cobbly, but meets S5         //DROLOGY         reftand Hydrology Indicators:       imary Indicators (finimum of one is required, check all that apply)       Secondary Indicators (2 or more required)        Surface Water (A1)      Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2 H, and 4B)        High Water Table (A2)      MLRA 1, 2, 4A, and 4B)      4A, and 4B)        Saturation (A3)      Sait Crust (B11)      Drainage Patterns (B10)        Water Marks (B1)      Aquatic Invertebrates (B13)      Dry-Season Water Table (C2)        Sediment Deposits (B2)      Hydrogen Sulfide Odor (C1)      Saturation (I2)        Algal Mat or Crust (B4)      Presence of Reduced Iron (C4)      Shallow Aquitard (D3)        Ion Deposits (B3)      Sturet or Stressed Plants (D1) (LRR A)      Raised Ant Mounds (D6) (LRR A)        Inundation Visible on Aerial Imagery (B7)      Other (Explain in Remarks)      Frost-Heave Hummocks (D7)        Sparsely Vegetated Concave Surface (B8)	Type:								
emarks: oung deposts, extremely cobbly, but meets S5 (DROLOGY (retland Hydrology Indicators: imary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Light Water Table (A2) Satir Crust (B1) Water Marks (B1) Satir Crust (B1) Water Marks (B1) Sediment Deposits (B2) Chift Deposits (B2) Light Mater Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Indicators (C3) Surface Soil Cracks (B6) Sunted or Stressed Plants (D1) (LRR A) Satir Crust (B4) Indication Visible on Aerial Imagery (B7) Softer Crust (B4) Indication Visible on Aerial Imagery (B7) Satir Crust (B4) Satir Table Present? Yes X No Depth (inches): 15 alter Table Present? Wetland Hydrology Present? Yes X No Depth (inches): 10 Wetland Hydrology Present? Yes X No Depth (inches): 15 Presenter Present? Yes X No Depth (inches): 15 Present Pre									
fettand Hydrology Indicators:       Secondary Indicators:         imary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B         C saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Inon Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Hot inches):       15         Idd Observations:       Mo       Depth (inches):       15         uration Present?       Yes       No       Depth (inches):       15         iater Table Present?       Yes       No       Depth (i	Depth (inche emarks: oung deposts, (	extremely cobbly	, but meets	5 85				Hydric Soil Pre	isent? Yes <u>X</u> No
imary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (2 or more required).         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)       4A, and 4B)         Saturation (A3)	Depth (inche emarks: oung deposts, ( YDROLOGY	extremely cobbly	, but meets	\$ 85				Hydric Soil Pre	isent? Yes <u>X</u> No
Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Orid Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Gecomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Water Present?       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       15         eld Observations:       Ves       No       Depth (inches):       15         uration Present?       Yes       No       Depth (inches):       10         wetland Hydrology Present?       Yes       No       Depth (inches):       15         escribe Recorded Data (	Depth (inche emarks: oung deposts, ( YDROLOGY /etland Hydrole	extremely cobbly	, but meets	s 85				Hydric Soil Pre	isent? Yes <u>X</u> No
High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         C Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):	Depth (inche emarks: oung deposts, ( /DROLOGY /etland Hydrol- rimary Indicator	extremely cobbly ogy Indicators: rs (minimum of o	, but meets ne is requi	red; check all that	apply)			Hydric Soil Pre	nsent? Yes X No
Saturation (A3)       Saturation (A3)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soits (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Opepth (inches):       15         eld Observations:       No       Depth (inches):       15         urface Water Present?       Yes       No       Depth (inches):       10         wetland Hydrology Present?       Yes       No       Depth (inches):       10         icludes capillary fringe)       Escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       emarks:	Depth (inche emarks: bung deposts, i /DROLOGY etland Hydroli imary Indicator Surface Wat	extremely cobbly ogy Indicators: rs (minimum of o er (A1)	, but meets ne îs requi	red: check all that Water-Sta	apply)	ves (B9)	(except	Hydric Soil Pre	esent? Yes X No ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Water Marks (B1)       Adjuant invertebrates (B13)       Dig-Season Water Fable (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       15         eld Observations:       Irrface Water Present?       Yes       No         aturation Present?       Yes       No       Depth (inches):       15         aturation Present?       Yes       No       Depth (inches):       10         wetland Hydrology Present?       Yes       X       No       Social photos, previous inspections), if available:         emarks:       Encoded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Encoded Data       Encoded Data	Depth (inche emarks: bung deposts, ( <b>/DROLOGY</b> etland Hydroli imary Indicator Surface Wat High Water	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2)	, but meets	red: check all that Water-Sta Kater-Sta	apply) ined Lea 1, 2, 4A,	ves (B9) and 4B)	(except	Hydric Soil Pre	esent? Yes X No ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
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Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       Urface Water Present?       Yes       No       Depth (inches):       15         aturation Present?       Yes       X       No       Depth (inches):       10       Wetland Hydrology Present? Yes       X       No         includes capillary fringe)       Bestrike Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       emarks:	Depth (inche emarks: oung deposts, ( PDROLOGY Vetland Hydrol- rimary Indicator Surface Wat High Water Saturation (A Water Marks Saturation D	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) \(3) (B1) proprie (B2)	, but meets	red: check all that Water-Sta MLRA Salt Crust Aquatic In	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B) des (B13)	(except	Hydric Soil Pre	esent? Yes X No ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       Interface Water Present?       Yes       No         urface Water Present?       Yes       No       Depth (inches):       15         aturation Present?       Yes       No       Depth (inches):       10         wetland Hydrology Present?       Yes       X       No       No         includes capillary fringe)       ascribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       emarks:	Depth (inche emarks: oung deposts, ( POROLOGY retrand Hydrol- rimary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Odd Depositi	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) \(3) (E1) eposits (B2) c (B2)	, but meets	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lea 1, 2, 4A, (B11) Vertebrat Sulfide ( Sulfide (	ves (B9) and 4B) es (B13) Odor (C1)	(except	Hydric Soil Pre	endary 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 Decembric Position (/2)
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       urface Water Present?       Yes       No       Depth (inches):       15         ater Table Present?       Yes       X       No       Depth (inches):       15         aturation Present?       Yes       X       No       Depth (inches):       10         reludes capillary fringe)       ascribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       emarks:	Depth (inche emarks: bung deposts, ( PDROLOGY retrand Hydrol firmary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De C Drift Deposit Algal Mat or	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4)	, but meets	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on 1	(except	Hydric Soil Pre	endary 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)
Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Frost-Heave Hummocks (D7)         reld Observations:       urface Water Present?       Yes         Vegetated Present?       Yes       No         Zater Table Present?       Yes       No         Depth (inches):       15         aturation Present?       Yes       No         Depth (inches):       10       Wetland Hydrology Present?         redudes capillary fringe)       escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (inche emarks: oung deposts, ( PDROLOGY fetland Hydrol fimary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De C Drift Deposit Algal Mat or Iron Deposit	extremely cobbly extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) A3) 5 (B1) s (B1) s (B2) s (B3) Crust (B4) s (B4)	, but meets	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Inc	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in T	(except Living Rod C4)	Hydric Soil Pre	esent? Yes X No ondary 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) EAC-Neutral Test (D5)
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urface Water Present?       Yes       No       X       Depth (inches):	Depth (inche emarks: bung deposts, ( PDROLOGY ettand Hydroli imary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Orift Deposit Algal Mat or Iron Deposit Surface Soil Inundation V Sparsely Veg	extremely cobbly extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) A3) (B1) eposits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) fisible on Aerial In getated Concave	, but meets ne is requi magery (B7 Surface (B	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse plain in R	ves (B9) and 4B) ees (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants emarks)	(except iving Roi C4) lled Soils (D1) (LR	Hydric Soil Pre	esent? Yes X No ondary 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)
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escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: emarks:	Depth (inche emarks: oung deposts, o <b>YDROLOGY</b> /etland Hydrolo rimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Sediment De Orift Deposit Algal Mat or Iron Deposit Surface Soil Inundation V Sparsely Ver ield Observatio urface Water P /ater Table Prese	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) \3) (B1) eposits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) (risible on Aerial In getated Concave ons: resent? Ye sent? Ye nt? Ye	, but meets ne is requi ne is requi Surface (B sssss	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp 38) No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc on Reduc Stresse olain in R Depth (i Depth (i	ves (B9) and 4B) des (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants 'emarks) nches): nches):	(except iving Ro C4) lied Soits (D1) (LR	Hydric Soil Pre	endary Indicators (2 or more required) Nater-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)
emarks:	Depth (inche emarks: bung deposts, of <b>DROLOGY</b> retland Hydrolo fimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Conft Deposit Surface Soil Inon Deposit Surface Soil Inondation V Sparsely Veg eld Observatio urface Water Pre- fater Table Pre- aturation Prese includes capillar	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) A3) 5 (B1) eposits (B2) 5 (B3) Crust (B4) 5 (B3) Cracks (B6) (rsible on Aerial In getated Concave ons: resent? Ye sent? Ye nt? Ye y fringe)	ne is requi ne is requi Surface (B sssssss	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or 7) Other (Exp 38) No X No No	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc Stresse olain in R Depth (i Depth (i	ves (B9) and 4B) des (B13) Ddor (C1) eres on I ced Iron ( tion in Ti d Plants emarks) nches): nches):	(except Living Roi C4) Iled Soits (D1) (LR	Hydric Soil Pre	esent? Yes X No ondary 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) rology Present? Yes X No
	Depth (inche emarks: oung deposts, of <b>PDROLOGY</b> retrand Hydrolo fimary Indicator Surface Water Saturation (A Water Marks Sediment De Orift Deposit Algal Mat or Iron Deposit Surface Soil Inundation V Sparsely Veg field Observatio urface Water Pre- aturation Prese ncludes capillar escribe Record	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) A3) c (B1) eposits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) (risible on Aerial Ir getated Concave ons: resent? Ye sent? Ye nt? Ye y fringe) led Data (stream	, but meets ne is requir magery (B7 Surface (B s	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irco Stunted or 7) Other (Exp 38) No X No No No Stanted or No S	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse olain in R Depth (i Depth (i Depth (i Depth (i	ves (B9) and 4B) ees (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants 'emarks) 'emarks) nches): nches): nches):	(except iving Roi C4) lied Soils (D1) (LR <u>15</u> 10 s inspecti	Hydric Soil Pre	endary 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 Beomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	Depth (inche emarks: bung deposts, of <b>DROLOGY</b> retrand Hydrolo fimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Conft Deposite Surface Soil Inon Deposite Surface Soil Inon Deposite Surface Soil Inundation V Sparsely Ver eld Observatio Urface Water Pre- aturation Prese includes capillar escribe Record emarks:	extremely cobbly ogy Indicators: rs (minimum of o er (A1) Table (A2) \3) crust (B2) crust (B2) crust (B4) s (B5) Cracks (B6) fisible on Aerial In getated Concave ons: resent? Ye sent? Ye nt? Ye y fringe) ed Data (stream	, but meets ne is requi magery (B) Surface (B s	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or T) Other (Exp 38) No X No X No 2 No 2	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide (R Reduc Stresse plain in R Depth (i Depth (i Depth (i I photos,	ves (B9) and 4B) des (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants 'emarks) nches): nches):  nches):  previous	(except Living Roc C4) Iled Soits (D1) (LR	Hydric Soil Pre	endary Indicators (2 or more required) Nater-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)

ENG FORM 6116-9, JUL 2018

See ERDC/EL TR-10-3; the	proponent a	gency is CE	ECW-CO-I	(Authority: AR 335-15, paragraph 5-2a
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County Sampling Date: 7/27/2
oplicant/Owner: CDOT - Region 1			-	State: CO Sampling Point: Wi
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	ange: NE4 S32, T3S, R72W
ndform (hillside, terrace, etc.): depression		Local relief (c	oncave, con	vex, none): concave Slope (%):
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	748220		Long: 1	05.46297 Datum: NAD8
oil Map Unit Name: Cathedral-Rock outcrop comp	lex, 30 to 70 pe	rcent slopes	1000	NWI classification: UPL
e climatic / hydrologic conditions on the site typica	al for this time o	of year?	Yes X	No (If no, explain in Remarks.)
e Vegetation Soil or Hydrology	significantly	disturbed? A	re "Normal	Circumstances" present? Yes X No
e Vegetation Soil or Hydrology	naturally pro	blematic? (	If needed, en	xplain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site	map showin	ng samplin	g point lo	ocations, transects, important features,
lutraphylic Vacatation Descent? Vac. V	No	Lic the	Someled /	hrma
Avdric Soil Present? Yes X	No	withi	n a Wetland	1? Yes X No
Vetland Hydrology Present? Yes X	No	- Soan		
emarks:				
mall depression of Carex in larger PSS wetland (	WL7)			
EGETATION – Use scientific names o	f plants.	Detributet	to divident	
ree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksheet:
	1.25			Number of Dominant Species That
				Are OBL, FACW, or FAC: 1
-				Total Number of Dominant Species
4 <u></u>		Table Cause	<u> </u>	Across All Strata: 1
apling/Shrub Stratum (Plot size: 15	,	= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:100.0%
	<u> </u>			Prevalence Index worksheet:
\				Total % Cover of: Multiply by:
				$\begin{array}{c c} OBL species & 70 & x \ 1 = & 70 \\ \hline EACW species & 10 & y \ 2 = & 20 \end{array}$
	-	=Total Cover		FAC species $0 \times 3 = 0$
lerb Stratum (Plot size: 5 )	17-12			FACU species 0 x4 = 0
Carex aquatilis	70	Yes	OBL	UPL species 0 x 5 = 0
Juncus balticus	10	No	FACW	Column Totals: 80 (A) 90
				Prevalence Index = B/A = 1.13
		·		
<u></u>				Hydrophytic Vegetation Indicators:
				X 2- Dominance Test is >50%
	<u> </u>			$\frac{1}{X}$ 3 - Prevalence Index is $\leq 3.0^{11}$
				4 - Morphological Adaptations (Provide supp
0				data in Remarks or on a separate sheet)
1				5 - Wetland Non-Vascular Plants <sup>1</sup>
	80	=Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
Voody Vine Stratum (Plot size:	_)			Indicators of hydric soil and wetland hydrology n
				be present, unless disturbed or problematic.
	-		<u> </u>	Hydrophytic
		-Total Course		
Bare Ground in Herb Stratum 10		=Total Cover		Vegetation Present? Yes V No

rofile Description: (Describe to the depth needed to document the indicat epth <u>Matrix</u> Redox Features inches) Color (moist) % Color (moist) % Type <sup>1</sup> 0-2 7.5YR 2.5/2 100	or or confirm the absence of indicators.)
Matrix         Redox Features           inches)         Color (moist)         %         Color (moist)         %           0-2         7.5YR 2.5/2         100	
0-2 7.5YR 2.5/2 100	(
0-2 7.5YR 2.5/2 100	Loc Texture Remarks
	Mucky Loam/Clay High in OM
2-8 10YR 3/2 100	Loamy/Clayey A4 Water Table
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Con	ated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histosol (A1) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6)	X 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D Red Parent Material (F21)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (r	except MLRA 1) Very Shallow Dark Surface (F22)
Depleted Below Dark Surface (A11) Depleted Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12) Redox Dark Surface (F6)	<sup>9</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8)	unless disturbed or problematic.
Type: Depth (inches): marks: oblematic soil, likely saturated year-round with depositional events	Hydric Soil Present? Yes X No
DROLOGY	
(DROLOGY	
(DROLOGY 'etland Hydrology Indicators:	Secondary Indicators (2 or more required)
PROLOGY etfand Hydrology Indicators: imary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (	Secondary Indicators (2 or more required) (except Water-Stained Leaves (B9) (MLRA 1, 2
DROLOGY      etfand Hydrology Indicators:     imary Indicators (minimum of one is required; check all that apply)     Surface Water (A1)     Water-Stained Leaves (B9) (     High Water Table (A2)     MLRA 1, 2, 4A, and 4B)	(except
<b>'DROLOGY</b> etland Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)         Water-Stained Leaves (B9) (         High Water Table (A2)         MLRA 1, 2, 4A, and 4B)         Saturation (A3)	(except
(DROLOGY         intervention         Surface Water (A1)         Water-Stained Leaves (B9) (         High Water Table (A2)         MLRA 1, 2, 4A, and 4B)         Saturation (A3)         Water Marks (B1)	Secondary Indicators (2 or more required) (except
(DROLOGY         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       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 (C3
Particular Stress         Image Indicators (minimum of one is required; check all that apply)         Surface Water (A1)         Water-Stained Leaves (B9) (         High Water Table (A2)         MLRA 1, 2, 4A, and 4B)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Unit Deposits (B3)	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 (C3 iving Roots (C3) Geomorphic Position (D2)
Interpretation       Interpretation         Interpretation       Interpreta	iving Roots (C3)
Pattand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Inft Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C3         (ving Roots (C3)       Geomorphic Position (D2)         C4)       Shallow Aquitard (D3)         ed Soils (C6)       X
Algal Mat or Crust (B5)         Surface Soil Cracks (B6)	Secondary Indicators (2 or more required)         (except
(attand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C3         iving Roots (C3)       Geomorphic Position (D2)         C4)       Shallow Aquitard (D3)         ed Soils (C6)       X         D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Argentiation       Presence of Reduced Iron Reduction in Tilli         Surface Soil Cracks (B6)       Startace Soil Cracks (B6)         Innumber of the second of the s	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 (C3         C4)       Geomorphic Position (D2)         C4)       Shallow Aquitard (D3)         ed Soils (C6)       X         D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)
POROLOGY         Iettand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       eld Observations:         urface Water Present?       Yes	Secondary Indicators (2 or more required)         (except
POROLOGY         Interfactors (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         King Water Table (A2)       MLRA 1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Onit Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         eld Observations:       Yes       No       X       Depth (inches):	Secondary Indicators (2 or more required)         (except
POROLOGY         Intervention         Surface Water (A1)         Surface Water (A1)         Water-Stained Leaves (B9) (         High Water Table (A2)         MLRA 1, 2, 4A, and 4B)         Saturation (A3)         Sediment Deposits (B1)         Sediment Deposits (B2)         Init Deposits (B3)         Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B7)         Sparsely Vegetated Concave Surface (B8)         eld Observations:         Irface Water Present?       Yes         No       X       Depth (inches):         ater Table Present?       Yes       No         Water Present?       Yes       No	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (CI         (ving Roots (C3)       Geomorphic Position (D2)         (C4)       Shallow Aquitard (D3)         (ed Soits (C6)       X         D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
POROLOGY         Interface Water (A1)       Water-Stained Leaves (B9) (         Surface Water (A1)       Water-Stained Leaves (B9) (         C High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         C Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         C Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         etd Observations:       Irface Water Present?       Yes         uration Present?       Yes       No       Depth (inches):         aturation Present?       Yes       X       Depth (inches):       Inches):	Secondary Indicators (2 or more required)         (except
POROLOGY         fettand Hydrology Indicators:         imary Indicators (minimum of one is required: check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         eld Observations:       Irface Water Present?       Yes       No       Depth (inches):         ater Table Present?       Yes       No       Depth (inches):       includes capillary fringe)         scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous       Servious	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C3)         (iving Roots (C3)       Geomorphic Position (D2)         C4)       Shallow Aquitard (D3)         ed Soils (C6)       X         Prost-Heave Hummocks (D7)         8       Wetland Hydrology Present?         9       Wetland Hydrology Present?         9       Wetland Hydrology Present?
POROLOGY         fettand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         eld Observations:       Irface Water Present?       Yes       No       Depth (inches):         izuration Present?       Yes       X       No       Depth (inches):       Includes capillary fringe)         ascribe Recorded Data (stream gauge, monitoring well, aerial photos, previous       Servious	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C3         (except)       Geomorphic Position (D2)         (A)       Shallow Aquitard (D3)         (A)       FAC-Neutral Test (D5)         D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)       Image Patterns (Price Patterns), if available:
PDROLOGY         fettand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         eld Observations:       Irface Water Present?       Yes       No       Depth (inches):         izuration Present?       Yes       X       No       Depth (inches):       Includes capillary fringe)         ascribe Recorded Data (stream gauge, monitoring well, aerial photos, previous       amarks:	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C3         (except)       Geomorphic Position (D2)         (A)       Shallow Aquitard (D3)         (A)       Shallow Aquitard (D3)         (A)       FAC-Neutral Test (D5)         (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)       Frost-Heave Hummocks (D7)         (B)       Wetland Hydrology Present?       Yes X       No         inspections), if available:       Staturable:       Staturable
POROLOGY         fettand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (         ( High Water Table (A2)       MLRA 1, 2, 4A, and 4B)         ( Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         ( Drift Deposits (B3)       Oxidized Rhizospheres on Li         Algal Mat or Crust (B4)       Presence of Reduced Iron (C         Iron Deposits (B5)       Recent Iron Reduction in Till         Surface Soil Cracks (B6)       Stunted or Stressed Plants (I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):         eld Observations:       X       Depth (inches):         iztration Present?       Yes       X       No         izturation Present?       Yes       X       Depth (inches):         ictudes capillary fringe)       ascribe Recorded Data (stream gauge, monitoring well, aerial photos, previous	Secondary Indicators (2 or more required)         (except       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (Ci         (except)       Geomorphic Position (D2)         (c4)       Shallow Aquitard (D3)         (ed Soils (C6)       X FAC-Neutral Test (D5)         D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)       Image Patterns; Yes X No         8       Wetland Hydrology Present? Yes X No

ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western Mo proponent ag	ineers untains, Va jency is CE	lleys, and C CW-CO-I	Coast Region ₹	OMB Control #: 0710-0024, E Requirement Control Symb (Authority: AR 335-15, para	xp: 11/30/2024 of EXEMPT: igraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	7/27/2022
pplicant/Owner: CDOT - Region 1		1.1		State: CC	Sampling Point:	WL9
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	ange: NE4 S32, T3	S, R72W	
andform (hillside, terrace, etc.): floodplain	1	.ocal relief (c	oncave, conv	vex, none): flat	Slo	pe (%):
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	74819		Long: 1	05.46233	Datum:	NAD83
oil Map Unit Name: Cathedral-Rock outcrop comp	lex, 30 to 70 per	cent slopes	1.00	NWI c	assification: UPL	
e climatic / hydrologic conditions on the site typica	al for this time of	year?	Yes X	No (lf no	, explain in Remarks.)	
re Vegetation Soil or Hydrology	significantly d	isturbed? A	re "Normal (	Circumstances" pres	ent? Yes X N	ō
re Vegetation _ Soil _ or Hydrology	naturally prob	lematic? (	If needed, ex	xplain any answers i	n Remarks.)	
UMMARY OF FINDINGS - Attach site	map showin	g samplin	g point lo	cations, transe	cts, important fea	tures, et
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	a Sampled A n a Wetland	Area 1? Yes_	<u>X No</u>	
Remarks: Fringe wetland along Clear Creek, inside bend						
EGETATION – Use scientific names o	f plants.					
Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:	
				Number of Domin	ant Species That	
				Are OBL, FACW,	or FAC:	3 (A)
L				Total Number of	Dominant Species	
l			<u> </u>	Across All Strata		3(B)
Sapling/Shrub Stratum (Plot size: 15		Total Cover		Percent of Domin Are OBL, FACW,	or FAC: 10	00.0% (A)
1. Salix exigua	70	Yes	FACW		Const House	
3				Total % Cov	x worksneet: wer of Multiple	u hu
4		<u> </u>		OBL species	20 x 1 =	20
5.				FACW species	90 x 2 =	180
	70 =	Total Cover		FAC species	0 x 3 =	0
erb Stratum (Plot size: 5)				FACU species	0 x 4 =	0
Eleocharis palustris	20	Yes	OBL	UPL species	0 x 5 =	0
Juncus balticus	20	Yes	FACW	Column Totals:	$\frac{110}{10}$ (A) $\frac{10}{10}$	200 (B
		<u> </u>	_	Prevalence in	dex = b/A =	4
	1			Hydrophytic Vec	etation Indicators:	
	10.00	S	<u> </u>	X 1 - Rapid Tes	st for Hydrophytic Vegel	tation
1	_			X 2 - Dominand	e Test is >50%	
·		;		X 3 - Prevalence	e Index is ≤3.0 <sup>1</sup>	
				4 - Morpholog	ical Adaptations (Provi	de supporti
4				5 Wotlood	lon-Vascular Planta <sup>1</sup>	sileer)
11,	40 =	Total Cover		Problematic	Hydrophytic Vegetation	(Explain)
Noody Vine Stratum (Plot size: 5	_)	, order overed		Indicators of hyd	ric soil and wetland hyd	frology mus
2.				Hudron hudro		
The second s		Total Cover		Vegetation		
				the second se		

pling Point: WL9

inches)	Color (moist)	0/0	Color (moist)	9%	Type	Loc <sup>4</sup>	Texture			Remarks
0.4	2 5V 3/2	100	color (mostry				Sandy			(intramo
	2.51 5/2	-100				-	Sanuy			
4-7	10YR 4/2	100					Sandy	<u> </u>		
7-16	10YR 4/2	100	10YR 5/8		<u> </u>	<u>M</u>	Sandy		Prominent	redox concentration
	_	Ξ		Ξ	Ξ	Ξ				
Type: C=Conce	ntration, D=Depl	etion, RM	Reduced Matrix, C	S=Cove	red or Co	pated Sar	nd Grains.	<sup>2</sup> Locati	on: PL=Pore	Lining, M=Matrix.
lydric Soil Indic	ators: (Applica	ble to all	LRRs, unless othe	erwise n	oted.)	12.75	to	ndicators	for Problem	atic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gle	yed Mat	rix (S4)			2 cm N	luck (A10) (L	RR A, E)
Histic Epiped	ion (A2)		X Sandy Red	dox (S5)			-	Iron-Ma	anganese Ma	isses (F12) (LRR D)
Black Histic (	(A3)		Stripped N	latrix (Se	5)			Red Pa	rent Material	(F21)
Hydrogen Su	lfide (A4)		Loamy Mu	cky Mine	eral (F1)	(except N	ALRA 1)	Very S	hallow Dark S	Surface (F22)
1 cm Muck (/	49) (LRR D, G)		Loamy Gle	eyed Mat	rix (F2)			Other (	Explain in Re	emarks)
Depleted Bel	ow Dark Surface	e (A11)	Depleted M	Aatrix (F)	3)					
Thick Dark S	urface (A12)		Redox Dar	k Surfac	e (F6)		<sup>e</sup> h	ndicators	of hydrophyti	c vegetation and
Sandy Mucky	/ Mineral (S1)		Depleted I	Dark Sur	face (F7)			wetland	d hydrology m	nust be present,
2.5 cm Muck	y Peat or Peat (	52) (LRR (	G)Redox Dep	pression	s (F8)			unless	disturbed or	problematic.
	C and the contraction									
estrictive Laye	r (if observed):									
estrictive Laye	r (if observed):									
Restrictive Laye Type: Depth (inche Remarks: Young deposits b	r (if observed): s):		-				Hydric Soil I	Present?		Yes <u>X</u> No
testrictive Laye Type: Depth (incher emarks: oung deposits b	r (if observed): s): out meets \$5						Hydric Soil I	Present?		Yes <u>X</u> No
Restrictive Laye Type: Depth (incher Remarks: 'oung deposits b YDROLOGY Vetland Hydrold	r (if observed): s): ut meets S5 ogy Indicators:		-				Hydric Soil )	Present?		Yes <u>X</u> No_
Restrictive Laye Type: Depth (incher Remarks: 'oung deposits b YDROLOGY Vetland Hydrolo Primary Indicator	r (if observed): s): out meets S5 ogy Indicators: s (minimum of o	ne is requi	red; check all that :	apply)			Hydric Soil )	Present?	Indicators (2	Yes X No
testrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Vetland Hydrolo Primary Indicator Surface Wate	r (if observed): s): but meets S5 bgy Indicators: s (minimum of o er (A1)	ne is requ	red: check all that : Water-Sta	apply)	ves (B9)	(except	Hydric Soil )	Present?	Indicators (2 Stained Leav	Yes X No or more required) res (B9) (MLRA 1, 2
testrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Vetland Hydrolo trimary Indicator Surface Wate High Water T	r (if observed): s): but meets 85 bgy Indicators: s (minimum of o er (A1) Table (A2)	ne îs regu	red: check all that : Water-Sta MLRA	apply) ined Lea 1, 2, 4A,	ves (B9) and 4B)	(except	Hydric Soil )	Present? econdary Water- 4A,	Indicators (2 Stained Leav and 4B)	Yes X No or more required) res (B9) (MLRA 1, 2
estrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Vetland Hydrolo trimary Indicator Surface Wate High Water T Saturation (A	r (if observed): s): but meets 85 bogy Indicators: s (minimum of o er (A1) Table (A2) (3)	ne îs requi	red; check all that a Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric Soil )	Present? econdary Water- 4A, Draina	Indicators (2 Stained Leav and 4B) ge Patterns (1	Yes X No or more required) res (B9) (MLRA 1, 2 B10)
estrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Vetland Hydrold trimary Indicator Surface Wate High Water T Saturation (A X Water Marks	r (if observed): s): but meets S5 bogy Indicators: s (minimum of o er (A1) Table (A2) (3) (B1)	në îs requi	red; check all that a Water-Sta MLRA Salt Crust Aquatic In	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B) res (B13)	(except	Hydric Soil )	Present? econdary Water- 4A, Draina Dry-Se	Indicators (2 Stained Leav and 4B) ge Pätterns (1 ason Water 1	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2)
Vetland Hydroid Frimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De	r (if observed): s): but meets S5 bgy Indicators: s (minimum of o er (A1) Table (A2) (3) (B1) posits (B2)	në îs requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C	ves (B9) and 4B) es (B13) Odor (C1)	(except	Hydric Soil )	Present? econdary Water- 4A, Draina; Dry-Se Satura	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water 1 ion Visible or	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS
testrictive Laye Type: Depth (incher Depth (incher emarks: oung deposits b YDROLOGY Yetland Hydrold trimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De X Drift Deposite	r (if observed): s): but meets S5 by Indicators: s (minimum of o er (A1) Table (A2) (B1) (B1) posits (B2) s (B3)	ne îs requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph	ves (B9) and 4B) es (B13) Ddor (C1) eres on I	(except	Hydric Soil )	Present? econdary Water- 4A, Draina Dry-Se Satural Geomo	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water 1 ion Visible or prphic Positio	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS n (D2)
estrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Yetland Hydrold rimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De X Drift Deposits Algal Mat or of	r (if observed): s): but meets \$5 by Indicators: s (minimum of o er (A1) Table (A2) (3) (B1) posits (B2) s (B3) Crust (B4)	ne îs requi	red: check all that : Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc	ves (B9) and 4B) es (B13) Ddor (C1) eres on 1 ced Iron (	(except Living Rod C4)	Hydric Soil )	Present? econdary Water- 4A, Draina: Dry-Se Satural Geomo Shallov	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T tion Visible or orphic Positio v Aquitard (D	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS n (D2) 3)
estrictive Laye Type: Depth (incher ermarks: oung deposits b YDROLOGY Yetland Hydrold rrimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De X Drift Deposits Algal Mat or of Iron Deposits	r (if observed): s): but meets \$5 by Indicators: s (minimum of o er (A1) Table (A2) (3) (B1) (B1) posits (B2) s (B3) Crust (B4) s (B5)	ne îs requi	red: check all that : Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc	ves (B9) and 4B) es (B13) Ddor (C1) eres on 1 ced Iron ( tion in Ti	(except Living Rod C4) Iled Soils	Hydric Soil )	Present? econdary Water- 4A, Draina: Satural Geomo Shallov X FAC-N	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T tion Visible or orphic Positio v Aquitard (D eutral Test (E	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS n (D2) 3) D5)
estrictive Laye Type: Depth (incher ermarks: oung deposits b YDROLOGY Vetland Hydrold rimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De X Drift Deposits Algal Mat or Iron Deposits Surface Soil	r (if observed): s): but meets \$5 but meets \$5 by Indicators: <u>s (minimum of o</u> er (A1) fable (A2) (3) (B1) (B1) (B1) (B2) s (B2) s (B2) crust (B4) s (B5) Cracks (B6)	ne îs requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse	ves (B9) and 4B) ees (B13) Ddor (C1) eres on 1 ced Iron ( tion in Ti d Plants	(except iving Rod C4) Iled Soils (D1) (LR	Hydric Soil )	Present? econdary Water- 4A, Draina: Dry-Se Satural Geomo Shallov X FAC-N Raised	Indicators (2 Stained Leav and 4B) ge Patterns (1 ason Water 1 tion Visible or orphic Positio v Aquitard (D eutral Test (D Ant Mounds	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS n (D2) 3) D5) (D6) (LRR A)
estrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY Vetland Hydrold rimary Indicator Surface Wate High Water T Saturation (A X Water Marks X Sediment De X Drift Deposits Algal Mat or Iron Deposits Surface Soli Inundation Vit	r (if observed): s): but meets S5 by Indicators: <u>s (minimum of o</u> er (A1) fable (A2) (3) (B1) posits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) isible on Aerial In	ne is requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse olain in R	ves (B9) and 4B) ees (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants temarks)	(except iving Rod C4) lled Soils (D1) (LR	Hydric Soil )	Present? econdary Water- 4A, Draina; Dry-Se Satural Geomo Shallov X FAC-N Raised Frost-F	Indicators (2 Stained Leav and 4B) ge Patterns (1 ason Water 1 tion Visible or orphic Positio v Aquitard (D eutral Test (C Ant Mounds leave Hummi	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (CS n (D2) 3) D5) (D6) (LRR A) ocks (D7)
estrictive Laye Type: Depth (incher emarks: oung deposits b YDROLOGY /etland Hydrold rimary Indicator Surface Wate High Water Ta Saturation (A Sediment De C Drift Deposits Algal Mat or of Iron Deposits Surface Soil Inundation Vi Sparsely Veg	r (if observed): s): ut meets S5 by Indicators: <u>s (minimum of o</u> er (A1) fable (A2) (B1) uposits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) isible on Aerial In getated Concave	ne is requi magery (B Surface ()	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( thizosph of Reduc n Reduc Stresse lain in R	ves (B9) and 4B) bes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants 'emarks)	(except iving Roc C4) Iled Soits (D1) (LR	Hydric Soil )	Present? iecondary Water- 4A, Draina; Dry-Se Satural Geome Shallov X FAC-N Raised Frost-F	Indicators (2 Stained Leav and 4B) ge Patterns (1 ason Water 1 ion Visible or orphic Positio v Aquitard (D eutral Test (E Ant Mounds leave Humm	Yes X No or more required) res (B9) (MLRA 1, 2 B10) Table (C2) n Aerial Imagery (C9 n (D2) 3) 25) (D6) (LRR A) ocks (D7)
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ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	orps of Eng - Western Me proponent a	<b>Jineers</b> ountains, Va gency is CE	lleys, and C ECW-CO-I	Coast Region R	OMB Control #: 0710-002 Requirement Control S (Authority: AR 335-15,	24, Exp: 11/30/2024 Symbol EXEMPT: paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Da	ite: 7/27/202
pplicant/Owner: CDOT - Region 1				State: CO	Sampling Po	int: WL10
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	ange: NE4 S32, T3	S. R72W	
andform (billside terrace etc.): floodplain		Local relief /c	oncave con	vev none) flat		Slope (%): 1-
bregion (IPR); IPRE MIRA 48A Lat: 39.7	4807		Long: d	05 46152	Date	MADR3
Man Unit Nama: Cathodral Book autoron annal	4007	mont closes	_ Long	103.40132 MMI at	continentiant UDI	
	ex, 50 to 70 pe	icent slopes	10. L D		assilication. OFE	
e climatic / hydrologic conditions on the site typica	for this time o	f year?	Yes X	No (If no	, explain in Remark	s.)
re Vegetation, Soil, or Hydrology	significantly	disturbed? A	Are "Normal"	Circumstances" pres	ent? Yes X	No
re Vegetation, Soil _ X _, or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site r	nap showir	ng samplin	g point lo	ocations, transe	cts, important i	features, et
tydrophytic Vegetation Present?         Yes         X           Hydric Soil Present?         Yes         X           Wetland Hydrology Present?         Yes         X		is the withi	n a Wetland	Area 1? Yes	X No	
emarks: arger floodplain wetland on outside bend of Clear	Creek					
EGETATION – Use scientific names of	plants.					
ree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:	
·		<u> </u>		Number of Domin	ant Species That	E (A)
		<u> </u>		Are OBL, FACVV,	or FAC:	CA
				Total Number of I	Dominant Species	5 (1)
		=Total Cover	_	Across Air Strata.	-	(B)
Sapling/Shrub Stratum (Plot size: 15	_)	Ves	FACW	Are OBL, FACW,	or FAC: -	100.0% (A
2. Salix bebbiana	20	Yes	FACW	Prevalence Inde	x worksheet:	
Betula occidentalis	20	Yes	FACW	Total % Cov	erof: Mu	Itiply by:
		1.000	_	OBL species	0 x1=	0
				FACW species	160 x 2 =	320
	90	=Total Cover		FAC species	25 x 3 =	75
erb Stratum (Plot size: 5)				FACU species	0 x 4 =	0
Juncus balticus	70	Yes	FACW	UPL species	0 x 5 =	0
. Festuca rubra	20	Yes	FAC	Column Totals:	185 (A)	395 (B
Cirsium arvense		No	FAC	Prevalence Inc	dex = B/A =	2.14
				In the state of the state of the state		
·				d Boold Too	ter Undershutie V	a a tatian
				- T- Rapid Tes	a Tect is \$50%	egeration
-	- <u></u>			X 3 - Prevalence	e lodev is $<3.0^{1}$	
°				4 - Momholog	ical Adaptations (P	rovide supporti
0				data in Rer	marks or on a separ	ate sheet)
1.				5 - Wetland N	Ion-Vascular Plants	1
	95	=Total Cover		Problematic	lydrophytic Vegetat	ion <sup>1</sup> (Explain)
Voody Vine Stratum (Plot size: 5	_)		1	Indicators of hydrogenetics of hydrogene	ric soil and wetland s disturbed or proble	hydrology mus ematic.
2.		=Total Cover		Hydrophytic		
	-	, oral obter		vegetation		

Depth	IVIAUIX		ALL AND AND AN ANY ANY A							A. 11. 12.1	
nches)	Color (moist)	%	Color (moist)	%	Type	Loc	Textu	ire		Remarks	
0-5	10YR 4/3	100	7.5YR 4/4	10	C	M	San	dy	Faintr	edox concentra	ations
5-16	10YR 3/3	100	7.5YR 4/6	25		<u>M</u>	San	dy	Prominer	nt redox concer	ntrations
		Ξ			_	Ξ		Ē	_		
ype: C=Co	oncentration, D=Depi	etion, RM	=Reduced Matrix, 0	CS=Cove	red or Co	oated Sar	d Grains.	<sup>2</sup> Loca	tion: PL=Po	re Lining, M=M	atrix.
Histosol Histic Ep Black Hi Hydroge 1 cm Mu Depleted Thick Da Sandy W 2.5 cm M	(A1) pipedon (A2) stic (A3) n Sulfide (A4) ck (A9) (LRR D, G) d Below Dark Surface irk Surface (A12) lucky Mineral (S1) Aucky Peat or Peat (S	e (A11) 52) (LRR (	LKRs, unless oth Sandy Gle Sandy Re Loamy Mu Loamy Gl Depleted Redox Da Depleted G) Redox De	erwise n eyed Mat dox (S5) Matrix (S6 ucky Mine eyed Mat Matrix (F rk Surfac Dark Sur pression	oted.) rix (S4) eral (F1) trix (F2) 3) se (F6) face (F7) s (F8)	(except N	ILRA 1)	2 cm Iron-M Red F Very Other <sup>9</sup> Indicator wetla unles	s for Proble Muck (A10) ( Manganese M Parent Materi Shallow Dark (Explain in F s of hydrophy nd hydrology s disturbed o	(LRR A, E) Masses (F12) (L ial (F21) c Surface (F22) Remarks) Aftic vegetation must be prese or problematic.	and nt,
CITICITUD I											
Type: Depth (ir emarks: roblematic	ayer (if observed):	s, does no	t meet chroma for	S5, but re	edox are	clear	Hydric Sol	il Present	?	Yes <u>X</u>	No
Type: Depth (ir emarks: roblematic	ayer (It observed): nches): soils. Young deposit:	5. does no	t meet chroma for	S5, but re	edox are	clear	Hydric Soi	il Present	?	Yes <u>X</u>	No
Type: Depth (ir emarks: roblematic	ayer (if observed): nches): soils. Young deposits GY drology Indicators:	s, does no	t meet chroma for	S5, but re	edox are	clear	Hydric Soi	il Present	2	Yes X	No
Type: Depth (ir emarks: roblematic YDROLO Yetland Hyd Yuffand Hyd Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely	ayer (If observed): Inches): soils. Young deposits soils. Young deposits <b>GY</b> drology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) posits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In vegetated Concave	s. does no ne is requi magery (B Surface ()	t meet chroma for tred: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized R Presence Recent Inc Stunted o 7) Other (Ex B8)	apply) ained Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in R	edox are wes (B9) and 4B) and 4B) Odor (C1) eres on I ced Iron ( tion in Ti d Plants Remarks)	(except ) Living Roc (C4) Iled Soils (D1) (LRI	Hydric Soi ots (C3) (C6) R A)	Secondar Wate 44 Drain Dry-S Satur Geom Shalle X FAC- Raise Frost	? y Indicators ( r-Stained Lea A, and 4B) age Patterns ieason Water ation Visible ation Ationa ation ation (Ationa ationa at	Yes X (2 or more requ aves (B9) (MLF (B10) r Table (C2) on Aerial Imag ion (D2) (D3) (D5) ds (D6) (LRR A mocks (D7)	No ired) RA 1, 2 ery (C9)
Type: Depth (ir emarks: roblematic YDROLO /etland Hype rimary Indic Surface High Wa Saturation Sedimer Drift Dep Surface Inundatic Sparsely ield Obser urface Wat /ater Table aturation Pe	ayer (If observed): Inches): soils. Young deposits soils. Young deposits <b>GY</b> drology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) It Deposits (B2) posits (B3) t or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Ye resent? Ye	ne is requi magery (B Surface () s s	t meef chroma for red: check all that Water-Sta MLRA Sait Crust Aquatic In Hydrogen X Oxidized R Presence Recent Ira Stunted o 7) Other (Ex B8) No X No X No X	apply) ained Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in R Depth (i Depth (i	edox are ves (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( ition in Ti d Plants ermarks) nches):_ nches): nches):	(except ) Living Roo (C4) Iled Soils (D1) (LR	Hydric Sol ots (C3) (C6) R A) Wetland	Secondar Wate 44 Drain Dry-S Satur Geon Shalla X FAC- Raise Frost	? y Indicators ( r-Stained Lea A, and 4B) age Patterns ieason Water ation Visible horphic Positi bow Aquitard ( Neutral Test ad Ant Mound Heave Humn Heave Humn by Present?	Yes X (2 or more required aves (B9) (MLF (B10) r Table (C2) on Aerial Imag ion (D2) (D5) ds (D6) (LRR A mocks (D7) Yes X	No ired) RA 1, 2 ery (C9
Type: Depth (ir emarks: roblematic YDROLO Yetland Hype rimary India Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely ield Obser urface Water Table aturation Pin ncludes cap	aver (if observed): aches): soils. Young deposits soils. Young deposits arks (Particular States): arks (B1) arks (B1) arks (B1) arks (B2) bosits (B3) arks (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Ye present? Ye present? Ye pollary fringe)	ne is requi	t meet chroma for ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X	S5; but re apply) ained Lea 1, 2, 4A, (B11) ivertebrat Sulfide ( Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i	edox are ives (B9) and 4B) tes (B13) Ddor (C1) eres on I ced Iron ( tion in Ti d Plants Remarks) nches): nches): nches):	(except ) Living Roc (C4) Iled Soils (D1) (LRI	Hydric Sol ots (C3) (C6) R A) Wetland	Secondar Wate 44 Drain Dry-S Satur Geom Shalle X FAC- Raise Frost	? y Indicators ( r-Stained Lea A, and 4B) age Patterns teason Water ation Visible horphic Positi bow Aquitard ( Neutral Test ad Ant Mound Heave Humn y Present?	Yes X (2 or more requ aves (B9) (MLF (B10) r Table (C2) on Aerial Imag ion (D2) (D3) (D5) ds (D6) (LRR A mocks (D7) Yes X	No
Type: Depth (ir emarks: roblematic YDROLO /etland Hype rimary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely ield Obser urface Wate /ater Table aturation Pe	ayer (If observed): aches): soils. Young deposits GY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B1) arks (B2) posits (B3) arks (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Ye present? Ye	ne is requi	t meef chroma for red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized R Presence Recent Inc Stunted o 7) Other (Ex B8) No X No X No X No X No X No X No X No X	S5, but re apply) ained Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i al photos,	edox are ives (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants ternarks) nches): nches): previous	clear (except ) Living Roc (C4) Iled Soils (D1) (LR) (D1) (LR)	Hydric Sol ots (C3) (C6) R A) Wetland	Secondar Wate 44 Drain Dry-S Satur Geom Shalle X FAC- Raise Frost	? y Indicators ( r-Stained Les age Patterns ieason Water ation Visible horphic Positi bw Aquitard ( Neutral Test id Ant Mound Heave Humn Heave Humn ig Present?	Yes X (2 or more required aves (B9) (MLF (B10) r Table (C2) on Aerial Imag ion (D2) (D5) Is (D6) (LRR A mocks (D7) Yes X	No
Type: Depth (ir emarks: roblematic YDROLO /etland Hyu rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely ield Obser urface Wat /ater Table aturation Pi ncludes cap escribe Rei	aver (if observed): hehes): soils. Young deposits soils. Young deposits arks (Particular and the solution water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B1) arks (B3) tor Crust (B4) osits (B3) tor Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In vegetated Concave vations: er Present? Ye Present? Ye present? Ye posite (B4) corded Data (stream	ne is requi	t meet chroma for ired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized I Presence Recent Irc Stunted o 7) Other (Ex B8) No X No X No X No X No X	S5; but re apply) ained Lea 1, 2, 4A, (B11) overtebrat Sulfide ( Rhizosph of Reduc on Reduc r Stresse plain in R Depth (i Depth (i Depth (i	edox are ives (B9) and 4B) tes (B13) Ddor (C1) eres on 1 ced Iron ( tion in Ti d Plants (emarks) nches): nches): nches): , previous	clear (except ) Living Roc (C4) Iled Soils (D1) (LRI (D1) (LRI	Hydric Sol ots (C3) (C6) R A) Wetland	Secondar Wate 44 Drain Dry-S Satur Geon Shalle X FAC- Raise Frost	? y Indicators ( r-Stained Less age Patterns teason Water ation Visible norphic Positi bow Aquitard ( Neutral Test ed Ant Mound Heave Humn IN Present?	Yes X (2 or more requ aves (B9) (MLF (B10) r Table (C2) on Aerial Imag ion (D2) (D3) (D5) ds (D6) (LRR A mocks (D7) Yes X	No ired) XA 1, 2 ery (C9)

ENG FORM 6116-9, JUL 2018

See ERDC/EL TR-10-3; the p	- Western Mo proponent ag	untains, Va ency is CE	lleys, and C ECW-CO-F	Coast Region	Requirement Contr (Authority: AR 335-	ol Symbol EXEMP1 15, paragraph 5-2a	7; a)
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling	Date: 7/26/2	2022
oplicant/Owner: CDOT - Region 1		1.1		State: CO	Sampling	Point: UF	P10
vestigator(s): Fillipi and Kizlinski		Section 7	ownship, Ra	ange: NE4 S32, T3	S, R72W		
andform (hillside, terrace, etc.): hillside	Ĺ	ocal relief (c	oncave, conv	vex, none): flat		Slope (%):	10
ubregion (LRR): LRR E, MLRA 48A Lat: 39.7	4820		Long: 1	05.46151	D	atum: NADS	83
il Map Unit Name: Cathedral-Rock outcrop comple	ex, 30 to 70 per	cent slopes		NWI cl	assification: UPL		
e climatic / hydrologic conditions on the site typical	for this time of	year?	Yes X	No (lf no	explain in Rema	ırks.)	
e Vegetation Soil or Hydrology	significantly d	isturbed? A	re Normal	Circumstances" pres	ent? Yes X	No	
e Vegetation Soil or Hydrology	naturally prob	lematic? (	If needed, ex	colain any answers in	Remarks.)		
UMMARY OF FINDINGS - Attach site n	nap showing	g samplin	g point lo	cations, transe	cts, importan	t features,	ete
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Vetland Hydrology Present? Yes	No X No X No X	ls the withi	e Sampled A n a Wetland	Area I? Yes	No <u>_X</u>	-	
emarks: deep side slope above wetland							
EGETATION – Use scientific names of	plants.						_
Des Distances (Distances and	Absolute	Dominant	Indicator	being and a la	and the second		
Pieus coorderosa	% Cover	Species?	EACU	Dominance lest	worksheet;		
Juniperus monosperma	20	Yes	UPL	Are OBL FACW	ant Species That or FAC:	0	(A
				Total Number of I	Dominant Species		- 1. 1
				Across All Strata:	Sommanic options.	5	(B)
Sapling/Shrub Stratum (Plot size: 15	40 =	Total Cover		Percent of Domin Are OBL, FACW,	ant Species That or FAC:	0.0%	(A)
. Symphoricarpos mollis	15	Yes	FACU				_
. Artemisia frigida	10	Yes	UPL	Prevalence Inde	x worksheet:	6.00.2.6	
				Total % Cov	er of: N	Aultiply by:	RC
				FACW species	0 x1=		1
	25 =	Total Cover		FAC species	0 x3=	= 0	-
lerb Stratum (Plot size: 5 )		100000000000		FACU species	35 x.4 =	140	
Bromuš înermis	20	Yes	UPL	UPL species	50 x 5 =	250	2.
		_		Column Totals:	85 (A)	390	(B
	_			Prevalence Inc	dex = B/A =	4.59	1
				Ludraphitis Van	stallás lediasta		
		<u> </u>		1 - Renid Tes	t for Hydrophytic	Venetation	
			_	2 - Dominanc	e Test is >50%	vegetation	
				3 - Prevalenc	e Index is ≤3.0 <sup>1</sup>		
				4 - Morpholog	ical Adaptations	(Provide supp	porti
0.				data in Rer	marks or on a sep	arate sheet)	
1				5 - Wetland N	Ion-Vascular Plar	nts <sup>1</sup>	J
	20 =	Total Cover		Problematic H	Hydrophytic Vege	tation' (Explai	in)
Woody vine Stratum (Plot size: 5	2			Indicators of hydrogenetic unless	ric soil and wetlar s disturbed or pro	nd hydrology r blematic	mus
				ne present, unies	a marchinen or bio		-
				A A C A A A A A A A A A A A A A A A A A			

Profile Description	on: (Describe t	a the dep	th needed to do	cument th	ne indica	ator or c	onfirm the	absence of	indicators.)	_	
)epth	Matrix		Red	ox Featur	es						
nches) (	Color (moist)		Color (moist)	%	Type	Loc	Tex	ture		Remarks	_
0-10	2.5Y 3/3	100		_	_	_	Loamy	/Clayey			
and the second second						100					
			-	_	_		-				
					_		-				
<u></u>					_	_					
					-	-					
		_		_	_	-	-				
ype: C=Concer	ntration, D=Depl	etion, RM=	Reduced Matrix,	CS=Cove	red or C	oated Sa	and Grains.	<sup>2</sup> Locat	on: PL=Pore	Lining, M=N	latrix.
ydric Soil Indic	ators: (Applical	ble to all l	RRs, unless oth	nerwise n	oted.)	12.70		Indicators	for Problema	atic Hydric :	Solls <sup>a</sup> :
Histosol (A1)			Sandy G	leyed Mat	rix (S4)			2 cm /	Auck (A10) (LF	RRA, E)	
Histic Epipede	on (A2)		Sandy R	edox (S5)				Iron-M	anganese Mas	sses (F12) (	LRR D)
Black Histic (/	A3)		Stripped	Matrix (Se	3)			Red P	arent Material	(F21)	
Hydrogen Sul	fide (A4)		Loamy M	lucky Mine	eral (F1)	(except	MLRA 1)	Very S	hallow Dark S	urface (F22	Y
1 cm Muck (A	9) (LRR D, G)		Loamy G	leyed Mat	rix (F2)			Other	Explain in Ren	marks)	
Depleted Belo	ow Dark Surface	(A11)	Depleted	Matrix (F:	3)			S			
Thick Dark Su	urface (A12)		Redox D	ark Surfac	e (F6)			<sup>9</sup> Indicators	of hydrophytic	vegetation	and
Sandy Mucky	Mineral (S1)		Depleted	Dark Sur	face (F7)	)		wetlan	d hydrology m	ust be prese	ent,
2.5 cm Mucky	Peat or Peat (S	2) (LRR 0	3) Redox D	epression	s (F8)			unless	disturbed or p	oroblematic.	
Restrictive Layer	(if observed):	-				1.1					
Type:	Cobbles/Ro	ocks									
Depth (inches Remarks: Shallow soil, dry, i	no signs of wetti	10 ng	-				Hydric S	oil Present?		Yes	No
Depth (inches Remarks: Shallow soil, dry, 1 YDROLOGY	no signs of wetti	10 ng	-				Hydric S	oil Present?		Yes	No
Depth (inches Remarks: Shallow soil, dry, 1 YDROLOGY Wetland Hydrolo	no signs of wetti	10 ng					Hydric S	oll Present?		Yes	No
Depth (inches Remarks: Shallow soil, dry, 1 YDROLOGY Wetland Hydrolo Primary Indicators	s): no signs of wettl gy Indicators:	10 ng	red: check all that	anniv).			Hydric S	oil Present?	Indicators (2)	Yes	No
Depth (inches Remarks: Shallow soil, dry, 1 YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate	no signs of wetti gy Indicators: s (minimum of or	10 ng ne is requi	red: check all that Water-St	apply)	ves (B9)	lexcept	Hydric S	oil Present? Secondary Water	Indicators (2 d	Yes	No
Depth (inches Remarks: Shallow soil, dry, 1 YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T	no signs of wetti gy Indicators: s (minimum of or rr (A1) able (A2)	10 ng ne is requi	red; check all that Water-St	ained Lea	ves (B9) and 4B	(except	Hydric S	oil Present? Secondary Water- 4A	Indicators (2 4 Stained Leave and 4B)	Yes or more requess (B9) (ML	No uired) RA 1, 2
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T: Saturation (A:	s): no signs of wettl gy Indicators: s (minimum of or rr (A1) able (A2) 3)	10 ng ne is requi	red: check all that 	ained Lea	ves (B9) and 4B	(except	Hydric S	oil Present? Secondary Water- 4A, Draina	Indicators (2 d Stained Leave and 4B) ge Patterns (B	or more requests (B9) (ML)	No uired) RA 1, 2
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T: Saturation (A: Water Marks	s): no signs of wettl gy Indicators: s (minimum of or r (A1) able (A2) 3) (B1)	10 ng ne is requi	red; check all that Water-St MLR/ Salt Crus Aquatic I	<u>apply)</u> ained Lea 1, 2, 4A, it (B11)	ves (B9) and 4B	(except	Hydric S	Secondary Water- 4A, Draina Drv-Se	Indicators (2 ( Stained Leave and 4B) ge Patterns (B ason Water T	Yes or more requ zs (B9) (ML 310) able (C2)	No uired) RA 1, 2
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ti Saturation (A: Water Marks Sediment Der	gy Indicators: (A1) able (A2) (B1) posits (B2)	10 ng ne is requi	red; check all that Water-St MLRA Salt Crus Aquatic I Hydrogel	ained Lea 1, 2, 4A, it (B11) nvertebrat	ves (B9) and 4B tes (B13) Odor (C1	(except	Hydric S	Secondary Water- 4A, Draina Dry-Se Satura	Indicators (2 d Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on	Yes or more requess (B9) (ML 310) able (C2) Aerial Imat	No
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ti Saturation (A: Water Marks Sediment Dep Drift Deposits	gy Indicators: (A1) able (A2) (B1) posits (B2) (B3)	10 ng ne is requi	red; check all that Water-St MLRA Salt Crus Aquatic I Hydroget Oxidized	ained Lea 1, 2, 4A, tt (B11) nvertebrät n Sulfide ( Rhizosph	ves (B9) and 4B tes (B13) Odor (C1	(except ) ) Living Ré	Hydric S	Secondary Water- 4A, Draina Dry-Se Satura Geom	Indicators (2 4 Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on perplic Position	Yes or more requess (B9) (ML 310) able (C2) Aerial Imag 0 (D2)	No aired) RA 1, 2 pery (C9)
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Tai Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C	gy Indicators: (Minimum of or (A1) able (A2) (B1) (B1) (B3) (Crust (B4)	10 ng ne is requi	red: check all that Water-St MLRA Salt Crus Aquatic I Hydrogei Oxidized Presence	<u>apply)</u> ained Lea 1, 2, 4A, it (B11) nvertebråt n Sulfide ( Rhizosph e of Reduc	ves (B9) and 4B es (B13) Ddor (C1 eres on l ced fron (	(except ) ) Living Ro (C4)	Hydric S	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo	Indicators (2 o Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on orphic Position w Aguitard (D3	Yes or more requess (B9) (ML 310) able (C2) Aerial Imag 1 (D2) 3)	No aired) RA 1, 2 gery (C9)
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ti Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	gy Indicators: (minimum of or (A1) able (A2) (B1) (B1) (B3) Crust (B2) (B3) Crust (B4) (B5)	10 ng ne is requi	red: check all that Water-St MLRA Salt Crus Aquatic 1 Hydroget Oxidized Présence Recent I	<u>apply)</u> ained Lea 1, 2, 4A, it (B11) nvertebrät n Sulfide ( Rhizosph e of Reduc on Reduc	ves (B9) and 4B es (B13) Door (C1 eres on l ced from ( tion in Ti	(except ) ) Living Ro (C4) (lied Soil	Hydric S	Secondary Water- 4A, Draina Dry-Se Satura Geom Shallo FAC-h	Indicators (2 c Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on orphic Position w Aquitard (D3 eutral Test (D	Yes or more requess (B9) (ML 310) able (C2) Aerial Imag 1 (D2) 3) 5)	No aired) RA 1, 2 gery (C9
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vatiand Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Vater Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil (	s): ano signs of wetting gy Indicators: (minimum of or (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6)	10 ng ne is requi	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted o	apply) ained Lea 1, 2, 4A, it (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc on Reduc	ves (B9) and 4B) des (B13) Ddor (C1 eres on l ced Iron ( tion in Ti d Plants	(except ) Living Rd (C4) Illed Soil (D1) (LF	Hydric S boots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raisec	Indicators (2 o Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on orphic Position w Aquitard (D3 eutral Test (D	Yes or more requess (B9) (ML B10) Aerial Imag 1 (D2) 5) (D6) (LRR A	No uired) RA 1, 2 pery (C9
Depth (inches Remarks: Shallow soil, dry, i Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Water High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil ( Inundation Vis	s): ano signs of wetting gy Indicators: s (minimum of or r (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Crusts (B6) sible on Aerial In	ng ne is requi	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted o 7) Other (E)	apply) ained Lea 1, 2, 4A, it (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc on Reduc or Stresse colain in R	ves (B9) and 4B des (B13) Ddor (C1 eres on l ced Iron ( tion in Ti d Plants cemarks)	(except ) Living Rd (C4) illed Soil (D1) (LF	Hydric S boots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-N Raisec Frost-	Indicators (2 d Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on orphic Position w Aquitard (D3 leutral Test (D I Ant Mounds ( deave Hummo	Yes or more requires (B9) (ML 310) able (C2) Aerial Imagin (D2) 3) 5) (D6) (LRR A bocks (D7)	No uired) RA 1, 2 pery (C9
Depth (inches Remarks: Shallow soil, dry, i Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Water High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Veg	s): ano signs of wetti gy Indicators: s (minimum of or r (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave	ng ne is requi magery (B) Surface (B	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted of Other (E) 38)	ained Lea ained Lea 1, 2, 4A, it (B11) nvertebrat n Sulfide ( Rhizosph e of Reduc on Reduc on Reduc or Stresse cplain in R	ves (B9) and 4B des (B13) Ddor (C1 eres on l ced Iron ( tion in Ti d Plants temarks)	(except ) ) Living Rd (C4) illed Soil (D1) (LF	Hydric S oots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-N Raisec Frost-I	Indicators (2 d Stained Leave and 4B) ge Patterns (E ason Water T tion Visible on orphic Position w Aquitard (D3 leutral Test (D I Ant Mounds ( leave Hummo	Yes or more requires (B9) (ML 310) able (C2) Aerial Image (D2) 3) 5) (D6) (LRR A bocks (D7)	No uired) RA 1, 2 pery (C9
Depth (inches Remarks: Shallow soil, dry, i Shallow soil, dry, i YDROLOGY Vatiand Hydrolo Primary Indicators Surface Water High Water Tri Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Veg	(B1) (B1) (B1) (B1) (B1) (B1) (B2) (B3) Crust (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns:	ng ne is requi nagery (B7 Surface (B	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Présence Recent In Stunted of Other (E) 38)	ained Lea ained Lea A 1, 2, 4A, it (B11) nvertebrat n Sulfide ( Rhizosph e of Reduc on Reduc on Reduc or Stresse cplain in R	ves (B9) and 4B des (B13) Odor (C1 eres on l eed Iron ( tion in Ti d Plants temarks)	(except ) Living Rd (C4) (Iled Soit (D1) (LF	Hydric S pots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-I	Indicators (2 d Stained Leave and 4B) ge Patterns (B ason Water T tion Visible on orphic Position w Aquitard (D3 leutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requires (B9) (ML B10) Aerial Image (D2) B) 5) (D6) (LRR A bocks (D7)	No
Depth (inches Remarks: Shallow soil, dry, i Shallow soil, dry, i YDROLOGY Vatiand Hydrolo Primary Indicators Surface Water High Water Tri Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pri	s): mo signs of wetting gy Indicators: s (minimum of or rr (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Crust (B4) (B5) Cracks (B6) sible on Aerial In etated Concave ns: esent? Yeitige	10 ng ne is requi nagery (B7 Surface (B	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted of Other (E) 38)	t apply) ained Lea A 1, 2, 4A, at (B11) nvertebråt n Sulfide ( Rhizosph 2 of Reduc on Reduc or Stresse cplain in R	ves (B9) and 4B Door (C1 eres on l sed fron ( tion in Ti d Plants ermarks)	(except ) Living Ro (C4) (Illed Soit (D1) (LF	Hydric S bots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-I	Indicators (2 & Stained Leave and 4B) ge Patterns (B eason Water T tion Visible on orphic Position w Aquitard (D3 eutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requess (B9) (ML B10) able (C2) Aerial Imag a (D2) 5) (D6) (LRR A bocks (D7)	No aired) RA 1, 2 pery (C9
Depth (inches Remarks: Shallow soil, dry, i Shallow soil, dry, i YDROLOGY Vatiand Hydrolo Primary Indicators Surface Water High Water Tri Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pres	s): ano signs of wetting gy Indicators: s (minimum of or rr (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Crust (B4) (B5) Cracks (B6) sible on Aerial In etated Concave ns: esent? Ye:	10 ng ne is requi nagery (B7 Surface (B S	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Présence Recent la Stunted o 7) Other (E) 38)	t apply) ained Lea A 1, 2, 4A, it (B11) nvertebrat n Sulfide ( Rhizosph e of Reduc on Reduc or Stresse cplain in R Depth (i Depth (i	ves (B9) and 4B Door (C1 eres on l red fron ( tion in Ti d Plants temarks) renkes): nches):	(except ) Living Rd (C4) illed Soit (D1) (LF	Hydric S bots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-N Raisec Frost-I	Indicators (2 & Stained Leave and 4B) ge Patterns (B eason Water T tion Visible on orphic Position w Aquitard (D3 eutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requess (B9) (ML B10) able (C2) Aerial Imag a (D2) 3) 5) (D6) (LRR A bocks (D7)	No aired) RA 1, 2 pery (C9)
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Vetland Hydrolo Primary Indicators Surface Water High Water Tri Saturation (A: Water Marks Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vegi Field Observatio Surface Water Pres Saturation Present	s): no signs of wetti gy Indicators: s (minimum of or rr (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns: esent? Ye: ent? Ye:	ng ne is requi nagery (B7 Surface (B s	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Présence Recent It Stunted o 7) Other (E) 38)	t apply) ained Lea A 1, 2, 4A, at (B11) nvertebrat n Sulfide ( Rhizosph e of Reduc on Reduc or Stresse cplain in R Depth (i Depth (i Depth (i	ves (B9) and 4B bes (B13) Odor (C1 eres on l red Iron ( tion in Ti d Plants ternarks) ermarks) nches): nches):	(except ) Living Rd (C4) (Illed Soit (D1) (LF	Hydric S bots (C3) s (C6) RR A)	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-N Raisec Frost-I	Indicators (2 & Stained Leave and 4B) ge Patterns (B eason Water T tion Visible on orphic Position w Aquitard (D3 eutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requires (B9) (ML B10) able (C2) Aerial Imag 1 (D2) 3) 5) (D6) (LRR A bocks (D7) Yes	No aired) RA 1, 2 pery (C9)
Depth (inches Remarks: Shallow soil, dry, i YDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Tr Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pres Saturation Presen includes canillary	s): no signs of wetti gy Indicators: <u>s (minimum of or</u> r (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns: esent? Ye: (1? Ye: (finge)	ng ne is requi nagery (B7 Surface (B ss	red: check all that Water-St MLRA Salt Crus Aquatic I Hydroget Oxidized Presence Recent It Stunted of Other (E) 38)	t apply) ained Lea A 1, 2, 4A, it (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse cplain in R Depth (i Depth (i	ves (B9) and 4B) bes (B13) Ddor (C1 eres on l ced Iron ( tion in Ti d Plants ermarks) ermarks) nches): nches):	(except ) Living Ro (C4) Illed Soit (D1) (LF	Hydric S bots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-h Raisec Frost-l	Indicators (2 a Stained Leave and 4B) ge Patterns (E eason Water T tion Visible on orphic Position w Aquitard (D3 teutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requess (B9) (ML B10) able (C2) Aerial Imag n (D2) B) 5) (D6) (LRR A bocks (D7) Yes	No aired) RA 1, 2 pery (C9)
Depth (inches Remarks: Shallow soil, dry, i PUROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pres Saturation Presen includes capillary Describe Recorde	s): ano signs of wetting gy Indicators: a (minimum of or able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns: esent? Yeil able? Yeil (fringe) ad Data (stream	10 ng ne is requi nagery (B) Surface (B S s s s	red: check all that Water-St MLR/ Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted of Other (E) 38) No X No X No X No X No X	ained Lea 1, 2, 4A, it (B11) nvertebråt n Sulfide C Rhizosph e of Reduc on Reduc on Reduc or Stresse splain in R Depth (i Depth (i Depth (i al photos	ves (B9) and 4B) res (B13) Odor (C1 eres on l red from ( tion in Ti d Plants (emarks) nches): nches): nches):	(except) ) Living Rc (C4) Illed Soit (D1) (LF	Hydric S bots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, Draina Dry-Se Satura Geom FAC-N Raisec Frost-I d Hydrology ailable:	Indicators (2 d Stained Leave and 4B) ge Patterns (E eason Water T tion Visible on orphic Position w Aquitard (D3 leutral Test (D I Ant Mounds ( Heave Hummo	Yes or more requess (B9) (MLI 310) able (C2) Aerial Imag 1 (D2) 3) 5) (D6) (LRR A bocks (D7) Yes	No aired) RA 1, 2 hery (C9)
Depth (inches Remarks: Shallow soil, dry, i PDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Veg Field Observatio Surface Water Pres Saturation Presen includes capillary Describe Recorde	gy Indicators: a (minimum of or able (A2) able (A2) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns: esent? Ye: ent? Ye: of finge) ad Data (stream	10 ng ne is requi nagery (B) Surface (B s s gauge, mo	red; check all that Water-St MLRA Salt Crus Aquatic I Hydroget Oxidized Presence Recent In Stunted of Other (E) 38) No X No X No X No X No X No X	ained Lea <b>1</b> , <b>2</b> , <b>4</b> , <b>i</b> (B11) nvertebrät n Sulfide C Rhizosph e of Reduc on Reduc on Reduc or Stresse (plain in R Depth (i Depth (i Depth (i al photos,	ves (B9) and 4B) res (B13) Odor (C1 eres on l red fron ( tion in Ti d Plants remarks) nches): nches): previou:	(except) ) Living Rd (Cl4) Soit (Cl4) Soit (D1) (LF s inspect	Hydric S bots (C3) s (C6) RR A) Wetlan	oil Present?	Indicators (2 4 Stained Leave and 4B) ge Patterns (B eason Water T tion Visible on orphic Position w Aquitard (D3 leaver Aummo Heave Hummo	Yes or more requess (B9) (MLI 310) able (C2) Aerial Image 1 (D2) 3) 5) (D6) (LRR A bocks (D7) Yes	No aired) RA 1, 2 pery (C9)
Depth (inches Remarks: Shallow soil, dry, i PDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pre- Saturation Presen includes capillary Describe Recorde Remarks:	gy Indicators: a (minimum of or r (A1) able (A2) 3) (B1) bosits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Ir etated Concave ns: esent? Ye: ent? Ye: of ringe) ad Data (stream	10 ng ne is requi nagery (Bi Surface (B s s gauge, mo	red: check all that Water-St MLR/ Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted of Other (E) 38) No X No X No X No X No X No X	ained Lea <b>1</b> , <b>2</b> , <b>4</b> , <b>1</b> , <b>1</b> ,	ves (B9) and 4B) tes (B13) Odor (C1 eres on l eres on l eres on l read Iron ( tion in Ti d Plants ternarks) nches): nches): previous	(except) ) Living Rd (C4) Soil (C1) (LF (D1) (LF	Hydric S boots (C3) s (C6) RR A) Wetlan	oil Present?	Indicators (2 4 Stained Leave and 4B) ge Patterns (E eason Water T tion Visible on orphic Position w Aquitard (D3 leaver Hummo leave Hummo	Yes or more requires (B9) (MLI 310) able (C2) Aerial Image 1 (D2) 3) 5) (D6) (LRR A books (D7) Yes	No
Depth (inches Remarks: Shallow soil, dry, i PDROLOGY Vetland Hydrolo Primary Indicators Surface Water High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observatio Surface Water Pres Saturation Presen includes capillary Describe Recorde Remarks: None observed.	s): ano signs of wetting gy Indicators: (minimum of or (A1) able (A2) (B1) cosits (B2) (B3) Crust (B4) (B5) Crust (B4) (B5) Cracks (B6) sible on Aerial In etated Concave ns: esent? Yeilt etated Concave ns: esent? Yeilt etated Concave ns: esent? Yeilt (Concave Concave) etated Concave ns: esent? Yeilt (Concave Concave) etated Concave ns: esent? Yeilt (Concave) etated Concave ns: esent? Yeilt (Concave) etated Concave (Concave) etated Concave (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (Concave) (	10 ng ne is requi nagery (B) Surface (B s s gauge, mo	red: check all that Water-St MLR/ Salt Crus Aquatic I Hydroger Oxidized Presence Recent In Stunted of Other (E) 38) No X No X No X No X	ained Lea 1, 2, 4A, it (B11) nvertebrat n Suffice C Rhizosph e of Reduc on Reduc on Reduc or Stresse cplain in R Depth (i Depth (i Depth (i al photos,	ves (B9) and 4B) tes (B13) Odor (C1 eres on l eres on l eres on l tion in Ti d Plants ternarks) nches): nches): previous	(except) ) Living Rd (Cl4) Soil (Cl4) Soil (Cl1) (LF	Hydric S boots (C3) s (C6) RR A) Wetlan	oil Present?	Indicators (2 4 Stained Leave and 4B) ge Patterns (E eason Water T tion Visible on orphic Position w Aquitard (D3 leaver Hummo Heave Hummo	Yes or more requess (B9) (MLI 310) able (C2) Aerial Image b (D2) 3) 5) (D6) (LRR # bocks (D7) Yes	No

ENG FORM 6116-9, JUL 2018

Western Mountains, Valleys, and Coast - Version 2.0.

UP10

U.S. Army Co WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	- Western Me proponent a	<b>gineers</b> ountains, Va gency is CE	lleys, and C CW-CO-I	Coast Region	OMB Control #: 07 Requirement Co (Authority: AR 3	10-0024, Exp ntrol Symbo 35-15, parag	o: 11/30/2024 I EXEMPT: raph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Samplin	g Date:	7/26/2022
pplicant/Owner: CDOT - Region 1		1.1		State: CC	) Samplin	g Point:	WL11
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	ange: NE4 S32, T3	S, R72W		
andform (hillside, terrace, etc.): floodplain		Local relief (c	oncave, con	vex, none): flat		Slop	e (%): 1-
ubregion (LRR): LRR E. MLRA 48A Lat: 39.7	4797		Long: 1	05.46181		Datum:	NAD83
oil Map Unit Name: Cathedral-Rock outcrop comple	ex. 30 to 70 pe	rcent slopes		NWI c	lassification: U	PL	
e climatic / bydrologic conditions on the site typical	for this time o	f vear?	Yes X	No (lf no	explain in Rer	marks.)	
re Venetation Soil or Hydrology	significantly	disturbed? (	re "Normal"	Circumstances" pres	ent? Ves	X No	
re Vegetation Soll or Hydrology	- neturally pro	blemetic? (	If needed o	volein anv answers i	n Romarke )	<u></u>	_
INMARY OF FINDINGS			a maint la	Aplain any answers i	in iveniario.)		
UMMART OF FINDINGS - Attach site h	nap snown	ig samplin	g point ic	cations, transe	ects, importa	int reat	ures, eo
łydrophytic Vegetation Present? Yes X łydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	e Sampled / n a Wetland	Area 1? Yes_	<u>X</u> No	-0	
Remarks: ringe wetland, 2-3 ft. wide along inside bend of Cle	ar Creek						
EGETATION – Use scientific names of	plants.				-		_
ree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	t worksheet:		
	1	<u> </u>		Number of Domin	nant Species Th	at	
-			<u> </u>	Are OBL, FACW	, or FAC:		4 (A
·				Total Number of	Dominant Spec	ies	
		-Total Cover		Across All Strata	l. Maria de la como	-	4 (B)
Sapling/Shrub Stratum (Plot size: 15	1	- Total Sover		Are OBL, FACW	or FAC:	at 10	0.0% (A
. Betula occidentalis	40	Yes	FACW				
	1		and the second second	Prevalence Inde	x worksheet:	1.57	
·				Total % Cov	/er of:	Multiply	by:
·				OBL species	40 x	1=	40
	40	-Total Corror		FACW species	60 X	2 = 1	20
erh Stratum (Plot size 5 )	40	- Total Cover		FACU species	0 x	4 =	0
Carex aquatilis	20	Yes	OBL	UPL species	0 x	5 =	0
Juncus balticus	20	Yes	FACW	Column Totals:	100 (A)	1	60 (B
. Eleocharis palustris	20	Yes	OBL	Prevalence In	dex = B/A =	1.60	
				Hydrophytic Veg	getation Indica	tors:	
			<del></del> ;	X 1 - Rapid fe	st for Hydrophyl	ic vegeta	ation
-	- <u> </u>			X 3- Prevalence	te indevis <3.0	1	
	-, <del></del> -	÷		4 - Morpholog	nical Adaptation	s'(Provid	le support
0.	10.00		_	data in Re	marks or on a s	eparate s	sheet)
1				5 - Wetland	Non-Vascular P	lants <sup>1</sup>	
	60	=Total Cover		Problematic	Hydrophytic Ve	getation	(Explain)
Voody Vine Stratum (Plot size: 5	)			<sup>1</sup> Indicators of hyd be present, unles	fric soil and wet is disturbed or p	land hydr problemat	ology mus ic.
2.	()			Hydrophytic			
% Bare Ground in Herb Stratum	-	=Total Cover		Vegetation Present?	Yes X	No	
a bare stound in here stratum				riesentr	100 1	140	_

000

Depth	Matrix		Neuo							
inches)	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Textur	e	1.1.1.1.1.1.1	Remarks
0-4	10YR 2/2	100				2	Sandy	,		1
4-7	7.5YR 3/3	100	5YR 4/6	60	с	M	Sandy	/	Prominent	redox concentration
7-14	10YR 4/2	100	5YR 4/6	30	C	M	Sandy	/	Prominent	redox concentration
		Ξ		HIN						
ype: C=Cor	ncentration, D=Depl	letion, RM	Reduced Matrix, C	S=Cove	red or C	oated Sar	nd Grains.	<sup>2</sup> Locat	ion: PL=Pore	Lining, M=Matrix.
dric Soil Ir	ndicators: (Applica	ble to all	RRs, unless othe	erwise n	oted.)	2.1	tr	ndicators	for Problem	atic Hydric Soils <sup>3</sup> :
Histosol (	A1)		Sandy Gle	yed Mate	rix (S4)			2 cm /	Muck (A10) (L	RRA, E)
Histic Epi	pedon (A2)		X Sandy Red	dox (S5)				Iron-M	anganese Ma	sses (F12) (LRR D)
Black His	tic (A3)		Stripped N	latrix (Se	5)			Red P	arent Material	(F21)
Hydrogen	Sulfide (A4)		Loamy Mu	cky Mine	eral (F1)	(except f	ILRA 1)	Very S	shallow Dark S	Surface (F22)
1 cm Muc	k (A9) (LRR D, G)		Loamy Gle	eyed Mat	rix (F2)			Other	(Explain in Re	marks)
Depleted	Below Dark Surface	e (A11)	Depleted M	Matrix (F:	3)					
Thick Dar	k Surface (A12)		Redox Dar	k Surfac	e (F6)		9 <mark>1</mark>	indicators	of hydrophytic	c vegetation and
Sandy Mu	icky Mineral (S1)		Depleted I	Dark Suri	face (F7)	6		wetlan	d hydrology m	nust be present,
2.5 cm M	ucky Peat or Peat (8	S2) (LRR	3)Redox Dep	pression	s (F8)	-		unless	disturbed or p	problematic.
Type:	ayer (il observed).						Section A			
Type: Depth (ind emarks: epletions 15	whes):	iyer)	<u>-</u>				Hydric Soil	Present?		Yes <u>X</u> No
Type: Depth (ind emarks: epletions 15	ches):	iyer)	-				Hydric Soil	Present?		Yes <u>X</u> No
Type: Depth (ind emarks: epletions 15 YDROLOO /etland Hyd	when in observed): thes): % 10YR 6/3 (4-7 La GY rology Indicators:	iyer)					Hydric Soil	Present?		Yes <u>X</u> No
Type: Depth (ind emarks: epletions 15 YDROLOO /etland Hydd rimary Indica Surfron M	when the base weather and the	iyer) ne îs requi	red; check all that a	apply)	1000 (P0)		Hydric Soil	Present? Gecondary	Indicators (2	Yes X No
Type: Depth (ind emarks: epletions 15 YDROLOO /etland Hydd rimary Indice Surface W Higb Work	when the base weather and the	iyer) ne îs requi	red: check all that i Water-Sta	apply) ined Lea	ves (B9)	(except	Hydric Soil	Present?	Indicators (2 -Stained Leav	Yes X No or more required) es (B9) (MLRA 1, 2
Type: Depth (ind emarks: epletions 15 YDROLOO /etland Hyde rimary Indice Surface V High Wate Saturation	when the observed): thes): % 10YR 6/3 (4-7 La 3Y rology Indicators: ators (minimum of or Vater (A1) er Table (A2) 0 (A3)	nyer) ne is requi	red: check all that : Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (811)	ves (B9) and 4 <b>B</b>	(except	Hydric Soil	Present?	Indicators (2 -Stained Leave and 4B)	Yes X No or more required) es (B9) (MLRA 1, 2
Type: Depth (ind emarks: epletions 15' YDROLOO /etland Hyde rimary Indice Surface V High Wate X Saturation Water Ma	when the observed): thes): % 10YR 6/3 (4-7 La GY rology Indicators: ators (minimum of or Vater (A1) er Table (A2) h (A3) rks (B1)	nyer) me is requi	red: check all that : Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4 <b>B</b> ,	(except	Hydric Soil	Present? Secondary Water 4A, Draina DravSi	Indicators (2 -Stained Leave , and 4B) .ge Patterns (B	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2)
Type: Depth (ind emarks: repletions 15 YDROLOO Vetland Hydd rimary Indice Surface V High Wate X Saturation Water Ma Sediment	when the base weath of the bas	nyer) ne îs requi	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hvdrogen	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide (	ves (B9) and 4B, es (B13) Oder (C1	(except	Hydric Soil	Present?	Indicators (2 -Stained Leave , and <b>4B</b> ) ge Patterns (F eason Water 1 tion Visible or	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2)
Type: Depth (ind emarks: epletions 15 YDROLOO YDROLOO Ydtland Hydr rimary Indice Surface V High Wate X Saturation Water Ma Sediment Drift Depo	when the base veals. We have a construction of the second	nyer) ne is requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph	ves (B9) and 4B; es (B13) Odor (C1 eres on	(except	Hydric Soil	Present?	Indicators (2 -Stained Leave and 4B) ge Patterns (f eason Water 1 tition Visible or orphic Position	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2)
Type: Depth (ind emarks: epletions 15 YDROLOO Yetland Hydu rimary Indice Surface V High Wate X Saturation Water Ma Sediment Drift Depo Algal Mat	when the base weath of the bas	nyer) In e îs requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc	ves (B9) and 4B; es (B13) Ddor (C1 eres on l sed fron (	(except ) Living Roi (C4)	Hydric Soil	Present?	Indicators (2 -Stained Leave and 4B) ge Patterns (F eason Water T ttion Visible or orphic Position w Aquitard (D)	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2) 3)
Type: Depth (ind emarks: epletions 15 YDROLOO /etland Hydu rimary Indice Surface V High Wate X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	when the base weath of the bas	nyer) Ine îs requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc	ves (B9) and 4B; es (B13) Ddor (C1 eres on 1 ced Iron ( tion in Ti	(except ) Living Roi (C4) Iled Soils	Hydric Soil	Present?	Indicators (2 -Stained Leave , and 4B) ge Patterns (B eason Water T tition Visible or orphic Position w Aquitard (D) Jeutral Test (D)	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2) 3) D5)
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Type: Depth (ind emarks: epletions 15 <b>/DROLOG</b> <b>/ettand Hyd</b> fimary Indice Surface V High Water Saturation Water Ma Sediment Drift Depc Algal Mat Iron Depci Surface S unundation	when in observed): when it observed): when it of the served is a served in the served in the served is a served in the	nyer) ne is requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse olain in R	ves (B9) and 4B; es (B13) Ddor (C1 eres on l eres on l e	(except ) Living Roo (C4) Iled Soils (D1) (LR	Hydric Soil	Present7	Indicators (2 -Stained Leave and 4B) ge Patterns (F eason Water T tition Visible or orphic Position w Aquitard (D: Jeutral Test (D d Ant Mounds Heave Hummo	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2) 3) 55) (D6) (LRR A) ocks (D7)
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Type: Depth (ind emarks: epletions 15 TOROLOC /etland Hydr rimary Indices Surface V High Wale Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Veld Observ urface Water	wheely in observed): wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely: wheely:	magery (B Surface ( S	red: check all that : Water-Sta MLRA Salt Crust Aquatic In: Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse blain in R Depth (i Depth (i	ves (B9) and 4B, es (B13) Odor (C1 eres on l aed Iron ( tion in Ti d Plants 'emarks) 'emarks): nches):	(except ) Living Roi (C4) Iled Soils (D1) (LR	Hydric Soil	Present? Secondary Water 4A, Draina Dry-St Satura Geom Shallo X FAC-N Raised Frost-l	r Indicators (2 -Stained Leavi , and 4B) ge Patterns (F eason Water T tition Visible or orphic Position w Aquitard (D: leutral Test (D d Ant Mounds Heave Hummo	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) fable (C2) fabl
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Type: Depth (ind emarks: epletions 15 <b>/DROLOC</b> <b>/etland Hyde</b> <b>/finary Indices</b> Surface V High Water Saturation Water Ma Sediment Drift Depo Surface S Inundation Sparsely ield Observ. urface Water /ater Table F aturation Pre- oncludes capi	when in observed): when it observed): when it of the iteration of the it	magery (B Surface ( S	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc Strësse olain in R Depth (ii Depth (ii	ves (B9) and 4B; es (B13) Odor (C1 eres on l ced Iron ( tion in Ti d Plants remarks) nches):	(except ) Living Ro (C4) Iled Soils (D1) (LR	Hydric Soil	Present?	r Indicators (2 -Stained Leave , and 4B) ge Patterns (F eason Water T tition Visible or orphic Position w Aquitard (D: Jeutral Test (D d Ant Mounds Heave Hummo Y Present?	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2) 3) 55) (D6) (LRR A) pocks (D7) Yes X No
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Type: Depth (ind temarks: Depletions 15 PDROLOC Vetland Hyde rimary Indices Surface V High Water X Saturation Water Ma Sediment Drift Depo Surface S Inundation Sparsely Netd Observ urface Water Ater Table F aturation Pre ncludes capi escribe Reco	when in observed): when it observed): when it of the served is a	magery (B Surface () ss gauge, mo	red: check all that : Water-Sta MLRA Salt Crust Aquatic In: Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No X No X No X No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse plain in R Depth (ii Depth (ii Depth (ii	ves (B9) and 4B; es (B13) Odor (C1 eres on l sed fron ( tion in Ti d Plants emarks) nches): nches): nches):	(except ) Living Ro (C4) Iled Soils (D1) (LR 8 s inspecti	Hydric Soil	Present?	r Indicators (2 -Stained Leavi , and 4B) ge Patterns (F eason Water T tition Visible or orphic Position w Aquitard (D: Jeutral Test (D d Ant Mounds Heave Hummo y Present?	Yes X No or more required) es (B9) (MLRA 1, 2 B10) Fable (C2) n Aerial Imagery (C9 n (D2) 3) 55) (D6) (LRR A) ocks (D7) Yes X No
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ENG FORM 6116-9, JUL 2018

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western M proponent a	gineers ountains, Va gency is CE	lleys, and C ECW-CO-F	Coast Region	OMB Contr Requiren (Authorit)	ol #: 0710-0024 wint Control Sy y: AR 335-15, j	5, Exp: 11/36 mbol EXEM paragraph 5-	0/2024 NPT: -2a)
Project/Site: Floyd Hill to Veterans Memorial Tunne		City/Cou	nty: Clear C	Creek County	Sa	mpling Dat	e: 7/26	6/2022
pplicant/Owner: CDOT - Region 1		1.1		State: CC	Sa	mpling Poi	nt: V	VL12
vestigator(s): Fillipi and Kizlinski		Section, 1	Township, Ra	ange: NE4 S32, T3	S, R72W			
andform (hillside, terrace, etc.): floodplain		Local relief (c	oncave, conv	vex, none): flat	10. E - 20.		Slope (%)	): 1-
ubregion (LRR): LRR E, MLRA 48A Lat: 39	74742		Long: 1	05.46106		Datur	n: NAI	D83
oil Map Unit Name; Cathedral-Rock outcrop com	olex. 30 to 70 pe	arcent slopes		NWI d	lassificatio	n: UPL		
e climatic / bydrologic conditions on the site typic	al for this time (	of vear?	Yes X	No (If no	o explain i	n Remarks	.)	
e Venetation Soil or Hydrology	significantly	disturbed?	Are "Normal"	Circumstances" pres	sent? V	ec X	No	
	agrinication	blomotic? /	If needed as	micin any answers i	n Domorka			-
UMMARY OF FINDINGS - Attach site	man showin	na samnlin	a point lo	cations transe	ects imr	ortant f	eatures	s et
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Netland Hydrology Present? Yes X	No No No	Is the within	e Sampled A in a Wetland	Area I? Yes_	<u>x</u> 1	ło		-1
Remarks: ringe wetland along Clear Creek								
EGETATION – Use scientific names of	of plants.	1						
Free Shedum (Dict Street) 20	Absolute	Dominant	Indicator	Deminent T	the second second second	ate		
ree <u>Stratum</u> (Plot size)	% Cover	Species	Status	Dominance les	t workshe	et:		
			_	Are OBL FACW	or FAC	es That	3	(A)
			<u> </u>	Total Number of	Dominant			- 10.1
				Across All Strata	Lonnan.	opecies	3	(B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domin Are OBL, FACW	hant Specie , or FAC;	es That	100.0%	_(A)
1. Salix exigua	70	Yes	FACW					-
				Prevalence Inde	x worksh	eet:		
		$\leftarrow$		Total % Cov	/er of:	Mult	iply by:	-
				EACW energies	30	x1=	180	-
	70	=Total Cover		FAC species	10	x3=	30	-
terb Stratum (Plot size: 5)	- 19	(910) 99101		FACU species	0	x4=	0	
Juncus balticus	20	Yes	FACW	UPL species	0	x 5 =	0	Ξ.
. Carex aquatilis	20	Yes	OBL	Column Totals:	130	(A)	240	(B
. Juncus dudleyi	10	No	FAC	Prevalence In	dex = B/A	=	.85	
Eleocharis palustris	10	No	OBL	1				_
				Hydrophytic Ve	getation In	dicators:	1.5.1	
			<u> </u>	X 1 - Rapid Te	st for Hydr	ophytic Ve	getation	
	_			X 2 - Dominant	ce restrs . ce indevic	<3.01		
·		·		4 - Morpholo	nical Adap	tations (Pr	ovide sur	onorti
0.	-			data in Re	marks or c	on a separa	ate sheet	)
1.				5 - Wetland	Non-Vascu	lar Plants		
and the second s	60	=Total Cover		Problematic	Hydrophyt	ic Vegetati	on (Expl	lain)
Noody Vine Stratum (Plot size: 5	_)			Indicators of hyd be present, unles	dric soil and s disturbe	d wetland h d or proble	ydrology matic.	/ mus
2.	-	=Total Cover	_	Hydrophytic Vegetation				

Cobe       Color (most)       %       Color (most)       %       Type       Loc       Teture       Remarks         0-8       10YR 4/4       100       7.3YR 4/8       25       C       Sandy       Distinct redox concentrations         0       10YR 4/4       100       7.3YR 4/8       25       C       Sandy       Distinct redox concentrations         0       0       10       Sandy       Distinct redox concentrations       Indicators       Preventrations         ype:       C-Concentration, D=Depietion, RM-Reduced Matrix, CS=-Covered of Costed Sand Grains       **Locators to Problematic Hydric Sols*;         1       Additactors: (Applicabile to all LRRs, unless otherwise noted.)       Indicators to Problematic Hydric Sols*;         1       Histos (A1)       Sandy Redox (S5)       Iron-Manganese Matrix (P2)       Other (Explain in Remarks)         1       Depieted Matrix (F3)       Commy Mucky Minera (F1) (except MLRA 1)       Very Shaleor Derk Surface (A2)       Other (Explain in Remarks)         1       Depieted Matrix (F2)       Other (Explain in Remarks)       Depieted Dark Surface (F7)       weltand hydrology must be present, unless disturbed or problematic strutes (B1)       Material (S1)       Depieted Dark Surface (F7)       weltand hydrology must be present, unless disturbed or problematic.       Sandy Mucky Minera (S1)       Depieted Dark Su	apth Matrix	Redox	Features						
0-8         10YR 4/4         100         7.5YR 4/6         25         C         Sandy         Distinct redux concentrations           ype:         C-Concentration, D=Depietion, RM=Reduced Matrix, CS         C         Sandy Grains         *Location: PL=Pore Lining, M=Matrix, drit 501 Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for YL=Pore Lining, M=Matrix, drit 501 Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for YL=Pore Lining, M=Matrix, drit 501 Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for YL=Pore Lining, M=Matrix, drit 501 Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for YL=Pore Lining, M=Matrix, drit 503 (LRR A)           Black Histic (A)         Sandy Redox (S)         Indicators for YL=Pore Lining, M=Matrix, (S)         Indicators for YL=Pore Lining, M=Matrix, drit 503 (LRR D, C)           Depleted Blow Dark Surface (A12)         Sandy Matrix (S0)         Indicators for YL=Pore Lining, M=Matrix, drit 503 (LRR D, C)         Indicators of hydrophylic vegetation and wetland hydrology must be present, 2.5 cm Musky Minerai (S1)         Depleted Matrix (F3)         Unless disturbed or problematic.           2.5 cm Musky Minerai (S1)         Depleted Matrix (F3)         Indicators for Ydrophylic vegetation and wetland hydrology must be present.         Wetland Hydrology must be present.           2.5 cm Musky Minerai (S1)         Depleted Matrix (F7)         wetland hydrology must be present.         Wetland Hydrology Indicators:	ches) Color (moist) %	Color (moist)	% Type	Loc	Text	ure		Remarks	
pe: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains. <sup>1</sup> Location: PL=Pore Lining. M=Matrix.         dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histos Eplecón (A2)       Sandy Redox (S5)       Incon-Manganees Masces (F12) (LRR 0)         Black Histic (A3)       Stripped Matrix (S6)       Incon-Manganees Masces (F12) (LRR 0)         Hydrogen Suffice (A4)       Loamy Musky Mineral (F1)       Very Shallow Dark Surface (F2)         Depleted Below Dark Surface (A1)       Depleted Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A1)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present; unless disturbed or problematic.         Strictive Layer (f) observed):       Type:       Cobbles and river rock       Depleted Dark Surface (F7)         Type:       Cobbles and river rock       Depleted Dark Surface (F3)       unless disturbed or problematic.         Strictive Layer (f observed):       Type:       Cobbles and river rock       Mag         Surface (Valer (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (except         Strictive Layer (f A1)       Mark A1, 2, 4A, and 4B)       Secondary Indicators (2 or more required).         Surface (Valer (A1)       Mark A1, 2, 4A, and 4B)       Strictive Layer (B9) (MLRA	0-8 10YR 4/4 100	7.5YR 4/6	C	Ξ	San	dy	Distinct	redox concen	trations
pr: O=Concentration, D=Depletion, RN+Reduced Matrix, CS=Covered or Costed Sand Grains       To costion: PL=Pore Lining, M=Matrix, CS=Covered or Costed Sand Grains       To costion: PL=Pore Lining, M=Matrix, CS=Covered or Costed Sand Grains         histosci (A1)       Sandy Gleyed Matrix (S4)       Indicators for Problematic Hydric Solls <sup>2</sup> ;         Histos (A1)       Sandy Gleyed Matrix (S4)       Icon Muck (A10) (LRR A, E)         Histos (A1)       Sandy Redox (S5)       Icon Muck (A10) (LRR A, E)         Black Histic (A3)       Stripped Matrix (S6)       Very Shallow Dark Surface (F2)         Yery Shallow Dark Surface (A11)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Type:       Cobbles and river rook       Depth (anches):       B       Water -Stained Leaves (B9) (except         High Vater Table (A2)       Matrix 1.2, 4A, and 4B)       Water -Stained Leaves (B9) (MLRA 1, 2       4A, and 4B)         Surface Water (A1)       Mater-Stained Leaves (B9) (except       Water -Stained Leaves (B9) (MLRA 1, 2       4A, and 4B)         Surface Water (A1)       Mater Atrix 4 Ad Ad B)       Darin age Patterns (B			==		_				
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators: Indicators for Problematic Hydric Soils*:         Histic Epidedin (A2)       Sandy Gleyed Matrix (S4)       2 cm Muck (A10) (LRR A, E)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (P21)         Hydrogen Suffice (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Sandy Rudy Mneral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present,         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         strictive Layer (if observed):       Type:       Cobbles and river rock       Deph (inches):       8         Depth (inches):       8       Salt Crus (B11)       Depleted Calcors (C2)       Water-Stained Leaves (B9) (except         Water CA1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2       4A, and 4B)         Surface Water (A1)       Aquatic Invertebrates (B13)       Drainage Patterns (B10)       Drainage Patterns (B10)         Water Attaber (B2)       HuRA 1, 2, 4A, and 4B)       Ad, and 4B)       Saturation (S12)       Saturation (S12)         Secondary Indicators (B3)       Oxid/azed Rin/azespheres on Living Roots (C3)	pe: C=Concentration, D=Depletion, RM=I	Reduced Matrix, CS	S=Covered or C	coated Sa	nd Grains.	<sup>2</sup> Locati	on: PL=Por	e Lining, M=I	Aatrix.
strictive Layer (if observed):         Type:       Cobbles and river rock         Depth (inches):       8         marks:       bblematic soils. Shallow and young deposits. but redox are clear, chroma does not meet S5         DROLOGY         attand Hydrology Indicators:         mark (A1)         Surface Water (A1)         Water-Stained Leaves (B9) (except         High Water Table (A2)         MLRA 1, 2, 4A, and 4B)         Saturation (A3)         Saturation (A3)         Saturation (A3)         Secondary Indicators (B2)         Hydre Marks (B1)         Aquatic Invertebrates (B13)         Drint Deposits (B2)         Hydre Receive of Reduced Iron (C4)         Shallow Aquitard (D3)         Coracts (B6)         Iron Reduction in Tilled Soils (C6)         Surface Soil Cracks (B6)         Iron Reduction in Tilled Soils (C6)         Surface Soil Cracks (B6)         Stanted Concave Surface (B8)         Mater Stresent?         Yes         No         Depth (inches):         Bater Stresent?         Yes         No         Depth (inches):         Atgai Mat or Crust (B4) <t< td=""><td>Histosol (A1) Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) 1 cm Muck (A9) (LRR D, G) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G</td><td>Sandy Gley Sandy Redd Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Da Nedox Depl</td><td>ved Matrix (S4) ox (S5) atrix (S6) ky Mineral (F1) yed Matrix (F2) atrix (F3) c Surface (F6) ark Surface (F7 ressions (F8)</td><td>(except ) )</td><td>MLRA 1)</td><td>2 cm A Iron-M Red Pi Very S Other <sup>9</sup>Indicators wetlan unless</td><td>Auck (A10) (I anganese M arent Materia hallow Dark Explain in R of hydrophy d hydrology disturbed or</td><td>LRR A, E) lasses (F12) ( al (F21) Surface (F22 lemarks) tic vegetation must be pres</td><td>LRR D) ) and ent,</td></t<>	Histosol (A1) Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) 1 cm Muck (A9) (LRR D, G) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G	Sandy Gley Sandy Redd Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Da Nedox Depl	ved Matrix (S4) ox (S5) atrix (S6) ky Mineral (F1) yed Matrix (F2) atrix (F3) c Surface (F6) ark Surface (F7 ressions (F8)	(except ) )	MLRA 1)	2 cm A Iron-M Red Pi Very S Other <sup>9</sup> Indicators wetlan unless	Auck (A10) (I anganese M arent Materia hallow Dark Explain in R of hydrophy d hydrology disturbed or	LRR A, E) lasses (F12) ( al (F21) Surface (F22 lemarks) tic vegetation must be pres	LRR D) ) and ent,
Type:       Cobbles and river rock         Depth (inches):       8         marks:       belematic soils. Shallow and young deposits. but redox are clear, chroma does not meet S5         DROLOGY         titand Hydrology Indicators:         mary. Indicators (minimum of one is required; check all that apply)         Surface Water (A1)	strictive Laver (if observed):		readence (real)					. Preserver and	
marks: bilematic solis. Shallow and young deposits, but redox are clear, chroma does not meet S5 <b>DROLOGY</b> stitand Hydrology Indicators: mary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water (A1) Water Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Sati Crust (B1) Water Marks (B1) Water Marks (B1) Aquatic Invertebrates (B13) Drift Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Stunted or Stressed Plants (D1) (LRR A) Sturted or Stressed Plants (D1) (LRR A) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Wetland Hydrology Present? Yes X No Depth (inches): <u>8</u> Wetland H	strictive Eager (in observea).								
Interface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         (High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         (Saturation (A3)       Sait Crust (B1)       Drainage Patterns (B10)         (Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Orifl Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       8         eld Observations:       Yes       No       Depth (inches):       8         uration Present?       Yes       No       Depth (inches):       8         uration Present?       Yes       No       Depth (inches):       8         uration Present? <t< th=""><th>Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic solis. Shallow and young deposit</th><th>ts, but redox are cle</th><th>ear, chroma do</th><th>es not me</th><th>Hydric So et S5</th><th>il Present?</th><th></th><th>Yes<u>X</u></th><th>No</th></t<>	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic solis. Shallow and young deposit	ts, but redox are cle	ear, chroma do	es not me	Hydric So et S5	il Present?		Yes <u>X</u>	No
Build Hydrology Indicators.       Secondary Indicators.         imary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B1)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       8         etd Observations:       Yes       No       Depth (inches):       8         utaration Present?       Yes       No       Depth (inches):       8         utaration Present?       Yes       No	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils. Shallow and young deposit DROLOGY	ts, but redox are clo	ear, chroma do	es not me	Hydric So et S5	il Present?		Yes <u>X</u>	No
Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Sait Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       Depth (inches):       8         ald Observations:       Yes       X       No       Depth (inches):       8         turation Present?       Yes       X       No       Depth (inches):       8         ald Observations:       Yes       X       No       Depth (inches): <td< td=""><td>Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi DROLOGY</td><td>ts, but redox are cl</td><td>ear, chroma do</td><td>es not me</td><td>Hydric So eet 85</td><td>il Present?</td><td></td><td>Yes<u>X</u></td><td>No</td></td<>	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi DROLOGY	ts, but redox are cl	ear, chroma do	es not me	Hydric So eet 85	il Present?		Yes <u>X</u>	No
High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Mo       Depth (inches):       8         Ald Observations:       Yes       No       Depth (inches):       8         Ituration Present?       Yes       No       Depth (inches):       8         Uturation Present?       Yes       No       Depth (inches):       8         Uddes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi	s, but redox are clo	ear, chroma do	es not me	Hydric So eet S5	il Present?	Indicators (	Yes X	No
Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       Depth (inches):       8         Ho Observations:       Yes       No       Depth (inches):       8         turation Present?       Yes       No       Depth (inches):       8       Wetland Hydrology Present? Yes       No         cludes capillary fringe)       Udes capillary fringe)       Depth (inches):       4       Wetland Hydrology Present? Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1)	ts, but redox are cle ed; check all that an Water-Stain	ear, chroma do pply) red Leaves (B9	es not me	Hydric So et S5	il Present? Secondary Water-	Indicators () Stained Lea	Yes X	No
Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       Depth (inches):       8         Id Observations:       Yes       No       Depth (inches):       8         turation Present?       Yes       No       Depth (inches):       8         turation Present?       Yes       No       Depth (inches):       4         cludes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	ed; check all that a Water-Stain MLRA 1	ear, chroma do pply) red Leaves (B9 , 2, 4A, and 4E	es not me	Hydric So eet S5	il Present? Secondary Water- 4A,	Indicators (; Stained Lea and 4B)	Yes X 2 or more req ves (B9) (ML	No uired) RA 1, 2
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       rface Water Present?       Yes       No       Depth (inches):       8         turation Present?       Yes       X       No       Depth (inches):       8         cludes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	ed: check all that a Water-Stain MLRA 1 Sait Crust ()	ear, chroma do pply) red Leaves (B9 , 2, 4A, and 4E B11)	es not me ) (except i)	Hydric So eet S5	<u>Secondary</u> Water- 4A, Draina	Indicators () Stained Lea and 4B) ge Patterns	Yes X 2 or more reg ves (B9) (ML (B10)	No
Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       Infrace Water Present?       Yes       No         ater Table Present?       Yes       No       Depth (inches):       8         aturation Present?       Yes       X       No       Depth (inches):       8         aturation Present?       Yes       X       No       Depth (inches):       4         cludes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils: Shallow and young deposi	ed; check all that a) Water-Stain MLRA 1 Salt Crust ( Aquatic Inve	ear, chroma do pply) ned Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13	es not me ) (except i)	Hydric So eet S5	Secondary Water- 4A, Draina Dry-Se	Indicators () Stained Lea and 4B) ge Patterns ason Water	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2)	No uired) RA 1, 2
Algal Mat or Crust (B4)       Presence of Reduced from (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       Inface Water Present?       Yes       No         ituration Present?       Yes       No       Depth (inches):       8         ituration Present?       Yes       X       No       Depth (inches):       4         cludes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi	ed; check all that a Water-Stain MLRA 1 Salt Crust (I Aquatic Invi Hydrogen S	ear, chroma do pply) red Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C'	es not me ) (except ))	Hydric So eet S5	Secondary Water- 4A, Draina Dry-Se Satura	Indicators () Stained Lea and 4B) ge Patterns ason Water tion Visible o	Yes X 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag	No uired) RA 1, 2 gery (C9)
Itom Deposits (B3)       Recent from Reduction in Filled Solis (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       Infrace Water Present?       Yes       No         ater Table Present?       Yes       X       No         Inturation Present?       Yes       X       No         Inturation Present?       Yes       X       No         Cludes capillary fringe)       Wetland Hydrology Present?       Yes       X	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils. Shallow and young deposi	ed: check all that aj Water-Stain MLRA 1 Sait Crust (i Aquatic Inve Hydrogen S Oxidized Rh	ear, chroma do pply) ned Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 sulfide Odor (C' hizospheres on	es not me ) (except )) ) Living Ro	Hydric So eet S5	Secondary Water- 4A, Draina Dry-Se Satura Geom	Indicators (3 Stained Lea and 4B) ge Patterns eason Water tion Visible o orphic Positi	Yes X 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Ima; on (D2)	No uired) RA 1, 2 gery (C9)
Suffice Soft Cracks (B6)       Suffice of Suffeed of Suffeed Prains (D1) (ERR A)       Raised All Mounds (D6) (ERR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       eld Observations:       Frost-Heave Hummocks (D7)         eld Observations:       Inface Water Present?       Yes       No       Depth (inches):         ater Table Present?       Yes       X       No       Depth (inches):       8         aturation Present?       Yes       X       No       Depth (inches):       4         cludes capillary fringe)       Wetland Hydrology Present?       Yes       X       No	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils. Shallow and young deposi	ed: check all that an Water-Stain MLRA 1 Sait Crust () Aquatic Inve Hydrogen S Oxidized Rh Presence or Presence or	ear, chroma do pply) ned Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron	es not me ) (except )) )) Living Ro (C4)	Hydric So eet S5	Secondary Water- 4A, Draina Dry-Se Satura Shalloo Yanoo h	Indicators () Stained Lea and 4B) ge Patterns eason Water tion Visible o orphic Position w Aquitard ()	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5)	No uired) RA 1, 2 gery (C9)
	Type: Cobbles and river rock Depth (inches): 8 marks: oblematic soils. Shallow and young deposi <b>DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of one is 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 Creater (B8)	ed; check all that an Water-Stain MLRA 1 Sait Crust (i Aquatic Inve Hydrogen S Oxidized Rt Presence o Recent Iron Studiod or 0	ear, chroma do pply) ed Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron r Reduction in T	es not me ) (except )) )) )) Living Ro (C4) (C4) (Iled Soils	Hydric So eet S5 oots (C3)	Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Baicon	Indicators () Stained Lea and 4B) ge Patterns eason Water tion Visible of price Position w Aquitard (I) leutral Test ( Act Mound	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) c (D6) (LBB	No uired) RA 1, 2 gery (C9)
eld Observations: Inface Water Present? Yes No X Depth (inches): ater Table Present? Yes X No Depth (inches): 8 aturation Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No cludes capillary fringe)	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils. Shallow and young deposi	ed; check all that an Water-Stain MLRA 1 Salt Crust (I Aquatic Invi Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Exol	ear, chroma do pply) ed Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron Reduced Iron Reduction in T Stressed Plants	es not me ) (except )) ) Living Rc (C4) illed Soils s (D1) (LR	Hydric So eet S5 oots (C3) s (C6) (R A)	Secondary Water- 4A, Draina Dry-Se Satura Geom X FAC-N Raised Frost-I	Indicators () Stained Lea and 4B) ge Patterns ason Water tion Visible o opphic Positio w Aquitard (I eutral Test ( Ant Mound: teave Humn	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / packs (D7)	No uired) RA 1, 2 gery (C9)
Irface Water Present? Yes No X Depth (inches): ater Table Present? Yes X No Depth (inches): 8 aturation Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No cludes capillary fringe)	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils. Shallow and young deposi	ed: check all that a) Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S Other (Expl: 8)	ear, chroma do pply) red Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' hizospheres on f Reduced Iron Reduction in T Stressed Plants ain in Remarks	es not me ) (except )) Living Ro (C4) illed Soils (D1) (LR )	Hydric So eet S5 oots (C3) s (C6) R A)	Secondary Water- 4A, Draina Dry-Se Satura Geoma Shallo X FAC-N Raiseo Frost-H	Indicators (3 Stained Lea and 4B) ge Patterns eason Water tion Visible o orphic Positi w Aquitard (1 eutral Test ( I Ant Mound Heave Humn	Yes X 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9)
ater Table Present?     Yes     X     No     Depth (inches):     8       aturation Present?     Yes     X     No     Depth (inches):     4       aturation Present?     Yes     X     No     Depth (inches):     4	Type: Cobbles and river rock Depth (inches): 8 emarks: oblematic soils: Shallow and young deposi  (DROLOGY effand Hydrology Indicators: imary Indicators (minimum of one is 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 (B7) Sparsely Vegetated Concave Surface (Bi eld Observations:	ed: check all that an Water-Stain MLRA 1 	ear, chroma do pply) ned Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron r Reduced Iron r Reduction in T Stressed Plants ain in Remarks	es not me ) (except )) ) Living Ro (C4) ;illed Soils ; (D1) (LR	Hydric So eet S5 oots (C3) s (C6) R A)	Secondary Water- 4A, Draina Dry-Se Satura Shallo' X FAC-N Raised Frost-I	Indicators () Stained Lea and 4B) ge Patterns eason Water tion Visible of orphic Position w Aquitard (I leutral Test ( I Ant Mound teave Humm	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9) A)
aturation Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No Includes capillary fringe)	Type: Cobbles and river rock Depth (inches): 8 emarks: roblematic soils. Shallow and young deposi	ts: but redox are cle ed; check all that an Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Expl: 8) No X [	ear, chroma do pply) ed Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron r Reduction in T Stressed Plants ain in Remarks	es not me ) (except )) Living Ro (C4) illed Soils (C1) (LR )	Hydric So eet S5 oots (C3) is (C6) R A)	Secondary Water- 4A, Draina Dry-Se Satura Geoma Shallo X FAC-N Raised Frost-I	Indicators (2 Stained Lea and 4B) ge Patterns ason Water tion Visible of prphic Position w Aquitard (1 eutral Test ( I Ant Mounda Heave Humn	Yes X 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9)
cludes capillary fringe)	Type: Cobbles and river rock Depth (inches): 8 emarks: roblematic soils. Shallow and young deposi	ts: but redox are cle ed; check all that an Water-Stain MLRA 1 Salt Crust (I Aquatic Invi Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Expl: 8) No X []	ear, chroma do pply) ed Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron r Reduction in T Stressed Plants ain in Remarks Depth (inches): Depth (inches):	es not me ) (except )) ) ) Living Ro (C4) illed Soils 6 (D1) (LR ) 8	Hydric So eet S5 oots (C3) s (C6) (R A)	Secondary Water- 4A, Draina Dry-Se Satura Geoma Shallo X FAC-N Raised Frost-H	Indicators (2 Stained Lea and 4B) ge Patterns ason Water tion Visible o orphic Positio w Aquitard (1 leutral Test ( I Ant Mound Heave Humn	Yes X 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9)
	Type: Cobbles and river rock Depth (inches): 8 emarks: roblematic solls. Shallow and young deposi  (DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is 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 (B7) Sparsely Vegetated Concave Surface (B eld Observations: Irface Water Present? Yes ater Table Present? Yes X aturation Present? Yes X	ed; check all that a) Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S Other (Expl: 8) No X I No I	ear, chroma do pply) ned Leaves (B9 , 2, 4A, and 4E B11) ertebrates (B13 Sulfide Odor (C' nizospheres on f Reduced Iron f Redu	es not me ) (except )) ) Living Ro (C4) iilled Soils 5 (D1) (LR ) <u>8</u> 4	Hydric So eet S5 oots (C3) s (C8) R A) Wetland	Secondary Water- 4A, Draina Dry-Se Satura Geom Shallo X FAC-N Raisec Frost-I	Indicators (2 Stained Lea and 4B) ge Patterns ason Water tion Visible o orphic Positi w Aquitard (1 eutral Test ( I Ant Mound Heave Humn	Yes X 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7) Yes X	No uired) RA 1, 2 gery (C9) A)

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	– Western Me proponent a	ountains, Va gency is CE	lleys, and C CW-CO-F	Coast Region २	Requirement Control Sym (Authority: AR 335-15, pa.	bol EXEMPT: ragraph 5-2a)
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	reek County	Sampling Date	7/27/202
oplicant/Owner: CDOT - Region 1		1.1		State: CO	Sampling Point	WL14
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	nge: NW4 S33, T3	S. R72W	
ndform (hillside, terrace, etc.):	7	Local relief (c	oncave, conv	/ex, none):	SI	ope (%):
bregion (LRR): LRR E. MLRA 48A Lat: 39.7	4677		Lona: -	105.46036	Datum	NAD83
il Map Unit Name: Cathedral-Rock outcrop comple	ex. 30 to 70 pe	rcent slopes		NWI cl	assification: UPL	
e climatic / hydrologic conditions on the site typical	for this time o	f vear?	Yes X	No (lf no	evolain in Remarks	
a Vegetation Soil or Hudrology	cionificantly	dicturbad? /	Normal I		or Vac V	No.
	- significantly		vie ivonnari	circumstances pres		vo
e vegetation, Soli _ X, or Hydrology	_ naturally pro	olematic? (	in needed, ex	cplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site n	nap showir	ng samplin	g point lo	cations, transe	cts, important fea	atures, et
lydrophytic Vegetation Present? Yes X lydric Soil Present? Yes X Vetland Hydrology Present? Yes X	No No No	ls the withi	e Sampled A n a Wetland	rea ? Yes	<u>X</u> No	
emarks: /etland between two bridges along Clear Creek. Ar	djacent to WL1	5				
EGETATION – Use scientific names of	plants.			_		
	Absolute	Dominant	Indicator	-		_
ree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test	worksheet:	
				Number of Domin	ant Species That	2 10
			-	Tatal Number of F		2 1/2
				Across All Strata:	Johnmant Species	2 (8
apling/Shrub Stratum (Plot size: 15	=	=Total Cover		Percent of Domina Are OBL, FACW,	ant Species That or FAC: 1	00.0% (A
. Salix exigua	50	Yes	FACW			
. Betula occidentalis	10	No	FACW	Prevalence Index	worksheet:	
				Total % Cove	er of: Multip	ly by:
	· · · · · ·			OBL species	10 x1=	10
-		-		FACW species	<u>90</u> x 2 =	180
and Stratum (Diataina) 5	60	= lotal Cover		FAC species	0 x 3 =	0
luncus halficus	30	Vac	FACW	HACO species	0 x4=	0
Carex aquatilis	5	No	OBL	Column Totals:	100 (A)	190 (E
Eleocharis palustris	5	No	OBL	Prevalence Inc	lex = B/A = 1.1	90
				7 2 220 200	C11111	
				Hydrophytic Veg	etation Indicators:	1 million
			· · · · ·	X 1 - Rapid Tes	t for Hydrophytic Vege	etation
				X 2 - Dominanc	e Test is >50%	
		$\longrightarrow$		X 3 - Prevalence	e Index is ≤3.0'	
		<u> </u>		4 - Morpholog	ical Adaptations (Prov	ide support
1				5 - Wetland M	ion-Vascular Diante <sup>1</sup>	- anasti
·	40	=Total Cover		Problematic F	Ivdrophytic Vegetation	(Explain)
Voody Vine Stratum (Plot size: 5	_)	, your over		Indicators of hydr	ic soil and wetland hy	drology mu
				be present, unless	aisturbed or problem	atic.
		=Total Cover	_	Hydrophytic Vegetation	Vac V Na	
				Procont?	VAS X NO	

epth Matrix	Redo	x Features			
nches) Color (moist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-5 10YR 3/6 100	)		-	Sandy	Medium sand
5-7 10YR 4/3 100	7.5YR 4/6	10 C	M	Sandy	
7-14 10YR 3/3 100	) 7.5YR 4/6	5 C	M	Sandy	
				6	1
	36				
					25
ype: C=Concentration, D=Depletion,	RM=Reduced Matrix, C	CS=Covered or C	oated Sa	nd Grains. <sup>2</sup> L	ocation: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to	all LRRs, unless othe	erwise noted.)		Indica	tors for Problematic Hydric Soils <sup>3</sup> :
_Histosol (A1)	Sandy Gle	eyed Matrix (S4)		2	cm Muck (A10) (LRR A, E)
Histic Epipedon (A2)	Sandy Re	dox (S5)		lrc	on-Manganese Masses (F12) (LRR D)
_Black Histic (A3)	Stripped N	Matrix (S6)		R	ed Parent Material (F21)
- Hydrogen Sulfide (A4)	Loamy Mu	icky Mineral (F1)	(except	MLRA 1)V	ery Shallow Dark Surface (F22)
_1 cm Muck (A9) (LRR D, G)	Loamy Glo	eyed Matrix (F2)		0	ther (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted I	Matrix (F3)		Q	and the second
_ Thick Dark Surface (A12)	Redox Da	rk Surface (F6)		Indica	ators of hydrophytic vegetation and
_Sandy Mucky Mineral (S1)	Depleted I	Dark Surface (F7	)	W	etland hydrology must be present,
2.5 cm Mucky Peat or Peat (S2) (LI	RR G)Redox De	pressions (F8)		ur	less disturbed or problematic.
estrictive Layer (if observed):			1000		
Туре:	3.0		5.14		
Type: Depth (inches): emarks: roblematic soil. Young deposits do not	meet chroma for S5 b	ut redox are clea	r	Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>CDROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is n	meet chroma for S5 b	out redox are clea	r	Hydric Soil Pres	ent? Yes X No
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>'DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is m Surface Water (A1)	equired; check all that	ut redox are clea apply) ined Leaves (B9)	r ) (except	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>'DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2)	equired; check all that Water-Sta	apply) 1, 2, 4A, and 4B	r ) (except )	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3)	equired: check all that Water-Sta MLRA Salt Crust	apply) ined Leaves (B9 1, 2, 4A, and 4B (B11)	r ) (except )	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	equired; check all that Water-Sta MLRA Salt Crust Aquatic In	apply) ined Leaves (B9) 1, 2, 4A, and 4B (B11) vertebrates (B13)	r ) (except )	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>CDROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	equired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Leaves (B9) 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1	r ) (except ) ) )	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	equired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F	apply) ined Leaves (B9) 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on	r ) (except ) ) Living Rc	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	equired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F	apply) ined Leaves (B9) 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron	r ) (except ) ) Living Rc (C4)	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3)
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Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is m 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)	equired: check all that water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or	apply) ined Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants	r ) (except ) ) Living Rc (C4) illed Soils (D1) (LR	Hydric Soil Pres           Secon	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of one is n 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 Imagen Sparsely Vegetated Concave Surface	equired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Inc Stunted or y (B7) Other (Exp ce (B8)	apply) ined Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron or Reduced Iron or Reduction in T r Stressed Plants plain in Remarks	r ) (except ) ) Living Ro (C4) illed Soils (D1) (LR	Hydric Soil Pres           Secon	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
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Type: Depth (inches): emarks: roblematic soil. Young deposits do not <b>/DROLOGY</b> fettand Hydrology Indicators: imary Indicators (minimum of one is n 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 Imagen Sparsely Vegetated Concave Surfa eld Observations: Inface Water Present? Yes	equired: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Inc Stunted or y (B7) Other (Exp ce (B8)	apply) ained Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches):	r ) (except ) ) Living Ro (C4) illed Soils (C1) (LR	Hydric Soil Pres           Secon	ent? Yes X No dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>/DROLOGY</b> fettand Hydrology Indicators: imary Indicators (minimum of one is n 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 Imagen Sparsely Vegetated Concave Surfa eld Observations: urface Water Present? Yes fater Table Present? Yes	equired: check all that Water-Sta Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Inc Stunted or y (B7) Other (Exp ce (B8) No X No X	apply) ained Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches): Depth (inches):	r ) (except ) ) Living Ro (C4) (C4) (C4) (C4) (C1) (LR	Hydric Soil Pres           Secon	ent? Yes X No dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>/DROLOGY</b> fettand Hydrology Indicators: imary Indicators (minimum of one is n 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 Imagen Sparsely Vegetated Concave Surfa eld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes	equired; check all that : equired; check all that : Water-Sta MLRA Sait Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or y (B7)Other (Exp ce (B8) No X No X No X	apply) ained Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches): Depth (inches):	r ) (except ) ) Living Rc (C4) (C4) (C4) (D1) (LR	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) blogy Present? Yes X No
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>/DROLOGY</b> fettand Hydrology Indicators: imary Indicators (minimum of one is n 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 Imagen Sparsely Vegetated Concave Surfa eld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes aturation Present? Yes	equired; check all that Water-Sta Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or y (B7) Other (Exp ce (B8) No X No X	apply) ained Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches): Depth (inches):	r ) (except ) ) Living Rc (C4) (C4) (C4) (D1) (LR	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) blogy Present? Yes X No
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>CDROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is n 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Sparsely Vegetated Concave Surfa etd Observations: Inface Water Present? Yes ater Table Present? Yes ater Table Present? Yes aturation Present? Yes aturation Present? Yes	equired; check all that water-Sta Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or y (B7) Other (Exp ce (B8) No X No X No X a, monitoring well, aeria	apply) ained Leaves (B9 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches): Depth (inches): Depth (inches):	r ) (except ) ) ) Living Ro (C4) illed Soils (C1) (LR ) s inspect	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) blogy Present? Yes X No
Type: Depth (inches): emarks: oblematic soil. Young deposits do not <b>DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of one is r 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 Imager Sparsety Vegetated Concave Surfa eld Observations: inface Water Present? Yes ater Table Present? Yes ituration Present? Yes cludes capillary fringe) iscribe Recorded Data (stream gauge	equired: check all that water-Sta Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or y (B7) Other (Exp ce (B8) No X No X No X e, monitoring well, aeria	apply) ained Leaves (B9) 1, 2, 4A, and 4B (B11) vertebrates (B13 Sulfide Odor (C1 Rhizospheres on of Reduced Iron on Reduction in T r Stressed Plants plain in Remarks) Depth (inches): Depth (inches): Depth (inches):	r ) (except ) ) Living Rc (C4) illed Soils (D1) (LR ) s inspect	Hydric Soil Pres	ent? Yes X No dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) blogy Present? Yes X No

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WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western Me proponent a	ountains, Va gency is CE	lleys, and ( CW-CO-I	Coast Region R	Requirement Control Sym (Authority: AR 335-15, par	bol EXEMPT: ragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cour	nty: Clear C	Creek County	Sampling Date	7/27/202
pplicant/Owner: CDOT - Region 1		1.1		State: CO	Sampling Point	WL15
vestigator(s): Fillipi and Kizlinski		Section, T	ownship, Ra	ange: NW4 S33, T3S,	R72W	
ndform (hillside, terrace, etc.): floodplain		Local relief (co	oncave, con	vex, none): concave	SI	ope (%): 0
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	74675		Long: 1	105.46044	Datum	NAD83
il Map Unit Name: Cathedral-Rock outcrop comp	lex, 30 to 70 pe	rcent slopes	1000	NWI clas	sification: UPL	
e climatic / hydrologic conditions on the site typica	al for this time o	f year?	Yes X	No (lf no, e	xplain in Remarks.)	
e Vegetation Soil or Hydrology	significantly	disturbed? A	re "Normal"	Circumstances" presen	t? Yes X I	No
e Vegetation Soil X or Hydrology	naturally pro	blematic? (	If needed, e	xplain any answers in R	(emarks.)	
UMMARY OF FINDINGS - Attach site	map showir	ng samplin	g point lo	ocations, transect	s, important fea	atures, et
Aydrophytic Vegetation Present? Yes X Aydric Soil Present? Yes X Vetland Hydrology Present? Yes X	No No No	ls the withi	s Sampled / n a Wetland	Area 1? Yes <u>X</u>	No	
temarks: Small PEM depression adjacent to PSS WL14						
EGETATION – Use scientific names of	f plants.					
ree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:	
	-		_	Number of Dominan Are OBL, FACW, or	t Species That FAC:	1 (A
				Total Number of Do	minant Species	
				Across All Strata:		1(B
Sapling/Shrub Stratum (Plot size: 15	_)	=Total Cover		Percent of Dominan Are OBL, FACW, or	t Species That FAC:	00.0%_(A
				Prevalence Index v	worksheet:	
				Total % Cover	of: Multip	ly by:
				OBL species	90 x1=	90
-		-Total Cover		FACW species	10 x 2 =	20
erb Stratum (Plot size: 5 )		-rotal cover		FACU species	0 x4=	0
Schoenoplectus tabernaemontani	90	Yes	OBL	UPL species	0 x 5 =	0
Juncus balticus	10	No	FACW	Column Totals:	100 (A)	110 (B
	_			Prevalence Index	x = B/A =1.1	10
-		. <u> </u>			and a set of a set of the	
<u></u>		·		Hydrophytic Veget	ation Indicators:	totion
			<u> </u>	X 2 - Dominance	Test is >50%	station
		_		X 3 - Prevalence I	ndex is ≤3.0 <sup>1</sup>	
			-	4 - Morphologica	al Adaptations (Prov	vide support
0	2 = 2			data in Rema	irks or on a separate	e sheet)
1				5 - Wetland Nor	n-Vascular Plants <sup>1</sup>	1 more
Vaadu Vina Strature	100	=Total Cover		Problematic Hyd	drophytic Vegetation	(Explain)
VOOUV VINE Stratum (Plot size: 5				Indicators of hydric be present, unless of	soil and wetland hy listurbed or problem	drology mus atic.
		=Total Cover		Hydrophytic		
		, when whereas		Vegetation		

Sampling Point: WL015

nches) Color (moist)	%	Color (moist)	%	Type	Loc	Tex	ture		Remarks	
0-5 10YR 2/2	100					Loamy	Clavev			
5-14 10YR 3/2	100				1	Loamy	Clayey	_		-
										_
	-				-		<u>_</u>			_
		_	-	_	$\geq$	_		-		-
						-				
							-			
ype: C=Concentration, D=De	epietion, RM=	Reduced Matrix, C	S=Cove	red or Co	oated Sar	nd Grains.	Locat	for Problem	e Lining, M=Matri	X.
Histored (A1)	cable to all L	Sondy Cle	erwise n	oted.)			and and a	Augk (A10) (I	BBA E	S C
		Sandy Gie	yeu wau	nx (34)			2 cm p	nuck (ATO) (L	-RR A, E)	
Histic Epipedon (A2)		Sandy Re	dox (85)				- Iron-IVI	anganese Ma	asses (F12) (LRF	( D)
Black Histic (A3)		Stripped N	hatnx (Se	5)			-Red Pa	arent Materia	I (F21)	
Hydrogen Sulfide (A4)		Loamy ML	icky Mine	eral (F1)	(except l	ILRA 1)	Very S	nallow Dark	Surface (F22)	
1 cm Muck (A9) (LRR D, G	)	Loamy Gl	eyed Mat	rix (F2)			Other	Explain in Re	emarks)	
Depleted Below Dark Surfa	ce (A11)	X Depleted I	Matrix (F:	3)			a			
Thick Dark Surface (A12)		Redox Da	rk Surfac	e (F6)			Indicators	of hydrophyt	ic vegetation and	1
Sandy Mucky Mineral (S1)		Depleted I	Dark Suri	face (F7)			wetlan	d hydrology r	must be present,	
2.5 cm Mucky Peat or Peal	(S2) (LRR G	Redox De	pression	s (F8)			unless	disturbed or	problematic.	
estrictive Layer (if observed	Ŋ:									
Type:										
Depth (inches): emarks: olor likely driven by organic m	atter content	and may not be F	3, but oth	nerwise p	problemat	Hydric So ic as it's lil	oil Present?	d year-round	Yes <u>X</u> N	o
Depth (inches): emarks: olor likely driven by organic m <b>/DROLOGY</b> retland Hydrology Indicators	atter content	and may not be F	3, but oth	nerwise p	problemat	Hydric So ic as it's lil	oil Present?	d year-round	Yes <u>X</u> N	0
Depth (inches): emarks: olor likely driven by organic m //DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of	atter content s: f one is requir	and may not be F	3, but oth	nerwise p	problemat	Hydric So ic as it's lil	vely saturate	d year-round	Yes X No	a
Depth (inches): emarks: olor likely driven by organic m (DROLOGY fetland Hydrology Indicators) imary Indicators (minimum of Surface Water (A1)	atter content s: f one is requir	and may not be F red: check all that Water-Sta	3, but oth apply) ined Lea	nerwise p ves (B9)	roblemat	Hydric So ic as it's lil	oil Present? kely saturate <u>Secondary</u> Water-	d year-round	Yes X No	0
Depth (inches): emarks: olor likely driven by organic m (DROLOGY etland Hydrology Indicators imary Indicators (minimum of Surface Water (A1) High Water Table (A2)	atter content s: f one is requir	and may not be F red: check all that Water-Sta MLRA	3, but off apply) ined Lea 1, 2, 4A,	nerwise p ves (B9) and 4B)	(except	Hydric So ic as it's lil	cely saturate Secondary Water- 4A,	d year-round Indicators (2 Stained Leav and 4B)	Yes X No	a
Depth (inches): emarks: otor likely driven by organic m <b>DROLOGY</b> etland Hydrology Indicators imary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)	atter content s: f one is requir	and may not be F red: check all that Water-Sta MLRA Salt Crust	3, but off apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric So ic as it's lil	cely saturate Secondary Water- 4A, Draina	d year-round Indicators (2 Stained Leav and <b>4B</b> ) ge Patterns (	Yes X No cor more required ves (B9) (MLRA 1 (B10)	a
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Depth (inches): emarks: olor likely driven by organic m /DROLOGY /etland Hydrology Indicators fimary Indicators (minimum of Surface Water (A1) High Water Table (A2) (Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	atter content	and may not be F ed; check all that Water-Sta MLRA Salt Crust Aquatic In Oxidized F	3, but off apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph	ves (B9) and 4B) des (B13) Ddor (C1) eres on I	(except	Hydric So ic as it's lil	Secondary Water- 4A, Draina Dry-Se Satura X Geome	d year-round Indicators (2 Stained Leav and 4B) ge Patterns ( eason Water tion Visible o orphic Positic	Yes X No or more required ves (B9) (MLRA of B10) Table (C2) on Aerial Imagery on (D2)	0 <u>d)</u> 1, 2 (C9)
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U.S. Army Co WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	orps of Eng - Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and C ECW-CO-F	Coast Region २	OME Control #: 0710-00 Requirement Control (Authority: AR 335-15	24. Exp: 11/30/2024 Symbol EXEMPT: , paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling D	ate: 7/27/202
pplicant/Owner: CDOT - Region 1		E		State: CC	Sampling Po	oint: WL16
vestigator(s): Fillipi and Kizlinski		Section, 1	Township, Ra	ange: SW4 S33, T3	35, R72W	
andform (billside terrace etc.): floodplain		l ocal relief (c	oncave com	vex none) flat		Slope (%): 1-
(bregion /LRR): LRR E MLRA 48A Lat: 39.7	4487		Long: 1	05 45785	Dat	Im: NAD83
ni Man Unit Name: Cathedral Bock outcrop compl	av 30 to 70 pa	rcent slones	_ Long	NM/L c	lassification: LIDI	
	ex, 50 to 70 pe	icent slopes	0.5	14001 C	assincation. OFE	2.4.
e climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes X		o, explain in Remark	(s.)
e Vegetation, Soil, or Hydrology	_significantly	disturbed? /	Are "Normal (	Circumstances" pres	ient? Yes X	No
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers i	n Remarks.)	
UMMARY OF FINDINGS – Attach site r	nap showir	ng samplin	g point lo	cations, transe	cts, important	features, et
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No	ls the withi	e Sampled A n a Wetland	Area 1? Yes_	<u>X</u> No	2
emarks: arge floodplain wetland along Clear Creek						
EGETATION – Use scientific names of	plants.		-			
From Strokum (Dial ainai 20 )	Absolute	Dominant Specifical	Indicator	Demission Test	two-kohoots	
Tee Stratum (Flot size 50 )	70 COVEL	opecies:	Status	Dominance resi	worksheet.	
			_	Are OBL FACW	or FAC:	3 (A)
		·		Total Number of	Dominant Species	
				Across All Strata	Comman openes	3 (B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domin Are OBL, FACW,	ant Species That or FAC:	100.0% (A
. Salix exigua	40	Yes	FACW	e		
. Betula occidentalis		Yes	FACW	Prevalence Inde	x worksheet:	an 2. C. S
Rosa woodsii		No	FACU	Total % Cov	erot: Mu	Itiply by:
				OBL species	120 x1=	240
·	70	=Total Cover		FAC species	10 x3=	30
erb Stratum (Plot size: 5 )		-rotar cover		FACU species	10 x 4 =	40
Juncus balticus	60	Yes	FACW	UPL species	0 x 5 =	0
. Cirsium arvense	10	No	FAC	Column Totals:	145 (A)	315 (B
Carex aquatilis	5	No	OBL	Prevalence In	dex = B/A =	2.17
				Hydrophytic Veg	petation Indicators	
			<u> </u>	X 1 - Rapid Tes	st for Hydrophytic V	egetation
				X 2 - Dominand	ce Test is >50%	
·		$\rightarrow$		X 3 - Prevalence	ce index is ≤3.0'	
				4 - Morpholog	gical Adaptations (F	rovide supporti
4				data in Re	Marks of on a sepa	i ale sheet)
1 <u>,</u>	70	-Total Omita			von-vascular Plant	tion / Evolute
Voody Vine Stratum (Plot size: 5	_)	- rotar Cover		Indicators of hvd	ric soil and wetland	liuon (⊏xpiain) Ihydrology mus
				be present, unles	s disturbed or prob	lematic.
		=Total Cover		Hydrophytic Vegetation		
Bara Craund in Harb Stratums 10				Present?	Yes X No	

inches)	Color (moist)	06	Color (moist)	0%	Type	Loc <sup>2</sup>	Tevtu	re .	Remarks	
0.5	10VD 3/2	05	7 5VD 4/6		- C	M	Loomul	lavay	Drominant reday concen	trations
<u> </u>	1078 3/3	70 -	7.578 4/6		-		Loomy/C	lavey	Prominent redox concern	trations
0-0	10 FR 3/2		7.5TR 4/6	_20			Loamy/C	ауеу	Prominent redox concen	urations
With C	Contract of		10YR 4/2	5		M				100
8-16	10YR 3/3		7.5YR 4/6						Prominent redox concen	trations
ype: C=Con ydric Soil In Histosol (A	icentration, D=Depi dicators: (Applica A1)	etion, RM= ble to all L	Reduced Matrix, C .RRs, unless othe Sandy Gle	CS=Cove erwise n	red or Co oted.) rix (S4)	Dated Sa	nd Grains.	<sup>2</sup> Locs Indicator 2 cm	tion: PL=Pore Lining, M=Ma s for Problematic Hydric S Muck (A10) (LRR A, E)	atrix. ioils <sup>3</sup> :
Blast List	edon (A2)		X Sandy Re	dox (So)				Iron-I	Wanganese Masses (F12) (L	RR D)
Hydrogen 1 cm Much Depleted B Thick Dark Sandy Mu 2.5 cm Mu	Suffide (A4) k (A9) (LRR D, G) Below Dark Surface k Surface (A12) cky Mineral (S1) icky Peat or Peat (S	(A11) 52) (LRR G	Loamy Mu Loamy Gk Depleted I Redox Dai Depleted I Redox Dai	Natrix (So Reyed Mat Matrix (F: Surfac Dark Surf pression:	// rix (F2) 3) ee (F6) face (F7) s (F8)	(except l	∜LRA 1)	Other Other Indicator wetla unles	s of hydrophytic vegetation a nd hydrophytic vegetation a disturbed or problematic.	and nt,
106.000.001										
estrictive La	ayer (if observed):									
Type:	ayer (if observed):						Section 2.			
Pestrictive La Type: Depth (inc emarks:	ayer (if observed): hes):						Hydric Soi	l Present	? Yes <u>X</u>	No
estrictive La Type: Depth (inc emarks: YDROLOG /etland Hydr rimary Indica Surface W High Wate X Saturation Water Mar Sediment Drif Depo	aver (if observed): hes): bes): beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso b	ne îs requir	red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Ovidized	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C	ves (B9) and 4B) es (B13) Ddor (C1) errs on 1	(except	Hydric Soi	Secondar Wate 44 Drain Dry-S Satur Geon	? Yes X y Indicators (2 or more requi r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Image paratic Position (D2)	No (A 1, 2 ery (C9
Vetrand Hydr Timary Indica Surface W High Wate X Saturation Water Mar Sediment Drift Depo Algal Mater Iron Depo: Surface So Inundation Sparsety V	Aver (if observed): hes): bes): ology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Ir /egetated Concave	ne is requir nagery (B7 Surface (E	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph- of Reduc on Reduc Stresse plain in R	ves (B9) and 4B) es (B13) Ddor (C1) eres on L ed Iron ( tion in Til d Plants emarks)	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soi	Secondar Wate 4/ Drain Dry-S Satur Geon Shall X FAC- Raise Frost	<u>Y Yes X</u> <u>y Indicators (2 or more requi</u> r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Image norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)	No ired) A 1, 2 ery (C9)
estrictive La Type: Depth (inc emarks: YDROLOG /etland Hydr rimary Indica Surface W High Wate X Saturation Water Mar Sediment Drift Depo Algal Mat Iron Depo: Surface Si Inundation Sparsety V ield Observa	aver (if observed): hes): bes): bes): beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso	ne is requir nagery (B7 Surface (E	red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc of Reduc stresse olain in R	ves (B9) and 4B) dor (C1) eres on L eed Iron ( tion in Til d Plants 'emarks)	(except Living Ro C4) lied Soits (D1) (LR	Hydric Soi	Secondar Wate 44 Drain Dry-S Satur Geon Shali X FAC- Raise Frost	? Yes X y Indicators (2 or more requi r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Image horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ad Ant Mounds (D6) (LRR A) Heave Hummocks (D7)	No ired) (A 1, 2 ery (C9)
estrictive La Type: Depth (inc Remarks: YDROLOG Vetland Hydr Yrimary Indica Surface W High Wate X Saturation Water Mar Sediment Drift Depo Algal Mat / Iron Depo: Surface So Inundation Sparsely N Vield Observa Surface Water Vater Table P Saturation Pre ncludes capil	aver (if observed): hes): bes): bes): bes): beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso beso	ne is requir nagery (B7 Surface (E sssssss	red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or Other (Exp 38) No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olain in R Depth (i Depth (i)	ves (B9) and 4B) es (B13) Ddor (C1) eres on I eres on I tion in Til d Plants emarks) nches): nches):	(except Living Ro C4) lied Soils (D1) (LR	Hydric Soi	Secondar Wate 44 Drain Dry-S Satur Geon Shall X FAC- Raise Frost	? Yes X y Indicators (2 or more requi r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Image horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ad Ant Mounds (D6) (LRR A) -Heave Hummocks (D7) by Present? Yes X	No
Vetractive La Type: Depth (inc temarks: YDROLOG Vetrand Hydr Trimary Indica Surface W High Water X Saturation Water Mar Sediment Drift Depo Algal Mat Iron Depos Surface Si Inundation Sparsely V ield Observa vater Table P vater Table P vater Table P vater Table P vater Table P vater Table P vater Table P	aver (if observed): hes): bes): ology Indicators: tors (minimum of of /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) t Visible on Aerial Ir /egetated Concave ations: Present? Ye sent? Ye sent? Ye lary fringe) orded Data (stream	ne is requir magery (B7 Surface (E s s gauge, mo	red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or Other (Exp 38) No X No X N	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc in Reduc Stresse blain in R Depth (ii Depth (ii Depth (ii I photos,	ves (B9) and 4B) es (B13) Ddor (C1) eres on L eed Iron ( tion in Til d Plants temarks) emarks): 	(except iving Ro C4) Iled Soils (D1) (LR	Hydric Soi	Secondar Wate 44 Drain Dry-S Satur Geon Shall X FAC- Raise Frost	? Yes X y Indicators (2 or more requi r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Image horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) Heave Hummocks (D7) agy Present? Yes X	No
estrictive La Type: Depth (inc Remarks: YDROLOG Vetland Hydr Yimary Indica Surface W High Wate X Saturation Water Mar Sediment Drift Depo Algal Mat Iron Depos Surface Si Inundation Sparsely V ield Observa urface Water Vater Table P aturation Pre ncludes capill lescribe Recc	aver (if observed): hes): bes): bes): beso tors (minimum of or vater (A1) er Table (A2) (A3) rKs (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) t Visible on Aerial Ir vertated Concave ations: Present? Ye sent? Ye sent? Ye sent? Ye sent? Ye sent? Ye sent? Ye	ne is requir magery (B7 Surface (E ss s gauge, mo	red; check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Irc Stunted or Other (Exp 38) No X No X No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc of Reduc stresse olain in R Depth (ii Depth (ii Depth (ii I photos,	ves (B9) and 4B) es (B13) Ddor (C1) eres on L ed Iron ( tion in Til d Plants 'emarks) inches): nches): nches): previous	(except iving Ro C4) lled Soils (D1) (LR 12 inspecti	Hydric Soi ots (C3) (C6) R A) Wetland ons), if avail	Secondar Wate 44 Drain Dry-S Satur Shali X FAC- Raise Frost	? Yes X y Indicators (2 or more requi r-Stained Leaves (B9) (MLR A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Image horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) Heave Hummocks (D7) py Present? Yes X	No

ENG FORM 6116-9, JUL 2018

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western Mo proponent ag	puntains, Va gency is CE	lleys, and C CW-CO-I	Coast Region	MB Control #: 0710-0024, E Requirement Control Symi (Authority: AR 335-15, par	xp: 11/30/2024 pol EXEMPT: agraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	7/27/2022
Applicant/Owner: CDOT - Region 1		-		State: CO	Sampling Point:	WL17
vestigator(s): Fillipi and Kizlinski		Section, 1	ownship, Ra	ange: SW4 S33, T3S,	R72W	
andform (hillside, terrace, etc.); island		Local relief (c	oncave, conv	vex, none): flat	Sic	pe(%): 1-2
Subregion (LRR): LRR E, MLRA 48A Lat: 39,7	74483		Long: 1	05.45814	Datum:	NAD83
oil Map Unit Name: Cathedral-Rock outcrop compl	lex. 30 to 70 per	cent slopes		NWI clas	sification: UPL	
re climatic / hydrologic conditions on the site typica	I for this time of	fvear?	Yes X	No (lf no e	xplain in Remarks.)	
re Vegetation Soil or Hydrology	significantly o	tisturbed? /	re "Normai"	Circumstances" presen	t? Yes X M	lo
re Vegetation Soil X or Hydrology	naturally prob	lematic? (	If needed ex	xplain any answers in R	(emarks )	
SUMMARY OF FINDINGS - Attach site	map showin	g samplin	g point lo	cations, transect	s, important fea	tures, etc
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	e Sampled A n a Wetland	Area 1? Yes <u>X</u>	No	
Remarks: Small Island in Clear Creek with sufficient soil to su	ipport a wetland	6				_
/EGETATION – Use scientific names of	f plants.					
Tree Stratum (Dict size: 30 )	Absolute % Cover	Dominant	Indicator	Dominance Test w	orkshoot:	
1	10 0.0101	opecies	Glatas	Number of Deminer	t Section That	
2.				Are OBL, FACW, or	FAC:	3 (A)
3.				Total Number of Do	minant Species	C (
4.				Across All Strata:		3 (B)
Sapling/Shrub Stratum (Plot size: 15	_)	=Total Cover		Percent of Dominan Are OBL, FACW, or	t Species That FAC:	00.0%_(A/E
1. Salix exigua	40	Yes	FACW		and the set.	-
3		105	PACIV	Total % Cover	of Multipl	v hv
4.				OBL species	0 x1=	0
5.				FACW species	50 x 2 =	100
the second second second	50 -	=Total Cover		FAC species	5 x 3 =	15
Herb Stratum (Plot size: 5)				FACU species	0 x 4 =	0
1. Equisetum arvense	5	Yes	FAC	UPL species	0 x 5 =	0
2				Column Totals:	55 (A)	115 (B)
4		<u> </u>		Prevalence inde.	x - b/A - 2.0	9
5.				Hydrophytic Veget	ation Indicators:	
5	10.00			1 - Rapid Test f	or Hydrophytic Vege	tation
	_			X 2 - Dominance	Test is >50%	
3				X 3 - Prevalence	Index is ≤3.0 <sup>1</sup>	
				4 - Morphologica	al Adaptations (Prov	ide supportin
14				5 - Wetland No	Nacular Diante <sup>1</sup>	sileer)
	5	Total Cover		Problematic Hy	drophytic Vegetation	(Explain)
Woody Vine Stratum (Plot size: 5 1.	_)	rotar COVO		Indicators of hydric be present, unless of	soil and wetland hy	drology must
2.		Total Cover		Hydrophytic Vegetation		

0-5         10YR 3/3         95         7           5-14         10YR 3/2         80         7           ype: C=Concentration, D=Depletion, RM=Redulydric Soil Indicators: (Applicable to all LRRs,	5YR 5/8	5 <u>C</u> 20 <u>C</u>	<u>M</u> M	Sandy Sandy	Prominent redox concentrations Prominent redox concentrations
5-14 10YR 3/2 80 7	5YR 5/8 :		<u>M</u>	Sandy	Prominent redox concentrations
ype: C=Concentration, D=Depletion, RM=Redu ydric Soil Indicators: (Applicable to all LRRs,		Ξ	Ξ	_	
ype: C=Concentration, D=Depletion, RM=Redu ydric Soil Indicators: (Applicable to all LRRs,			Ξ		
ydric Soil Indicators: (Applicable to all LRRs,	iced Matrix, CS=0	Covered or C	oated Sa	nd Grains. <sup>2</sup> Loc	ation: PL=Pore Lining, M=Matrix.
	unless otherwi	se noted.)	2.11	Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed	Matrix (S4)		2 cn	1 Muck (A10) (LRR A, E)
Histic Epipedon (A2)	X Sandy Redox (	(S5)		Iron	Manganese Masses (F12) (LRR D)
_Black Histic (A3)	Stripped Matrix	x (S6)		Red	Parent Material (F21)
Hydrogen Sulfide (A4)	Loamy Mucky	Mineral (F1)	(except	MLRA 1) Ven	/ Shallow Dark Surface (F22)
1 cm Muck (A9) (LRR D, G)	Loamy Gleyed	Matrix (F2)		Othe	er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matri	ix (F3)		N	
Thick Dark Surface (A12)	Redox Dark Su	urface (F6)		Indicato	rs of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark	Surface (F7)	)	wetl	and hydrology must be present,
2.5 cm Mucky Peat or Peat (S2) (LRR G)	Redox Depres	sions (F8)	-	unle	ss disturbed or problematic.
estrictive Layer (if observed):					
Type:					
Depth (inches):				Hydric Soil Preser	it? Yes_X_No_
		_			
rimany indicators (minimum of one is required; r	heck all that apply	(V		Seconda	any Indicators (2 or more required)
Surface Water (A1)	Water-Stained	Leaves (B9)	(except	Wat	er-Stained Leaves (B9) (MLRA 1, 2
High Water Table (A2)	MLRA 1. 2.	4A, and 4B	)	- 4	A and 4B)
Saturation (A3)	Salt Crust (B1)	1)		Drai	page Patterns (B10)
Water Marks (B1)	Aquatic Inverte	ebrates (B13)		Drv-	Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulf	ide Odor (C1	)	Satu	uration Visible on Aerial Imagery (C9
Drift Deposits (B3)	X Oxidized Rhize	ospheres on I	Livina Ra	ots (C3) Geo	morphic Position (D2)
Algal Mat or Crust (B4)	Presence of R	educed Iron (	(C4)	Sha	llow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Re	eduction in Ti	lled Soils	(C6) X FAC	-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stre	essed Plants	(D1) (LR	RA) Rais	ed Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)	Other (Explain	in Remarks)		Fros	t-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)					
eld Observations:					
urface Water Present? Yes N	lo_X Dep	oth (inches):			
/ater Table Present? Yes	lo X Dep	oth (inches):		12.00	
aturation Present? Yes X N	lo Dep	oth (inches):	8	Wetland Hydrold	gy Present? Yes X No
cludes capillary fringe)				all the state	
escribe Recorded Data (stream gauge, monitori	ng well, aerial pho	otos, previou	s inspect	ions), if available:	
emarks:			_		

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	orps of Eng - Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and C ECW-CO-F	Coast Region R	OMB Control #: 0710-0024. Exj Requirement Control Symbo (Authority: AR 335-15, parag	p: 11/30/2024 // EXEMPT: praph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	7/27/2022
pplicant/Owner: CDOT - Region 1				State: CO	Sampling Point:	WL19
nvestigator(s): Fillipi and Kizlinski		Section, 1	Township, Ra	ange: SW4 S33, T3	S, R72W	
andform (hillside, terrace, etc.): island		Local relief (c	oncave, conv	vex, none): flat	Slop	e (%): 1-2
ubregion (LRR): LRR E, MLRA 48A Lat: 39.	74291		Long: 1	05.45399	Datum:	NAD83
oil Map Unit Name: Cathedral-Rock outcrop comp	lex, 30 to 70 pe	rcent slopes	1000	NWI cl	assification: UPL	-
re climatic / hydrologic conditions on the site typica	al for this time o	f vear?	Yes X	No (lf no	explain in Remarks.)	
re Vegetation Soil or Hydrology	significantly	disturbed? /	Are "Normal"	Circumstances" pres	ent? Yes X No	5
re Vegetation Soil X or Hydrology	naturally pro	blematic? (	If needed ex	volain anv answers in	Remarks )	
SUMMARY OF FINDINGS - Attach site	map showir	ng samplin	g point lo	cations, transe	cts, important feat	ures, etc
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls th with	e Sampled A n a Wetland	Area I? Yes_	XNo	
Remarks: Island wetland along an outside bend in Clear Cree	ek					
/EGETATION – Use scientific names o	f plants.					
Tran Shokum (Distaina) 20	Absolute	Dominant	Indicator	Damina	wedenberte	
(Plot size: 30 )	% Cover	Species	Status	Dominance lest	worksneet:	
		<u> </u>	<u> </u>	Are OBL FACW	ant Species That	2 (A)
			<u> </u>	Total Number of F	Cominant Spanias	2 0.0
4.	_			Across All Strata:	Johnnahr Species	2 (B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domin Are OBL, FACW,	ant Species That or FAC: 10	0.0% (A/
1. Salix exigua	70	Yes	FACW			
2. Betula occidentalis	10	No	FACW	Prevalence Index	worksheet:	1
3.		$\longrightarrow$		Total % Cov	er of: Multiply	by:
				OBL species	160 x1=	200
	80	=Total Cover		FAC species	10 x3=	30
Herb Stratum (Plot size: 5 )		Total Cover		FACU species	0 x4=	0
Equisetum arvense	10	No	FAC	UPL species	0 x 5 =	0
2. Calamagrostis canadensis	70	Yes	FACW	Column Totals:	170 (A) 3	350 (B)
Juncus balticus	10	No	FACW	Prevalence Inc	dex = B/A = 2.06	()
			_	Hydrophytic Veg	etation Indicators:	
	-			X 1 - Rapid Tes	t for Hydrophytic Vegeta	ation
-				X 2 - Dominanc	e Test is >50%	
	3.25			X 3 - Prevalenc	e Index is ≤3.0 <sup>1</sup>	
				4 - Morpholog	ical Adaptations (Provid	le supportin
0				data in Rer	narks or on a separate :	sheet)
1				5 - Wetland N	Ion-Vascular Plants <sup>1</sup>	-
arco ana mana mana an	90	=Total Cover		Problematic +	lydrophytic Vegetation	(Explain)
woody Vine Stratum (Plot size: 5	_)			Indicators of hydrogenetic be present, unless	ric soil and wetland hydr s disturbed or problemat	ology must tic.
2.	1	2		Hydrophytic		
All shows a state of the		=Total Cover		Vegetation	100 D	
Contraction of the second s				Descent	Vac V Na	

000

epun Matrix	. and 1.4.4.4	Redo	x Feature	s		ennin ure			
ches) Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Tex	ture	R	Remarks
0-2 10YR 3/3	100			_	220	Sar	ndy		
2-12 10YR 3/3	80	7.5YR 5/8	20	c	M	Sar	ndy	Prominent re	dox concentrations
			$\equiv$	Ξ	$\equiv$	<u> </u>			
			-	_	-			-	
	==		Ξ		$\equiv$	-			
ype: C=Concentration, D=Deple	etion, RM=R	Reduced Matrix, C	S=Cove	red or Co	pated Sa	and Grains.	<sup>2</sup> Loca	tion: PL=Pore L	ining, M=Matrix.
dric Soil Indicators: (Applicat _ Histosol (A1) _ Histic Epipedon (A2)	ole to all LF	RRs, unless othe Sandy Gle Sandy Rec	erwise no yed Matr dox (S5)	oted.) ix (S4)			Indicator 2 cm Iron-M	s for Problemat Muck (A10) (LRI Nanganese Mass	ic Hydric Soils": R A, E) ses (F12) (LRR D)
Black Histic (A3)		Stripped N	latrix (S6	) rel/E1\	evcent	MIRAI	Red F	Parent Material (I Shallow Dark Su	F21)
1 cm Muck (A9) (LRR D, G)	(A11)	Loamy Gle	eyed Matri	rix (F2)	SUSSI		Other	(Explain in Rem	narks)
Thick Dark Surface (A12)	(011)	Redox Dar	k Surfac	e (F6)			<sup>8</sup> Indicator	s of hydrophytic	vegetation and
2.5 cm Mucky Peat or Peat (S	2) (LRR G)	Redox Dep	pressions	ace (F7) (F8)			unles	s disturbed or pr	oblematic.
strictive Layer (if observed):					1000	-			
Type: Cobble Depth (inches): emarks: roblematic soils - young deposits	12 of sand, ch	nroma does not m	neet S5, t	out redo;	are cle	Hydric So ar	oil Present	? Y	es <u>X</u> No
Type: <u>Cobble</u> Depth (inches): emarks: oblematic soils - young deposits <b>'DROLOGY</b>	12 ; of sand, cf	nroma does not m	neet S5, t	out redo;	are cle	Hydric So ar	bil Present	2 Y	es <u>X</u> No
Type: Cobble Depth (inches): emarks: oblematic solis - young deposits <b>'DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of on	12 of sand, ch	nroma does not m	neet S5, t	out redo;	are cle	Hydric So ar	bil Present	? Y	es X No
Type: Cobble Depth (inches): marks: oblematic soils - young deposits <b>'DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1)	12 of sand, cr	nroma does not m ed: check all that a Water-Stai	apply)	put redo; ves (B9)	(except	Hydric So ar	bil Present Secondar Wate	? Y y Indicators (2 or r-Stained Leaves	es X No r more required) s (B9) (MLRA 1, 2
Type: Cobble Depth (inches): marks: oblematic soils - young deposits <b>DROLOGY</b> atland Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1) High Water Table (A2)	12 ; of sand, cr	nroma does not m ed: check all that a Water-Stai MLRA	apply) ined Lean 1, 2, 4A,	out redox ves (B9) and <b>4</b> B)	(except	Hydric So ar	bil Present Secondar Wate: 4A	? Y <u>y Indicators (2 or</u> r-Stained Leaves 1, and <b>4B</b> )	es <u>X</u> No r more required) s (B9) (MLRA 1, 2
Type: Cobble Depth (inches): marks: oblematic soils - young deposits <b>DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3)	12 : of sand, cr ne is require	nroma does not m ed: check all that a Water-Stai KLRA Salt Crust	apply) ined Lean 1, 2, 4A, (B11)	out redo; ves (B9) and <b>4B</b> )	(except	Hydric So	Secondar Wate Drain	? Y <u>y Indicators (2 or</u> r-Stained Leaves a, and <b>4B</b> ) age Patterns (B1	es <u>X</u> No <u>r more required)</u> s (B9) (MLRA 1, 2
Type: Cobble Depth (inches): emarks: oblematic soils - young deposits <b>DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	12 : of sand, cr ne is require	aroma does not m ad: check all that a Water-Stai MLRA Sait Crust Aquatic Inv	apply) ined Leav 1, 2, 4A, (B11) vertebrati	out redo; ves (B9) and <b>4B</b> ) es (B13)	(except	Hydric So	Secondar Wate Drain Dry-S	? Y y Indicators (2 or r-Stained Leaves a, and <b>4B</b> ) age Patterns (B1 eason Water Ta	es <u>X</u> No r more required) s (B9) (MLRA 1, 2 10) ble (C2)
Type: Cobble Depth (inches): emarks: oblematic soils - young deposits <b>'DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	12 : of sand, cr	ed; check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	apply) ined Lear 1, 2, 4A, (B11) vertebrate Sulfide C	ves (B9) and 4B) es (B13)	(except	Hydric So	Secondar Wate Drain Dry-S Satur	2 Y y Indicators (2 or r-Stained Leaves I, and 4B) age Patterns (B1 ieason Water Ta ation Visible on /	es X No r more required) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9
Type: Cobble Depth (inches): marks: oblematic solls - young deposits <b>DROLOGY</b> atland Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	12 of sand, ch	ed; check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R	apply) ined Lean 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe	ves (B9) and 4B) es (B13) dor (C1) eres on I	(except	Hydric So ear	Secondar Wate Drain Dry-S Satur Geom	2 Y y Indicators (2 or r-Stained Leaves v, and 4B) age Patterns (B1 ieason Water Ta ation Visible on / horphic Position	es <u>X</u> No <u>r more required</u> ) s (B9) ( <b>MLRA 1, 2</b> 10) ble (C2) Aerial Imagery (C9 (D2)
Type: Cobble Depth (inches): emarks: oblematic soils - young deposits <b>'DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	12 of sand, ch	ed: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R	apply) ined Lean 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe of Reduc	ves (B9) and 4B) es (B13) dor (C1) eres on 1 ed Iron (	(except (iving R( C4)	Hydric So ear	Secondar Wate Drain Dry-S Satur Satur Shalid	y Indicators (2 or r-Stained Leaves a, and 4B) age Patterns (B1 eason Water Ta ation Visible on / horphic Position bow Aquitard (D3)	es X No r more required) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9 (D2)
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Type: Cobble Depth (inches): emarks: oblematic solls - young deposits <b>'DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of on 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)	12 of sand, ch	ed: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R Presence o Recent Iro Stunted or	apply) ined Lean 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc n Reduct Stressed	ves (B9) and 4B) es (B13) odor (C1) eres on I ed Iron ( ion in Ti 1 Plants	(except (except Living R( C4) lied Soit (D1) (LF	Hydric So ear boots (C3) s (C6) RR A)	Secondar Wate 4A Drain Dry-S Satur Satur Shallo X FAC- Raise	2 Y y Indicators (2 or r-Stained Leaves a, and 4B) age Patterns (B1 eason Water Ta ation Visible on / norphic Position ow Aquitard (D3) Neutral Test (D5 d Ant Mounds (I	r more required) (MLRA 1, 2 (B9) (MLRA 1, 2 (D) (D2) (D2) (LRR A)
Type: Cobble Depth (inches): marks: oblematic solls - young deposits <b>DROLOGY</b> etfand Hydrology Indicators: mary Indicators (minimum of or 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 Im	12 of sand, ch ne is require	ed: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R Presence o Recent Iro Stunted or Other (Exp	apply) ined Lean 1, 2, 4A, (B11) vertebrat/ Sulfide C Rhizosphe of Reduct n Reduct Stressed slain in R	ves (B9) and 4B) es (B13) odor (C1) eres on I ed Iron ( ion in Ti J Plants emarks)	(except (except Living Ro C4) lled Soit (D1) (LF	Hydric So ear boots (C3) s (C6) RR A)	Secondar Wate Drain Dry-S Satur Satur Shalk X FAC- Raise Frost-	y Indicators (2 or r-Stained Leaves a, and 4B) age Patterns (B1 eason Water Ta ation Visible on / norphic Position ( ow Aquitard (D3) Neutral Test (D5 id Ant Mounds (I Heave Hummod	r more required) s (B9) (MLRA 1, 2 ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) cks (D7)
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Type: Cobble Depth (inches): emarks: roblematic soils - young deposits <b>(DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of or 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 (B3) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave etd Observations: urface Water Present? Yes fater Table Present? Yes	12 of sand, cf ne is require hagery (B7) Surface (B8 S	ad: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R Presence of Recent Iro Stunted or Other (Exp 3) No X No X No X	apply) ined Lean 1, 2, 4A, (B11) vertebratu Sulfide C Rhizosphe of Reduct n Reduct Stressec olain in R Depth (in Depth (in	ves (B9) and 4B) es (B13) edor (C1) eres on I ed Iron ( ion in Ti d Plants emarks) nches):_ nches):_ nches):_	(except (iving R4 (c4) lied Soil (D1) (L1	Hydric So ar boots (C3) s (C6) RR A)	Secondar Wate 4A Drain Dry-S Satur Shallo X FAC- Raise Frost-	2 Y y Indicators (2 or -Stained Leaves , and 4B) age Patterns (B1 eason Water Ta ation Visible on / horphic Position tow Aquitard (D3) Neutral Test (D5 d Ant Mounds (I Heave Hummod	es <u>X</u> No r more required) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) :ks (D7) es <u>X</u> No
Type: Cobble Depth (inches): emarks: roblematic soils - young deposits <b>(DROLOGY</b> ettand Hydrology Indicators: imary Indicators (minimum of or 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 (B3) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave etd Observations: urface Water Present? Yes fater Table Present? Yes fater Table Present? Yes	12 of sand, cf ne is require hagery (B7) Surface (B8 S	ad: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R Presence of Recent Iro Stunted or Other (Exp 3) No X No X No X	apply) ined Lean 1, 2, 4A, (B11) vertebratu Sulfide C Rhizosphe of Reduct Stressec of Reduct Stressec olain in R Depth (ir Depth (ir	ves (B9) and 4B) es (B13) edor (C1) eres on I ed Iron ( ion in Ti J Plants emarks) inches): hches):	(except (except (iving R4 (C4) lied Soit (D1) (L1	Hydric So ar boots (C3) s (C6) RR A)	Secondar Wate 4A Drain Dry-S Satur Shallo X FAC- Raise Frost-	Y Indicators (2 or -Stained Leaves , and 4B) age Patterns (B1 eason Water Ta ation Visible on / horphic Position tow Aquitard (D3) Neutral Test (D5 d Ant Mounds (I Heave Hummoc Heave Hummoc	es <u>X</u> No r more required) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) :ks (D7) es <u>X</u> No _
Type: Cobble Depth (inches): emarks: oblematic soils - young deposits <b>DROLOGY</b> atland Hydrology Indicators: imary Indicators (minimum of or 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 Im Sparsely Vegetated Concave eld Observations: inface Water Present? Yes ater Table Present? Yes ater Table Present? Yes cludes capillary fringe) iscribe Recorded Data (stream g	12 i of sand, ch ne is require hagery (B7) Surface (B8 gauge, mon	ad: check all that a Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized R Presence of Recent Iro Stunted or Other (Exp 3) No X No X No X No X No X No X	apply) ined Lean 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe of Reduct Stressec of Reduct Stressec olain in R Depth (ir Depth (ir Depth (ir	ves (B9) and 4B) es (B13) edor (C1) eres on I ed Iron ( ion in Ti J Plants emarks) nches): 	(except (except (iving R4 (C4) lied Soit (D1) (LF	Hydric So ar boots (C3) s (C6) RR A) Wetlan	Secondar Wate 4A Drain Dry-S Satur Shalld X FAC-I Raise Frost-	Y Indicators (2 or r-Stained Leaves , and 48) age Patterns (B1 eason Water Ta ation Visible on / horphic Position tow Aquitard (D3) Neutral Test (D5 d Ant Mounds (D Heave Hummoo	es <u>X</u> No r more required) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) :ks (D7) es <u>X</u> No _

ENG FORM 6116-9, JUL 2018

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	- Western Me proponent a	ountains, Va gency is CE	lleys, and C CW-CO-F	Coast Region	Requirement Control (Authority: AR 335-1	Symbol EXEN 5, paragraph 5	пРТ; -2a)
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	creek County	Sampling D	ate: 7/2	7/202
oplicant/Owner: CDOT - Region 1		2.00		State: CO	Sampling P	oint: l	JP19
vestigator(s): Fillipi and Kizlinski		Section 7	ownship, Ra	ange: SW4 S33, T3	S, R72W		
andform (hillside, terrace, etc.). hillside	- 7	Local relief (c	oncave, conv	vex, none). flat		Slope (%	): 2-
ubregion (LRR): LRR E, MLRA 48A. Lat: 39.7	42866	P. P. M	Long: 1	05.453997	Dat	um: NAI	D83
bil Map Unit Name: Cathedral-Rock outcrop comple	ex, 30 to 70 pe	rcent slopes	1.01	NWI cla	ssification: UPL		
e climatic / hydrologic conditions on the site typical	for this time o	f vear?	Yes X	No (If no.	explain in Remar	ks.)	
re Vegetation Soil or Hydrology	significantly	disturbed? A	re Normal	Circumstances' prese	nt? Yes X	No	
re Vegetation Soil or Hydrology	naturally pro	blematic? (	If needed ex	colain any answers in	Remarks )		
UMMARY OF FINDINGS – Attach site n	nap showir	ng samplin	g point lo	cations, transec	ts, important	features	s, et
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Netland Hydrology Present? Yes	No <u>X</u> No <u>X</u> No <u>X</u>	ls the withi	a Sampled A n a Wetland	Area 1? Yes	NoX		
emarks: Ipland between river and path, not a natural setting	, but upland ve	eg established					
EGETATION – Use scientific names of	plants.						_
ree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator	Dominance Test	worksheet		
				Number of Domins	ot Species That		
				Are OBL, FACW,	or FAC:	4	(A)
0.				Total Number of D	ominant Species		
./	_			Across All Strata:		5	(B)
Senling/Shaih Stratum (Diot size: 15		=Total Cover		Percent of Domina	Int Species That	80.0%	/Δ
Betula occidentalis	-' 10	Yes	FACW	ALCODE, FACIL,	0,1740,	00.078	
				Prevalence Index	worksheet:		
h.				Total % Cove	r of. M	ultiply by:	-
				OBL species	0 x 1 =	0	
£	_		_	FACW species	10 × 2 =	20	-
	10	=Total Cover		FAC species	30 x 3 =	90	-
Promila inarmia	20	Vec	10	FACU species	0 x.4=	150	-
Acrostis	10	Yes	FAC	Column Totals:	30 x 5 =	260	-/B
Cirsium arvense	10	Yes	FAC	Prevalence Ind	ex = B/A =	3.71	-,0
Equisetum arvense	10	Yes	FAC			1001-1	- 1
				Hydrophytic Vege	atation Indicators	3:	
				1 - Rapid Test	for Hydrophytic \	egetation/	
				X 2 - Dominance	e Test is >50%		
	$( \longrightarrow$	<u> </u>		3 - Prevalence	e Index is ≤3.0		
	$\leftarrow \rightarrow$			4 - Morphologi data in Rem	cal Adaptations (I	-rovide sup	pporti
1				5-Wetland M	on-Vascular Plant	51	
	60	=Total Cover		Problematic H	vdrophytic Vegeta	ation <sup>1</sup> (Exp	lain)
Voody Vine Stratum (Plot size: 5	_)			Indicators of hydribe present, unless	c soil and wetland disturbed or prob	l hydrology lematic.	y mus
				Hydrophytic			
		-Total Cautor		ingen oprigue			

Depth

(inches)

0-14

Matrix

%

100

Color (moist)

10YR 3/2

	_	

UP19

Sampling Point:

Remarks

Type: C-Consentration D-Declation PM-Pa	duard Metrix CP-Coverad or Costad St	and Orgins
Hype, C-Concentration, D-Depletion, RM-Re	succed matrix, CO-Covered of Coaled Sa	Indicators for Problematic Hydric Solls <sup>1</sup>
Historal (A1)	Sandy Cleved Matrix (SA)	2 cm Muck (Ado) (LRR A E)
	Sandy Bodoy (S5)	
Plack Histic (A2)	Sandy Redox (GS)	
Hudrogen Sulfide (A4)	Supped Matrix (So)	MURA 1) Vac/ Shallow Dark Surface (E22)
1 om Muck (A9) (LBB D_G)	Loamy Gleved Matrix (52)	Other (Evolain in Remarks)
Deplated Relow Dark Surface (A11)	Depleted Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depieted Matrix (FS)	<sup>9</sup> Indicators of hudrophytic vocatation and
Sandy Music Mineral (S1)	Reduct Dark Surface (F0)	indicators of hydrophytic vegetation and
2.5 cm Mucky Mineral (S1)	- Depleted Dark Surface (F7)	uplace disturbed or problematic
2.5 cm Mucky Pear of Pear (52) (LKR G)	Redox Depressions (Po)	unless disturbed of problematic.
Restrictive Layer (if observed):		
Туре:		washing and success the second s
and the set of the set		Hydric Soil Present? Yes No
Depth (inches): Remarks: dry soil		
Depth (inches): Remarks: dry soil		
Depth (inches): Remarks: dry soil IYDROLOGY Wetland Hydrology Indicators:		
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required	; check all that apply)	Secondary Indicators (2 or more required)
Depth (inches): Remarks: dry soil IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1)	; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) tWater-Stained Leaves (B9) (MLRA 1, 2
Depth (inches): Remarks: dry soil IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2)	; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) t
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) t
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	t <u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches): Remarks: dry soil AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	; 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) t
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	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 on Living Re	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     oots (C3) Geomorphic Position (D2)
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	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 on Living Re Presence of Reduced Iron (C4)	<ul> <li>Secondary Indicators (2 or more required)</li> <li>Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9 oots (C3)</li> <li>Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> </ul>
Depth (inches): Remarks: dry soil AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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)	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 on Living Re Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soit	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)       Saturation Visible on Aerial Imagery (C9         coots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)       FAC-Neutral Test (D5)
Depth (inches): Remarks: dry soil AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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)	<ul> <li>check all that apply)</li> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soil</li> <li>Stunted or Stressed Plants (D1) (L1)</li> </ul>	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         coots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: dry soil <b>IYDROLOGY</b> Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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) Ihundation Visible on Aerial Imagery (B7)	<ul> <li>check all that apply)</li> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soil</li> <li>Stunted or Stressed Plants (D1) (L1)</li> <li>Other (Explain in Remarks)</li> </ul>	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         coots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Depth (inches): Remarks: dry soil IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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)	: 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 on Living Re Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (L1 Other (Explain in Remarks)	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         coots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         Is (C6)       FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Depth (inches): Remarks: dry soil <b>HYDROLOGY</b> Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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) Field Observations:	<ul> <li><u>check all that apply</u>)</li> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soil</li> <li>Stunted or Stressed Plants (D1) (L1</li> <li>Other (Explain in Remarks)</li> </ul>	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         cots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         Is (C6)       FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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) Field Observations: Surface Water Present? Yes	<ul> <li><u>check all that apply</u>)</li> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soil</li> <li>Stunted or Stressed Plants (D1) (L1</li> <li>Other (Explain in Remarks)</li> <li>No X</li> <li>Depth (inches):</li> </ul>	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         cots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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) Field Observations: Surface Water Present? Yes Water Table Present? Yes	: 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 on Living Represence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soil         Stunted or Stressed Plants (D1) (L1)         Other (Explain in Remarks)         No       X         Depth (inches):         No       X         No       X	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         cots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)
Depth (inches): Remarks: dry soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	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 on Living Represence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soil         Stunted or Stressed Plants (D1) (L1)         Other (Explain in Remarks)         No       X         No       X         No       X         No       X         No       X         No       X         Depth (inches):         No       X         Depth (inches):	Secondary Indicators (2 or more required)         t       Water-Stained Leaves (B9) (MLRA 1, 2         4A, and 4B)       Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C9         cots (C3)       Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         RR A)       Raised Ant Mounds (D6) (LRR A)         Frost-Heave Hummocks (D7)         Wetland Hydrology Present?       Yes

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

Color (moist)

**Redox Features** 

%

Type

Loc

Texture

Loamy/Clayey

Remarks:

None observed.

ENG FORM 6116-9, JUL 2018

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	- Western Me proponent a	ountains, Va gency is CE	lleys, and C CW-CO-F	Coast Region R	OMB Control #: 0710-00 Requirement Control (Authority: AR 335-15	924, Exp: 11/30/2024 Symbol EXEMPT: 5, paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling D	ate: 8/02/202
pplicant/Owner: CDOT - Region 1		1.1		State: CO	Sampling P	oint: WL20
vestigator(s): Fillipi, Kizlinski, Head		Section, 1	ownship, Ra	ange: SW4 S33, T38	6, R72W	
andform (hillside, terrace, etc.); floodplain		Local relief (c	oncave, conv	vex, none); flat		Slope (%); 1
ubregion (LRR): LRR E. MLRA 48A Lat: 39.7	74282		Long: 1	05.45303	Dat	um: NAD83
oil Map Unit Name: Cathedral-Rock outcrop comp	ex. 30 to 70 pe	rcent slopes		NWI cla	ssification: UPL	
a climatic / hydrologic conditions on the site hydrol	I for this time o	fuppr?	Vac V	No. //f.no.	evolain in Damad	
e cimate / hydrologic conditions of the site typica		disturbed 2	Tes A			No.)
Soli Vegetation, Goli, or Hydrology	- significantly			circumstances prese	Demender )	110
re vegetation, Soli _ X _, or Hydrology	naturally pro	olematic? (	in needed, ex	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site	map showing	ng samplin	g point lo	ocations, transec	ts, important	features, et
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No	ls the withi	e Sampled A n a Wetland	Area 1? Yes <u>)</u>	KNo	
Remarks: .arge wetland on an inside bend of Clear Creek	1					
EGETATION – Use scientific names of	f plants.					
	Absolute	Dominant	Indicator		A 2.2.	
ree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test v	worksheet:	
·		<u> </u>		Number of Domina	nt Species That	
				Are OBL, FACW, d	or FAC:	(A
				Total Number of D	ominant Species	A /B
		=Total Cover		Percept of Demine	at Species That	
Sapling/Shrub Stratum (Plot size: 15	)			Are OBL, FACW, o	or FAC:	100.0% (A
. Salix exigua	20	Yes	FACW			
2. Betula occidentalis	20	Yes	FACW	Prevalence Index	worksheet:	
h <u></u>				Total % Cove	r of: Mi	ultiply by:
				OBL species	0 x1=	0
		-		FACW species	<u>60</u> x 2 =	120
Jarb Stratum (Diot size) 5	40	= Total Cover		FAC species	35 X 3 =	20
Arrostis stolonitere	30	Yes	FAC	LIPL species	0 x5=	0
Heracleum maximum		No	FAC	Column Totals:	100 (A)	245 (B
. Achillea millefolium	5	No	FACU	Prevalence Inde	ex = B/A =	2.45
Juncus balticus	20	Yes	FACW			
				Hydrophytic Vege	tation Indicators	8
	-			1 - Rapid Test	for Hydrophytic V	egetation
				X 2 - Dominance	Test is >50%	
		$\longrightarrow$		X 3 - Prevalence	Index is ≤3.01	
<u> </u>		<u> </u>		4 - Morphologie	cal Adaptations (F	Provide support
4				5 - Wetland M	n.Vacular Diant	e <sup>1</sup>
1.	- 60	=Total Cover		Problematic H	vdrophytic Vegete	tion <sup>1</sup> (Evolain)
Noody Vine Stratum (Plot size: 5	_)	- Total Cover		Indicators of hydri	c soil and wetland	i hydrology mus lematic.
2.				Hudronhudi		
		=Total Cover	-	Vegetation		
0/ Dava Craund in Llach Chasterns				· · · · · · · · · · · · · · · · · · ·		

~ \*\*

epth Matri	x	Redo	A l'eatures						
ches) Color (moist)	%	Color (moist)	%	Туре	Loc <sup>2</sup>	Text	ure	Remark	s
0-3 10YR 3/4	100			_	_	Sar	idy	10. THE R. P.	
3-6 10YR 4/3	100	7.5YR 4/6	5	С	M	Sar	idy	Prominent redox co	oncentrations
6-16 10YR 4/3	100	7.5YR 4/6		c	M	Sar	idy	Prominent redox co	oncentrations
			2	2	Ξ	_	=	-	
ype: C=Concentration, D=E	epletion, RM=	Reduced Matrix, C	CS=Covere	ed or Co	pated Sa	nd Grains.	<sup>2</sup> Loca	tion: PL=Pore Lining,	M=Matrix.
dric Soil Indicators: (App	icable to all L	RRs, unless othe	erwise not	ted.)			Indicator	s for Problematic Hyd	lric Soils <sup>3</sup> :
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) 1 cm Muck (A9) (LRR D, Depleted Below Dark Surf Thick Dark Surface (A12) Sandy Mucky Mineral (S1 2.5 cm Mucky Bast or Da	G) face (A11) )	Sandy Red Stripped N Loamy Mu Loamy Gle Depleted N Redox Dar Depleted I	dox (S5) Matrix (S6) Icky Minera eyed Matrix Matrix (F3) rk Surface Dark Surfac	al (F1) x (F2) (F6) ce (F7)	(except	MLRA 1)	Iron-M Red F Very Other <sup>9</sup> Indicator wetla	Vanganese Masses (F Parent Material (F21) Shallow Dark Surface ( (Explain in Remarks) s of hydrophyfic vegeta nd hydrology must be p didtyfology must be p	(F22) (LRR D)
2.5 cm Mucky Peat of Pea	at (52) (LRR 0	Redox Dep	pressions (	(FO)			unies	s disturbed or problem	auc.
estrictive Layer (if observe Type: Depth (inches):	d):	-				Hydric So	il Present	? Yes_)	(No
estrictive Layer (if observe Type: Depth (inches): emarks: roblematic soils. Young floor	d): Iplain deposits	do not meet chror	ma for S5,	but rec	lox are c	Hydric So lear	il Present	? Yes_)	<u> No</u>
estrictive Layer (if observe Type: Depth (inches): emarks: roblematic soils. Young flood	d): Iplain deposits	do not meet chror	ma for S5,	but rec	lox are c	Hydric So lear	il Present	? Yes_)	<u>( No</u>
estrictive Layer (if observe Type: Depth (inches): emarks: roblematic soils. Young floor YDROLOGY Yetland Hydrology Indicato rimary Indicators (minimum of 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 Aeri Sparsely Vegetated Conc	d): Iplain deposits rs: of one is requir al Imagery (B7 ave Surface (B	red; check all that a Water-Star MLRA Salt Crust Aquatic Int Hydrogen Oxidized R Presence Recent Iro Stunted or Other (Exp 38)	apply) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce on Reductio Stressed plain in Rer	but red es (B9) and 4B) s (B13) dor (C1) res on 1 d Iron ( on in Til Plants marks)	dox are c (except Living Rc C4) lied Soils (D1) (LR	Hydric So lear bots (C3) s (C8) R A)	Secondar Wate 44 Drain Dry-S Satur X Geom Shalle X FAC- Raise Frost	? Yes y Indicators (2 or more r-Stained Leaves (B9) A, and 4B) age Patterns (B10) Season Water Table (C ation Visible on Aerial horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (L1 -Heave Hummocks (D2)	(MLRA 1, 2 (MLRA 1, 2 2) Imagery (C9) RR A) 7)
testrictive Layer (if observe Type: Depth (inches): Depth (inches): Troblematic soils. Young floor YDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum 4 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conc ield Observations: urface Water Present? aturation Present? aturation Present?	d): plain deposits rs: of one is requir al Imagery (B7 ave Surface (B Yes Yes Yes	red; check all that a water-Stai MLRA Salt Crust Aquatic Inn Hydrogen Oxidized R Presence Recent Iro Stunted or Other (Exp 38) No X No X No X No X	ma for S5, apply) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceion Reduction Stressed blain in Rer Depth (inc Depth (inc	but red es (B9) and 4B) s (B13) dor (C1) res on L d Iron ( on in Til Plants marks) ches): ches): ches):	(except (except Living Rc C4) (D1) (LR	Hydric So lear bots (C3) s (C8) (R A) Wetland	Secondar Wate 44 Drain Dry-S Satur X Geon Shalle X FAC- Raise Frost	? Yes _ ) y Indicators (2 or more r-Stained Leaves (B9) A, and 4B) age Patterns (B10) Season Water Table (C ation Visible on Aerial horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ad Ant Mounds (D6) (L1 Heave Hummocks (D2) by Present? Yes _ )	< <u>No</u>
estrictive Layer (if observe Type: Depth (inches): emarks: roblematic soils. Young floor /DROLOGY /etfand Hydrology Indicator imary Indicators (minimum 4 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 (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conc eld Observations: urface Water Present? aturation Present? aturation Present? icludes capillary fringe) escribe Recorded Data (stre	d): plain deposits rs: of one is requir al Imagery (B7 ave Surface (B Yes Yes Yes Yes am gauge, mo	red: check all that a red: check all that a Water-Stal MLRA Salt Crust Aquatic Im Hydrogen Oxidized R Presence I Recent Iro Stunted or Other (Exp 38) No X No X No X No X No X No X	ma for S5, apply) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceion Reduction Stressed blain in Rer Depth (inc Depth (inc Depth (inc	but red es (B9) and 4B) s (B13) dor (C1) res on L d Iron ( on in Til Plants marks) ches): ches): ches):	(except (except Living Rc C4) lied Soils (D1) (LR	Hydric So lear bots (C3) s (C8) (R A) Wetland ions), if ava	Secondar Wate 44 Drain Dry-S Satur X Geom Shalle X FAC- Raise Frost	? Yes _ ) y Indicators (2 or more r-Stained Leaves (B9) A, and 4B) age Patterns (B10) Season Water Table (C ation Visible on Aerial horphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ad Ant Mounds (D6) (L1 Heave Hummocks (D2) by Present? Yes _ )	< <u>No</u>

ENG FORM 6116-9, JUL 2018

U.S. Army Co WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	- Western Me proponent a	jineers ountains, Va gency is Cl	lleys, and C ECW-CO-I	Coast Region	OMB Control #: 0710-00 Requirement Control (Authority: AR 335-15	24, Exp: 11/30/2024 Symbol EXEMPT: , paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling D	ate: 7/27/202
pplicant/Owner: CDOT - Region 1				State: CO	Sampling Po	oint: WL21
vestigator(s): Fillipi ad Kizlinski		Section,	Township, Ra	ange: SE4 S33, T35	. R72W	
andform (hillside, terrace, etc.); floodplain		Local relief (c	oncave, con	vex. none): flat		Slope (%); 1-
ubregion (LRR): LRR E MIRA 48A Lat: 39.7	4372		Long: 1	05 49604	Date	Im: NAD83
oil Man Unit Name: Mammoth-Ohman-Rock outcro	n complex 30	to 60 percent	siones	NWI ct	assification: LIPI	
a dimetia / buckelagia agaditions on the site builds	for this time o	funer?	Vac V	No //fro	avalais is Damad	
e climatic / hydrologic conditions on the site typica	nor this time o	r year?	Tes A	(1100	explain in Remain	(5.)
soli, or Hydrology	significantly	disturbed r /	are Normal	circumstances prese	entr res A	NO
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (	If needed, et	xplain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach site r	nap showin	ng samplin	ig point lo	ocations, transed	ts, important	features, et
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls th with	e Sampled A in a Wetland	Area 1? Yes	XNo	J
Remarks: Floodplain wetland along the bank of Clear Creek	5 mil 1					
EGETATION – Use scientific names of	plants.					
Free Strahum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test	work sheet.	
	-10 00101	opecies	Glatas	Murch as of Derain	ant Presides That	
				Are OBL, FACW,	or FAC:	3 (A)
				Total Number of D	ominant Species	/
W =				Across All Strata:		3 (B)
Sapling/Shrub Stratum (Plot size; 15	<u></u>	=Total Cover		Percent of Domina Are OBL, FACW,	ant Species That or FAC:	100.0% (A
. Betula occidentalis	70	Yes	FACW	Carrier Contractor	Concept Parcent of the	
2. Apocynum androsaemitolium		No	FACU	Prevalence Index	worksheet:	illian be have
Nalanthemum stellatum	10	NO	FAG	OPL species	20 11-	20
			-	FACW species	90 x7=	180
	90	=Total Cover		FAC species	30 x 3 =	90
erb Stratum (Plot size: 5)	1			FACU species	10 x.4 =	40
Juncus balticus	20	Yes	FACW	UPL species	0 x 5 =	0
. Carex nebrascensis	10	No	OBL	Column Totals:	150 (A)	330 (B
. Agrostis stolonifera	20	Yes	FAC	Prevalence Ind	ex = B/A =	2.20
Carex utriculata		No	OBL	1		
				Hydrophytic Veg	etation Indicators	5. 
			<del></del> :	1 - Rapid Tesi	t for Hydrophytic V	egetation
				X 3- Prevalence	$a \ln dev is < 3.0^{1}$	
			<u> </u>	4 - Morphologi	cal Adaptations (F	Provide supporti
0_	1000	_	_	data in Ren	narks or on a sepa	rate sheet)
1				5 - Wetland N	on-Vascular Plants	1
	60	=Total Cover		Problematic H	lydrophytic Vegeta	tion <sup>1</sup> (Explain)
Noody Vine Stratum (Plot size: 5	_)			<sup>1</sup> Indicators of hydr be present, unless	ic soil and wetland disturbed or probl	hydrology mus ematic.
8 Bare Ground in Herb Stratum		=Total Cover		Hydrophytic Vegetation Present?	AS X No	
A Bale Glound In Herb Stratum				Present	NO NO	

Indition       Indition       Indition       Indition         Inches)       Color (moist)       %       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> 0-5       10YR 3/3       85       7.5YR 4/6       15       C       M         5-12       10YR 3/2       75       7.5YR 4/6       20       C       M         10YR 5/2       5       D       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M       M<	Texture       Remarks         Sandy       Prominent redox concentrations         Sandy       Prominent redox concentrations         Sandy       Prominent redox concentrations         Stains       Prominent redox concentrations         Stains <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Indicators for Problematic Hydric Soils <sup>3</sup> :       2 cm Muck (A10) (LRR A, E)         Iron-Manganese Masses (F12) (LRR D)       Red Parent Material (F21)         (A 1)       Very Shallow Dark Surface (F22)
0-5         10YR 3/3         85         7.5YR 4/6         15         C         M           5-12         10YR 3/2         75         7.5YR 4/6         20         C         M           10YR 3/2         75         7.5YR 4/6         20         C         M           10YR 5/2         5         D         M         M           10YR 5/2         5         D         M           1         2         2         2           1         2         3         3         3           1         2         3         3         3           1         2         3         3         3           1         3         3         3         3           1         3         3 <th>Sandy Prominent redox concentrations Sandy Prominent redox concentrations Prominent redox co</th>	Sandy Prominent redox concentrations Sandy Prominent redox concentrations Prominent redox co
5-12       10YR 3/2       75       7.5YR 4/6       20       C       M         10YR 5/2       5       D       M       M         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Sandy Prominent redox concentrations  Srains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :2 cm Muck (A10) (LRR A, E)Iron-Manganese Masses (F12) (LRR D)Red Parent Material (F21) (A 1) Very Shallow Dark Surface (F22)
Ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Stains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Stains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) (A 1) Very Shallow Dark Surface (F22)
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Stains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) (A 1) Very Shallow Dark Surface (F22)
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)	Stains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	irains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Strains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G         ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	Strains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Indicators for Problematic Hydric Soils <sup>3</sup> :       2 cm Muck (A10) (LRR A, E)         Iron-Manganese Masses (F12) (LRR D)       Red Parent Material (F21)         Red Parent Material (F21)       Very Shallow Dark Surface (F22)
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) X Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLR 1 cm Muck (A9) (LRR D, G) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLR)         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)	2 cm Muck (A10) (LRR A, E) Iron-Manganese Masses (F12) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
Histic Epipedon (A2)     X     Sandy Redox (S5)       Black Histic (A3)     Stripped Matrix (S6)       Hydrogen Sulfide (A4)     Loamy Mucky Mineral (F1) (except MLR       1 cm Muck (A9) (LRR D, G)     Loamy Gleyed Matrix (F2)       Depleted Below Dark Surface (A11)     Depleted Matrix (F3)	Red Parent Material (F21) (LRR D) Red Parent Material (F21) Very Shallow Dark Surface (F22)
Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLR 1 cm Muck (A9) (LRR D, G) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Red Parent Material (F21) (A 1) Very Shallow Dark Surface (F22)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLR 1 cm Muck (A9) (LRR D, G) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	(A1) Very Shallow Dark Surface (F22)
1 cm Muck (A9) (LRR D, G) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Other (Explain in Remarks)
Thick Dark Surface (A12)Redox Dark Surface (F6)	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if observed):	
Type: Cobbles / Gravel	An and the second second second second
Depth (inches): 12 Ryd	Jric Soll Present? Yes A NO
YDROLOGY Vetland Hydrology Indicators:	
rimary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
High Water Table (A2) MILKA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)Sati Crust (B11)	Drainage Patterns (B10)
Adjuard invertebrates (B13)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B2) X Ovidized Bhizospheres on Living Roots (	(C3) Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6	() X FAC-Neutral Test (D5)
	Raised Ant Mounds (D6) (LRR A)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Frost-Heave Hummocks (D7)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	
Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) ield Observations: urface Water Present? Yes No X Depth (inches):	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) ield Observations: Surface Water Present? Yes No X Depth (inches): Vater Table Present? Yes No X Depth (inches):	
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Integet (B8)         ield Observations:       Vater Present?         Yater Table Present?       Yes         No       X       Depth (inches):         vater Table Present?       Yes         No       X       Depth (inches):         aturation Present?       Yes       No	/etland Hydrology Present? Yes X No
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Interface (B8)         ield Observations:       No       X         Depth (inches):       Vater Table Present?       Yes         Vater Table Present?       Yes       No       X         iaturation Present?       Yes       No       X         ncludes capillary fringe)       Water Table Present?       Yes       No	Vetland Hydrology Present? Yes X No
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       other (Explain in Remarks)         ield Observations:       urface Water Present?         vater Table Present?       Yes         No       X       Depth (inches):         aturation Present?       Yes         No       X       Depth (inches):         aturation Present?       Yes         No       X       Depth (inches):         wheld use capillary fringe)       wheel aerial photos, previous inspections)	Vetland Hydrology Present? Yes X No

U.S. Army C WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the	orps of Eng - Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and ( CW-CO-I	Coast Region R	OMB Control #: 0710-0 Requirement Control (Authority: AR 335-1	024, Exp: 11/30/2024 I Symbol EXEMPT: 5, paragraph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling D	)ate: 8/2/2022
pplicant/Owner: CDOT - Region 1		E. 19. 1		State: CO	Sampling P	oint: WL22
vestigator(s): Fillipi, Kizlinski, Head		Section, 1	ownship, Ra	ange: SE4 S33, T3	S. R72W	
andform (hillside, terrace, etc.): Island		Local relief (c	oncave, con	vex. none); flat		Slope (%); 0
ubregion (LRR): LRR E. MLRA 48A Lat: 39.7	74324		Long: 1	105,44537	Dai	tum: NAD83
oil Man Unit Name: Mammoth-Ohman-Rock outcre	op complex, 30	to 60 percent	slopes	NWI d	assification: UPL	
re climatic / hydrologic conditions on the site hypics	I for this time o	fvear?	Vec V	No (If no	evolain in Demar	ke )
re Vagetation Soil or Hudrology	cionificantly	dicturbad?	Normal'	Circumstances" pros		No.
re Vegetation, Golf, or Hydrology	_ adjustication		lennedad o	valeia environeurora in	Bemerke	· ····
" vegetation, soli, or Hydrology	- naturally pro	plematic: (	n needed, e	xplain any answers in	remarks.)	5. 55 A.
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Netland Hydrology Present? Yes X	No No No	ls th with	a Sampled A	Area 1? Yes_	XNo	
temarks: \$mall island supporting a wetland along the bank o	f Clear Creek					
EGETATION – Use scientific names of	f plants.					
ree Stratum (Plot size: 30 )	% Cover	Dominant Species?	Status	Dominance Test	worksheet:	
·		<u> </u>		Number of Domin	ant Species That	
		<u> </u>	<u> </u>	Are OBL, PACVV,	Destinent Consider	(A)
				Across All Strata:	Dominant Species	4 (B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domin Are OBL, FACW,	ant Species That or FAC:	100.0% (A
. Salix exigua	70	Yes	FACW			Sector Sector Sector
			<u></u>	Prevalence Inde	x worksheet:	100 T = 1
		<u> </u>		Total % Cov	er of: M	ultiply by:
				OBL species	0 x1=	150
	70	=Total Cover		FAC species	20 x 3 =	60
lerb Stratum (Plot size: 5 )	- 1.9			FACU species	0 x4=	0
Agrostis stolonifera	10	Yes	FAC	UPL species	0 x 5 =	0
. Juncus balticus	5	Yes	FACW	Column Totals:	95 (A)	210 (B
Equisetum arvense	10	Yes	FAC	Prevalence In	dex = B/A =	2.21
			_	1		
<u></u>				Hydrophytic Veg	etation Indicator	S:
	<u> </u>	<u> </u>		1 - Rapid Tes	st for Hydrophytic \	/egetation
-				X 3 - Prevalence	$\approx \ln dex is < 3.0^{1}$	
1		$\rightarrow$		4 - Morpholoc	ical Adaptations (	Provide supporti
0.			_	data in Rei	marks or on a sepa	arate sheet)
1				5 - Wetland M	Non-Vascular Plant	s <sup>1</sup>
	25	=Total Cover		Problematic I	Hydrophytic Veget	ation <sup>1</sup> (Explain)
Voody Vine Stratum (Plot size: 5	_)			Indicators of hyd be present, unles	ric soil and wetland s disturbed or prot	d hydrology mus plematic.
1		=Total Cover		Hydrophytic Vegetation	Vec. V.	
				I Descard	Vec V Ne	

mpling Point: WL22

in altern	Color (maint)	D/.	Calar (maint)	04	Tuno	Loo <sup>2</sup>	Tastu			Demarka	
nches)				- 70	Type	- LOC	Textu	Texture		Remarks	
0-4	101R 3/2	-100 -	7.51R 4/6		<u> </u>	<u>M</u>	Sand	<u>y</u> .	Prominen	it redox concent	rations
4-12	10YR 3/3	100		_			Sand	У			
		<u> </u>		_	-		-		-		
				_					_		
		<u> </u>		_							
-				_	_						
1000	A	100				2.1		- 14			
	S					-					
ype: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, C	CS=Cove	red or Co	bated Sar	nd Grains.	<sup>2</sup> Locat	ion: PL=Por	re Lining, M=Ma	trix.
dric Soil I	ndicators: (Applica	ble to all l	RRs, unless othe	erwise n	oted.)		1.1	Indicators	for Probler	natic Hydric Sc	oils <sup>3</sup> :
Histosol (A1)			Sandy Gle	Sandy Gleyed Matrix (S4)				2 cm /	Muck (A10) (	LRR A, E)	
Histic Epipedon (A2)			X Sandy Red	X Sandy Redox (S5)			1	Iron-Manganese Masses (F12) (LRR D)			RR D)
Black His	tic (A3)		Stripped N	latrix (St	3)		-	Red P	arent Materia	al (F21)	
Hydroger	n Sulfide (A4)		Loamy Mu	cky Mine	eral (F1)	except N	ILRA 1)	Very S	shallow Dark	Surface (F22)	
1 cm Mu	ck (A9) (LRR D, G)		Loamy Gle	eyed Mal	trix (F2)			Other	(Explain in R	(emarks)	
_ Depleted	Below Dark Surface	(A11)	Depleted M	Matrix (F	3)					a desident a subserved	
- Thick Da	rk Surface (A12)		Redox Dar	k Surfac	e (F6)			Indicators	of hydrophy	tic vegetation ai	nd
Sandy Mucky Mineral (S1)			Depleted I	Depleted Dark Surface (F7)					wetland hydrology must be present,		
2.5 cm M	lucky Peat or Peat (	52) (LRR (	3)Redox Dep	pression	s(F8)			unless	disturbed o	r problematic.	
estrictive L	ayer (if observed):										
Type											
1 Jpor	Cobbles	5	2.1				the second second			400 m	
Depth (in emarks: edox at surf	Cobble:	12	<u> </u>				Hydric Soil	Present		Yes <u>X</u>	No
Depth (in emarks: edox at surf	Cobble: ches): ace, clear GY	12	-				Hydric Soil	l Present?		Yes <u>X</u>	No
Depth (in emarks: edox at surf	Cobbles ches): ace, clear GY irology Indicators:	12	Ż.				Hydric Soil	Present?		Yes <u>X</u>	No
Depth (in emarks: edox at surf /DROLO retland Hyd imary Indic	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o	12 ne îs requi	red; check all that a	apply)			Hydric Soil	Present? Secondary	Indicators (	Yes X	No
Depth (in emarks: edox at surf /DROLO /etland Hyd imary Indic Surface \/	Cobbles ches): ace, clear GY frology Indicators: ators (minimum of o Water (A1)	ne is requi	red: check all that in Water-Sta	apply) ined Lea	ives (B9)	(except	Hydric Soil	Present?	Indicators (	Yes X 2 or more requir aves (B9) (MLRA	No
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wat	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) er Table (A2)	s 12 ne is requi	red: check all that : Water-Sta MLRA	apply) ined Lea 1, 2, 4A,	ives (B9) and 4B)	(except	Hydric Soil	Secondary Water 4A	Indicators ( Stained Lea and 4B)	Yes X 2 or more requir aves (B9) (MLRA	No
Depth (in marks: dox at surf DROLO etland Hyd imary Indic Surface V High Wal Saturatio	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) ler Table (A2) n (A3)	ne îs regul	red: check all that : Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric Soil	Secondary Water 4A Draina	Indicators ( Stained Lea and 4B) ge Patterns	Yes <u>X</u> 2 or more requir aves (B9) (MLRA (B10)	No
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wat Saturatio Water Ma	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1)	ne îs regul	red; check all that i Water-Sta MLRA Salt Crust Aquatic In	apply) ined Lea 1, 2, 4A, (B11) vertebral	ives (B9) and 4B) tes (B13)	(except	Hydric Soil	Secondary Water 4A Draina Dry-Se	Indicators ( -Stained Lea , and 4B) ge Patterns eason Water	Yes X 2 or more requir ives (B9) (MLRA (B10) Table (C2)	No
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wal Saturatio Water Mi Sedimen	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	ne is requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide (	ives (B9) and 4B) tes (B13) Odor (C1)	(except	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura	- Indicators ( -Stained Lea and 4B) ge Patterns eason Water ttion Visible (	Yes X 2 or more requir ives (B9) (MLRA (B10) Table (C2) on Aerial Image	No ed) A 1, 2
Depth (in emarks: edox at surf PDROLO retland Hyd imary Indic Surface V High Wal Saturatio Water Ma Sedimeni Sedimeni	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) (er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	ne is requi	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph	ives (B9) and 4B) tes (B13) Odor (C1) eres on I	(except	Hydric Soil	Secondan Water 4A Draina Dry-Si Satura Geom	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi	Yes X 2 or more requir ives (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2)	No
Depth (in emarks: edox at surf DROLO etland Hyd imary Indic Surface V High Wal Saturatio Vater Ma Sedimeni Drift Dep Algal Mal	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	ne is requi	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc	ives (B9) and 4 <b>B</b> ) tes (B13) Odor (C1) eres on L ced Iron (	(except living Roc C4)	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura Geom	(Indicators ( -Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard (	Yes X 2 or more requir ives (B9) (MLRA (B10) Table (C2) on Aerial Imagel on (D2) D3)	No ed) A 1, 2
Depth (in emarks: edox at surf (DROLO) etland Hyd imary Indic Surface V High Wal Saturatio Water Ma Sedimeni Drift Dep Algal Mat Iron Depo	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	ne is requi	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	apply) ined Lea 1, 2, 4A, (B11) vertebrai Sulfide ( Rhizosph of Reduc n Reduc	ives (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( ition Til	(except living Rod C4) lied Soils	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura Geom Shallo X FAC-N	(Indicators ( -Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( Jeutral Test (	Yes X 2 or more required aves (B9) (MLRA (B10) Table (C2) on Aerial Imagel on (D2) D3) (D5)	No ed) A 1, 2
Depth (in emarks: edox at surf (DROLO fetland Hyd imary Indic Surface V High Wal Saturatio Water Ma Sedimeni Sedimeni Drift Depa Algal Mat Iron Depa	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	ne îs requi	red; check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	apply) ined Lea 1, 2, 4A, (B11) vertebrai Sulfide ( Rhizosph of Reduc n Reduc Stresse	ives (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( tion in Til d Plants	(except iving Rod C4) iled Soils (D1) (LR	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura Geom Shallo X FAC-M Raisee	(Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( leutral Test ( d Ant Mound	Yes X 2 or more required aves (B9) (MLRA (B10) Table (C2) on Aerial Imagel on (D2) D3) (D5) s (D6) (LRR A)	No
Depth (in emarks: edox at surf DROLO etland Hyd imary Indic Surface V High Walt Saturatio Water Ma Saturatio Water Ma Sedimeni Conft Dep Algal Mal Iron Depo Surface S Inundatio	Cobbles ches): acce, clear GY frology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) c or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial In Variatian Concave	ne is requi	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc n Reduc Stresse slain in R	ives (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( tion in Til d Plants Remarks)	(except iving Roc C4) lied Soils (D1) (LR)	Hydric Soil	Secondary Water 4A Draina Dry-St Satura Geom Shallo X FAC-N Raisea Frost-	(Indicators ( Stained Lea , and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( jeutral Test ( d Ant Mound Heave Humr	Yes X 2 or more required aves (B9) (MLRA (B10) Table (C2) on Aerial Imagered on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)	No
Depth (in emarks: edox at surf PDROLO etland Hyd imary Indic Surface V High Walt Saturatio Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	Cobbles ches): ace, clear GY rology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial II Vegetated Concave	ne is requi nagery (B) Surface (I	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc Stresse plain in R	ives (B9) and 4B) bes (B13) Ddor (C1) eres on L ced Iron ( tition in Til d Plants ?emarks)	(except Living Rod C4) Iled Soils (D1) (LR	Hydric Soil	Secondary Water 4A Draina Dry-Se Satura Geom Shallo X FAC-N Raisee Frost-	e Indicators ( -Stained Lea , and 4B) ge Patterns eason Water tition Visible orphic Positi w Aquitard ( Jeutral Test ( d Ant Mound Heave Humr	Yes X 2 or more requir ives (B9) (MLRA (B10) Table (C2) on Aerial Imager on (D2) D3) (D5) s (D6) (LRR A) mocks (D7)	No red) A 1, 2
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wat Saturatio Water Ma Sedimeni Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely etd Observ	Cobbles ches): ace, clear GY rology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave rations: tr Present?	ne is requi nagery (B) Surface (B	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc n Reduc Stresse olain in R	ives (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( tition in Til d Plants Remarks)	(except Living Roc C4) Iled Soils (D1) (LR	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura Geom Shallo X FAC-N Raised Frost-	r Indicators ( -Stained Lea and 4B) ge Patterns eason Water ttion Visible orphic Positi w Aquitard ( leutral Test ( d Ant Mound Heave Humr	Yes X 2 or more requir ives (B9) (MLR/ (B10) Table (C2) on Aerial Imager on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)	No
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wat Saturatio Water Mat Sedimeni Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely etd Observ inface Wate	Cobbles ches): ace, clear GY rology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave rations: or Present? Ye Present? Ye	ne is requi	red; check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc n Reduc Stresse blain in R Depth (i Depth (i	ives (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( tition in Til d Plants Remarks) Remarks): nches):	(except Living Roc C4) Ied Soils (D1) (LR	Hydric Soil	Secondan Water 4A Draina Dry-Se Satura Geom Shallo X FAC-N Raisea Frost-	r Indicators ( -Stained Lea and 4B) ge Patterns eason Water attion Visible orphic Positi w Aquitard ( leutral Test ( d Ant Mound Heave Humr	Yes X 2 or more requir ives (B9) (MLR/ (B10) Table (C2) on Aerial Imager on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)	No red) A 1, 2
Depth (in emarks: edox at surf DROLO ettand Hyd imary Indic Surface V High Wal Saturatio Water Ma Saturatio Water Ma Sedimeni Conft Dep Algal Mal Iron Depo Surface S Inundatio Sparsely etd Observ inface Wate ater Table	Cobbles ches): ace, clear GY rology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Oeposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave rations: or Present? Ye present? Ye	ne is requi	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc n Reduc Stresse blain in F Depth (i Depth (i	ves (B9) and 4B) tes (B13) Odor (C1) eres on L ced Iron ( tion in Til d Plants temarks) ermarks) nches): nches):	(except Living Roc C4) Iled Soils (D1) (LR)	Hydric Soil	Secondan Water 4A Draina Dry-Si Satura Geom Shallo X FAC-h Raised Frost-	r Indicators ( -Stained Lea -Stained Lea -Stained Lea -Stained Lea -Stained Lea -Stained Lea -Stained Leave -Stained Leave -St	Yes X 2 or more requir ives (B9) (MLR/ (B10) Table (C2) on Aerial Imager on (D2) D3) (D5) s (D6) (LRR A) nocks (D7) Yes X	No
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Depth (in emarks: edox at surf petland Hyd imary Indic Surface V High Wal Saturatio Water Ma Saturatio Water Ma Sedimeni Sourface S Inundatio Sparsely eld Observ urface Water ater Table aturation Pri- nocludes cap	Cobbles ches): ace, clear GY Irology Indicators: ators (minimum of o Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Deposits (B2) osits (B3) t Or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye esent? Ye	ne is requi ne is requi surface (B Surface (B sssssss	red; check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No X No	apply) ined Lea 1, 2, 4A, (B11) vertebral Sulfide ( Rhizosph of Reduc n Reduc Stresse blain in R Depth (i Depth (i Depth (i I photos	ives (B9) and 4B) bes (B13) Ddor (C1) eres on L ced Iron ( tition in Til d Plants Remarks) nches): nches): nches):	(except Living Roc C4) Ied Soils (D1) (LR) 8	Hydric Soil	Secondan Water 4A Draina Dry-Si Satura Geom Shallo X FAC-h Raised Frost-	y Indicators ( -Stained Lea -Stained Lea -St	Yes X 2 or more requir ives (B9) (MLR/ (B10) Table (C2) on Aerial Imager on (D2) D3) (D5) s (D6) (LRR A) nocks (D7) Yes X	No
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ENG FORM 6116-9, JUL 2018

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	- Western Me proponent a	puntains, Va gency is CE	lleys, and C ECW-CO-I	Coast Region R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date: 8/2/2022	
pplicant/Owner: CDOT - Region 1		1.1		State: CC	Sampling Point: WL23	
vestigator(s): Fillipi, Kizlinski, Head		Section, 1	ownship, Ra	ange: SE4 S33, T3	S, R72W	
andform (hillside, terrace, etc.): floodplain		Local relief (c	oncave. con	vex. none); flat	Slope (%): 1-	
ubregion (LRR): LRR E MIRA 48A Lat: 3	9.743071		Long: -	105 443967	Datum: NAD83	
oil Man Unit Name: Mammoth-Ohman-Rock outero	n complex 30	to 60 percent	slopes	NWI c	lassification: LIPL	
	for this lines	to co percent	Ver V		Constraint in Demoder 1	
re climatic / hydrologic conditions on the site typical	for this time o	ryear?	res		o, explain in Remarks.)	
re vegetation, Soll, or Hydrology	significantly	disturbed / /	are "Normal	Circumstances pres	sent? Yes X No	
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (	If needed, et	xplain any answers i	n Remarks.)	
UMMARY OF FINDINGS – Attach site n	nap showin	ng samplin	g point lo	ocations, transe	cts, important features, et	
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No No No	ls the withi	e Sampled / n a Wetland	Area 1? Yes_	<u>X.</u> No	
Remarks: Floodplain wetland on an inside bend of Clear Creel	K.					
EGETATION – Use scientific names of	plants.					
Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tesl	t worksheet:	
	1.1.1.1.1.1.1			Number of Domin	nant Species That	
	<u> </u>			Are OBL, FACW,	or FAC:4 (A)	
i				Total Number of	Dominant Species	
l				Across All Strata	4(B)	
Sapling/Shrub Stratum (Plot size: 15	J	= lotal Cover	-	Percent of Domin Are OBL, FACW,	ant Species That or FAC:100.0% (A/	
1. Salix exigua		Yes	FACW	-	the sector sector	
2. Saix bepbiana	10	Vec	FACW	Total % Con	ex worksneet: Multiply by:	
		103	TACW	OBL species	0 ×1= 0	
	< <u> </u>			FACW species	130 x 2 = 260	
	50	=Total Cover		FAC species	5 x 3 = 15	
erb Stratum (Plot size: 5 )				FACU species	0 x 4 = 0	
Juncus balticus	80	Yes	FACW	UPL species	0 x 5 = 0	
Agrostis stolonifera	5	No	FAC	Column Totals:	135 (A) 275 (B)	
	_			Prevalence In	dex = B/A = 2.04	
			<u> </u>	1		
				Hydrophytic Veg	petation Indicators:	
		<u> </u>	<del></del> ;	X 1 - Rapid Tes	st for Hydrophytic Vegetation	
/	· · · · · ·			X 3- Prevalence	$20 \text{ lodey is } < 3.0^3$	
·		$\rightarrow$		4 - Morpholog	tical Adaptations (Provide supporti	
0.	1			data in Re	marks or on a separate sheet)	
1.				5 - Wetland f	Non-Vascular Plants <sup>1</sup>	
a second s	85	=Total Cover		Problematic	Hydrophytic Vegetation <sup>1</sup> (Explain)	
Noody Vine Stratum (Plot size:	_)			Indicators of hyd	fric soil and wetland hydrology mus	
l		_		be present, unles	s disturbed or problematic.	
2		-		Hydrophytic		
	-	=Total Cover		Vegetation	New Works	
A Bare Ground in Herb Stratum				Present?	res X No	
800

in chool	Caler (maint)	D/.	Coler (minist)	04	Tune	Loc2	Testus		P	lamarka
nches)		100		-70 E	Type		Textur	e	Drawingston	demarks
0-4	101R 3/3	100	7.5TR 4/6				Sandy		Prominent re	dox concentration
4-14	1018.2/1		7.518 4/6				Sandy		Prominent re	dox concentrations
E		Ξ			Ξ	Ē		=		
ype: C=Cc	ncentration, D=Depl	etion, RM	Reduced Matrix, C	S=Cove	red or Co	pated San	d Grains.	<sup>2</sup> Locati	on: PL=Pore L	ining, M=Matrix.
ydric Soil I	ndicators: (Applica	ble to all	LRRs, unless othe	erwise n	oted.)	2.72	ti	ndicators	for Problemat	ic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gle	yed Mate	rix (S4)			2 cm N	luck (A10) (LRI	RA, E)
Histic Ep	ipedon (A2)		X Sandy Red	dox (S5)				Iron-M	anganese Mass	ses (F12) (LRR D)
Black His	stic (A3)		Stripped N	latrix (S6	5)			Red Pa	arent Material (f	F21)
Hydroger	n Sulfide (A4)		Loamy Mu	cky Mine	eral (F1)	(except M	LRA 1)	Very S	hallow Dark Su	rface (F22)
1 cm Mu	ck (A9) (LRR D, G)		Loamy Gle	eyed Mat	rix (F2)			Other	Explain in Rem	arks)
Depleted	Below Dark Surface	(A11)	Depleted M	Matrix (F:	3)					
Thick Da	rk Surface (A12)		Redox Dar	k Surfac	e (F6)		9	indicators	of hydrophytic v	vegetation and
Sandy M	ucky Mineral (S1)		Depleted I	Dark Suri	face (F7)			wetlan	d hydrology mu	st be present,
2.5 cm N	lucky Peat or Peat (8	52) (LRR (	G)Redox Dep	pression	s (F8)			unless	disturbed or pre-	oblematic.
estrictive L	ayer (if observed):	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
Timo										
Type.			2.1							
Depth (in emarks: /ater filled b	ches):	10	÷.		_		Hydric Soil	Present?	Y	es <u>X</u> No_
Depth (in emarks: /ater filled b	ches): ottom, water table at	t 10	÷			, i	Hydric Soll	Present?	Y	es <u>X</u> No_
Pepth (in emarks: /ater filled b YDROLO	ches): ottom, water table al GY Irology Indicators:	10	<u>-</u>				Hydric Soil	Present?	Y	es <u>X</u> No_
Depth (in emarks: /ater filled b	ches): ottom, water table al GY Irology Indicators: ators (minimum of o	t 10 ne îs regul	red; check all that :	apply)			Hydric Soil	Present? Gecondary	Yi	es X No
Depth (in emarks: /ater filled b //DROLO /etland Hyd fimary Indic Surface (	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1)	t 10 ne îs regui	red: check all that : Water-Sta	apply) ined Lea	ves (B9)	(except	Hydric Soil	Present? Gecondary Water-	Yi Indicators (2 or Stained Leaves	es <u>X</u> No
TOROLO Tetland Hydrimary Indic Surface N	ches): ottom, water table at GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2)	t 10 ne îs regui	red; check all that a multiple of the second	apply) ined Lea 1, 2, 4A,	ves (B9) and 4B)	(except	Hydric Soil	Present? Gecondary Water- 4A,	Yi Indicators (2 or Stained Leaves and 4B)	es X No more required) s (B9) (MLRA 1, 2
Depth (in emarks: ater filled b CDROLO Control (interpretent) Surface ( Control (	ches): ottom, water table at GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3)	t 10 ne îs requi	red; check all that i Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric Soil	Present? Secondary Water- 4A, Draina	Yi Indicators (2 or Stained Leaves and 4B) ge Patterns (B1	es X No more required) s (B9) (MLRA 1, 2
Depth (in emarks: ater filled b retland Hyd surface ( Gaturatio Vater M.	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1)	t 10 ne îs regui	red: check all that i Water-Sta Salt Crust Aquatic In:	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B) es (B13)	(except	Hydric Soil	Present? Secondary Water- 4A, Draina Draina	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 cason Water Ta	es X No more required) s (B9) (MLRA 1, 2 10) ble (C2)
Depth (in emarks: ater filled b retland Hyd imary Indic Surface ( High Wa Saturatio Water M Sedimen	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	t 10 ne îs requi	red: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C	ves (B9) and 4B) es (B13) Odor (C1)	(except	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 eason Water Ta tion Visible on A	es <u>X</u> No <u>more required</u> ) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9
Pepth (in emarks: /ater filled b //DROLO /etland Hyd fimary Indic Surface 1 ( High Wa ( Saturatic Water M: Sedimen Drift Dep	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) to cosits (D4)	t 10 ne îs regui	red: check all that i Water-Sta MLRA Salt Crust Aquatic Ini Hydrogen X Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph	ves (B9) and 4B) es (B13) Odor (C1) eres on I	(except	Hydric Soil	Present?	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 eason Water Ta tion Visible on / orphic Position (	es X No more required) s (B9) (MLRA 1, 2 (0) ble (C2) Aerial Imagery (C9 (D2)
Pepth (in emarks: /ater filled b //DROLO /etland Hyd imary Indic Surface () ( High Wa ( Saturatio Water M: Sedimen Drift Dep Algal Ma	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) crite (B5)	t 10 ne îs regui	red: check all that : Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized F Presence Pesent	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron (	(except iving Roo C4)	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura Geome Satura	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 ason Water Ta tion Visible on / orphic Position ( w Aquitard (D3)	es X No more required) s (B9) (MLRA 1, 2 (D) ble (C2) Aerial Imagery (C9 (D2)
Type. Depth (in emarks: /ater filled b //DROLO /etland Hyd imary Indic Surface () ( High Wa ( Saturatio Water M. Sedimen Drift Dep Algal Ma Iron Dep	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Del Crocke (B6)	t 10 ne îs regui	red: check all that is Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Studied co	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc	ves (B9) and 4B) es (B13) Odor (C1) eres on I eed Iron ( tion in Ti d Plate	(except iving Roo C4) lied Soils ( (C1) (	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura Geomo Shallor X FAC-N Balcon	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 ason Water Ta tion Visible on / orphic Position ( w Aquitard (D3) eutral Test (D5)	es X No more required) s (B9) (MLRA 1, 2 (D) ble (C2) Aerial Imagery (C9 (D2)
TOROLO TOROLO TOROLO Totand Hydri Totand Hydri Totand Hydri Totand Hydri Totand Hydri Surface N C High Wa C Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio	ches): ottom, water table al <b>GY</b> <b>Irology Indicators:</b> <u>ators (minimum of o</u> Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) m Visible on Aerial II	t 10 ne is regul	red; check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or Other (Err	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Shizosph of Reduc n Reduc Stresse Stresse	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants iemarks)	(except iving Roo C4) lied Soils ( (D1) (LRF	Hydric Soil	Present? Gecondary Water- 4A, Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Erost-I	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 ason Water Ta tion Visible on A orphic Position ( w Aquitard (D3) eutral Test (D5) Ant Mounds (D eave Hummon	es X No more required) s (B9) (MLRA 1, 2 (D) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) ths (D7)
Depth (in emarks: ater filled b DROLO Etland Hyd imary Indic Surface V High Wa Saturatic Water Mi Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely	ches): ottom, water table al <b>GY</b> <b>frology Indicators:</b> <u>ators (minimum of o</u> Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial In Vegetated Concave	ne is requi	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse olain in R	ves (B9) and 4B) es (B13) Ddor (C1) eres on 1 eed Iron ( tion in Ti d Plants emarks)	(except Living Roo C4) (D1) (LRR	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura Geomo Shallor X FAC-N Raisec Frost-H	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 eason Water Ta tion Visible on A prphic Position ( w Aquitard (D3) eutral Test (D5 I Ant Mounds (D leave Hummoo	es X No more required) s (B9) (MLRA 1, 2 (D) ble (C2) Aerial Imagery (C9 (D2) ) ) (D2) (LRR A) ks (D7)
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Depth (in emarks: ater filled b retland Hyd fetland Hyd fetland Hyd fetland Hyd Surface N Surface N Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely eld Observ face Water face Water	ches): ottom, water table al GY Trology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial In Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye esent? Ye	ne is requi magery (B Surface (I ss_Xs_X	red: check all that : Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88) No X No No	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc n Reduc Stresse olain in R Depth (ii Depth (ii	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants remarks) remarks): nches): nches):	(except iving Roo C4) Iled Soits ( (D1) (LRF	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Raisec Frost-f	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 ason Water Ta tion Visible on / orphic Position ( w Aquitard (D3) eutral Test (D5) I Ant Mounds (E leave Hummoo	es <u>X</u> No <u>more required</u> ) s (B9) (MLRA 1, 2 (D) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) :ks (D7) es <u>X</u> No
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Depth (in emarks: ater filled b CDROLO (Index Surface ) C High Wa C Saturatio Water M. Sedimen Drift Dep Algal May Iron Dep Surface 3 Inundatic Sparsely eld Observ ater Table ater Table	ches): ottom, water table al GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial In Vegetated Concave rations: ar Present? Ye esent? Ye esent? Ye illary fringe) corded Data (stream	t 10 ne is requi	red: check all that is Water-Sta MLRA Salt Crust Aquatic In- Hydrogen X Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88) No X No X No an No an	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C hizosphio of Reduc n Reduc Strøsse olain in R Depth (ii Depth (ii Depth (ii I photos,	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I iced Iron ( tion in Ti d Plants 'emarks) nches): nches): previous	(except iving Roo C4) lied Soils ( (D1) (LRF 10 3	Hydric Soil	Present? Secondary Water- 4A, Draina Dry-Se Satura Geoma Shallor X FAC-N Raisec Frost-f	Indicators (2 or Stained Leaves and 4B) ge Patterns (B1 ason Water Ta tion Visible on / orphic Position ( w Aquitard (D3) eutral Test (D5) I Ant Mounds (D leave Hummoo	es <u>X</u> No <u>more required</u> ) s (B9) (MLRA 1, 2 10) ble (C2) Aerial Imagery (C9 (D2) ) D6) (LRR A) :ks (D7) es <u>X</u> No

ENG FORM 6116-9, JUL 2018

WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	- Western M proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and C CW-CO-I	Coast Region R R
oject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County Sampling Date: 8/2/2022
pplicant/Owner: CDOT - Region 1				State: CO Sampling Point: UP021
vestigator(s): Fillipi, Kizlinski, Head		Section 7	ownship, Ra	ange: SE4 S33, T3S, R72W
andform (hillside, terrace, etc.): floodplain		Local relief (c	oncave, con	vex, none): flat Slope (%): 1-3
ubregion (LRR): LRR E, MLRA 48A Lat: 39.7	4314	P. 0 (200 M	Long: 1	05.44514 Datum: NAD83
oil Map Unit Name: Mammoth-Ohman-Rock outcro	p complex, 30	to 60 percent	slopes	NWI classification: UPL
re climatic / bydrologic conditions on the site typica	for this time of	fvear?	Yes X	No (If no explain in Remarks)
re Venetation Soil or Hydrology	significantly	disturbed? A	te Normal	Circumstances' present? Ves X No
ro Vegetation Coll or Hydrology	- noturally pro	blamatic? /	foonded or	
		Diemance (	in needed, e	xpiain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site r	nap showli	ng samplin	g point lo	ocations, transects, important features, etc
lydrophytic Vegetation Present? Yes ? lydric Soil Present? Yes		ls the withi	a Sampled A n a Wetland	Area 1? YesNo <u>X</u>
venand Hydrology Present? Fes			_	
emarks: ortion of floodplain further from river is UPL, lacks	hydro, soils ar	e close, as ex	pected	
EGETATION – Use scientific names of	plants.	Deminant	Indiastas	
ree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
·	_			Number of Dominant Species That
				Are OBL, FACW, or FAC:(A)
·				Total Number of Dominant Species
		=Total Cover		Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size: 15	)			Are OBL, FACW, or FAC: 100.0% (A/
Betula occidentalis	70	Yes	FACW	
. Salix exigua	5	No	FACW	Prevalence Index worksheet:
i.				Total % Cover of: Multiply by:
•				OBL species 0 x1 = 0
	75	-Total Course	<u> </u>	FAC w species 75 x 2 = 150
erh Stratum (Plot size: 5		- Total Cover		
Agrostis stolonitera	70	Yes	FAC	UPL species $0 \times 5 = 0$
Equisetum arvense	5	No	FAC	Column Totals: 150 (A) 375 (B)
2				Prevalence Index = B/A = 2.50
				Hydrophytic Vegetation Indicators:
<u>.</u>			·	1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
·		<u> </u>		3 - Prevalence Index is ≤3.0'
				4 - Morphological Adaptations (Provide supportin data in Remarks or on a separate sheet)
3				5 - Wetland Non-Vascular Plants <sup>1</sup>
1 Ma		=Total Cover		Problematic Hydrophytic Vegetation (Evolution)
Voody Vine Stratum (Plot size:	_)	19501 20101		Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
				•
		Tatal Caura		Hydrophytic

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3	U	11	-

mp	ind	Poin	8.0	ÜF	2021
				~	~~~

	04 04	law (minist)	04	Tune	Loc	Tax	-		Damarka	
	70 00	NOC (INDISE)	70	Type	LOC	Tex	ture	-	Remains	
0-3 10YR 2/2	100			-	$\leftarrow$	Sar	ndy		Loamy sand	
3-14 10YR 4/6	100			_	_	Sa	ndy	_		
			_	_	-	_		_		
	_		_	_	-	2	-			
				_	1	1				
						-				
				-	=					
			-		<u>.</u>					
ype: C=Concentration, D=Depleti	on, RM=Red	uced Matrix, C	CS=Cove	red or C	oated Sa	ind Grains.	<sup>2</sup> Locat	ion: PL=Por	e Lining, M=N	Matrix.
ydric Soil Indicators: (Applicable	e to all LRRs	s, unless othe	erwise no	oted.)			Indicators	for Problem	natic Hydric	Soils <sup>a</sup> :
Histosol (A1)	- L-	Sandy Gle	eyed Matr	ix (S4)			2 cm	Muck (A10) (	LRR A, E)	
Histic Epipedon (A2)	0.4	Sandy Re	dox (S5)				Iron-M	langanese M	lasses (F12) (	LRR D)
Black Histic (A3)		Stripped M	Aatrix (S6	9			Red P	arent Materia	al (F21)	
Hydrogen Sulfide (A4)	-	Loamy Mu	icky Mine	eral (F1)	(except	MLRA 1)	Very S	Shallow Dark	Surface (F22	9
1 cm Muck (A9) (LRR D, G)	-	Loamy Gl	eyed Mat	rix (F2)			Other	(Explain in R	(emarks)	
Depleted Below Dark Surface (/	- (11)	Depleted	Matrix (F3	5)			9 ca atasta		a and a second	
Thick Dark Surface (A12)	-	-Redox Da	rk Surfac	e (F6)			Indicators	of nyaropny	tic vegetation	and
2.5 cm Mucky Mineral (S1)	1000	Depleted I	Dark Sun	ace (F/	)		wettar	a nyarology diaturbad a	must de pres	ent,
2.5 cm Mucky Pear of Pear (32)	(LKK 0) -	Redox De	pressions	s (ro)			uniess	a distui bed oi	problematic.	
estrictive I aver fit observedi										
Tuno: Cobblos / Grou	iól.				111					
Type: Cobbles / Grav Depth (inches): 14 lemarks: lark surface but bright beneath, dry	vél					Hydric So	oil Present?	,	Yes	Na
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry	vel					Hydric So	oil Present'	,	Yes	No
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators:	4					Hydric S	oil Present	,	Yes	No
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one	is required; (	check all that	apply)			Hydric So	oil Present? Secondan	/ Indicators ()	Yes 2 or more reg	No
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	is required;	check all that Water-Sta	apply)	ves (B9)	(except	Hydric So	oil Present? Secondan Water	/ Indicators () -Stained Lea	Yes 2 or more req vves (B9) (ML	No uired) RA 1, 2
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	is required; -	check all that Water-Sta MLRA	apply) ined Lear 1, 2, 4A,	ves (B9) and 4B	(except	Hydric Sr	oil Present? Secondan Water 4A	/ Indicators () -Stained Lea , and 4B)	Yes 2 or more req vves (B9) (ML	No uired) RA 1, 2
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	vel 4 is required; (	check all that Water-Sta MLRA Salt Crust	apply) ined Lear 1, 2, 4A, (B11)	ves (B9) and 4B	(except	Hydric Si	Secondan Water 4A	/ Indicators () -Stained Lea , and 4B) age Patterns	Yes 2 or more req (ves (B9) (ML (B10)	No
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	is required; (	check all that Water-Sta MLRA Salt Crust Aquatic In	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B es (B13)	(except	Hydric Si	Secondan Water 4A Draina	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water	Yes 2 or more req ives (B9) (ML (B10) Table (C2)	No
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	is required; 1	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) ined Lear 1, 2, 4A, (B11) vertebråt Sutfide C	ves (B9) and 4B es (B13) Ddor (C1	(except	Hydric Si	Secondan Water 4A Draina Dry-S Satura	/ Indicators () -Stained Lea , and 4B) oge Patterns eason Water ation Visible o	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag	No uired) RA 1, 2 gery (C9
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	is required; (	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	apply) ined Leat 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi	ves (B9) and 4B es (B13) Ddor (C1 eres on	(except ) ) Living Ro	Hydric Si	Secondan Water 4A Draina Dry-Si Satura Geom	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2)	No uired) RA 1, 2 gery (C9
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	is required; (	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc	ves (B9) and 4B es (B13) Odor (C1 eres on ied from	(except ) ) Living Ro (C4)	Hydric Si	Secondan Water 4A Draina Dry-Si Satura Shallo	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard ()	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imai on (D2) D3)	No uired) RA 1, 2 gery (C9
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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)	is required; (	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized P Presence Recent Inc	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospha of Reduc on Reduct	ves (B9) and 4B es (B13) Odor (C1 eres on red Iron tion in Ti	(except ) ) Living Ra (C4) illed Soilt	Hydric So boots (C3)	Secondary Water 4A Draine Dry-St Satura Shallo X FAC-1	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard () Veutral Test (	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5)	No uired) RA 1, 2 gery (C9
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOGY YUROLOG	is required; -	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Inc Stunted o Other (Ex)	apply) ined Lear 1, 2, 4A, (B11) vertebråt Sulfide C Rhizospho of Reduc on Reduct r Stresser olarin in B	ves (B9) and 4B es (B13) Odor (C1 eres on eed Iron tion in Ti d Plants	(except ) Living Ro (C4) (Illed Soil: (D1) (LF	Hydric So bots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Si Satura Shallo X FAC-t Raise	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible of orphic Positi- w Aquitard () Neutral Test ( d Ant Mound	Yes 2 or more req ives (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR /	No uired) RA 1, 2 gery (C9 A)
Type: Cobbles / Grav Depth (inches): 14 temarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Venetated Concave Si	is required;	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent In Stunted of Other (Ex)	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphi of Reduc on Reduct r Stressea olain in R	ves (B9) and 4B es (B13) Ddor (C1 eres on ied Iron tion in Ti d Plants emarks)	(except ) Living Rc (C4) (Illed Soilt (D1) (LF	Hydric So bots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Sr Satura Geom Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible o orphic Positi w Aquitard () Neutral Test ( d Ant Mound Heave Humn	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9 A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Park surface but bright beneath, dry PTROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave St	is required; is required; gery (B7) urface (B8)	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Inc Stunted o Other (Exp	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc on Reduct r Stresser olain in R	ves (B9) and 4B es (B13) Ddor (C1 eres on red Iron tion in Ti d Plants emarks)	(except ) Living Rc (C4) Illed Soilt (D1) (LF	Hydric So bots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Sa Satura Geom Shallo X FAC-1 Raisee Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard (i Veutral Test ( d Ant Mound Heave Humn	Yes 2 or more req ives (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9 A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vatland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Tield Observations:	is required; t	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Inc Stunted o Other (Exp	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc on Reduct r Stresser olain in R	ves (B9) and 4B es (B13) Ddor (C1 eres on red Iron tion in Ti d Plants ermarks)	(except ) Living Rd (C4) (D1) (LF	Hydric Se bots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Sa Satura Geom Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard () Neutral Test ( d Ant Mound Heave Humn	Yes 2 or more reg ives (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (CS
Type: Cobbles / Grav Depth (inches): 14 Remarks: Park surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Veter Table Present? Yes	is required; t	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized P Presence Recent Inc Stunted o Other (Ex)	apply) ined Leat 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc on Reduct r Stresser olain in R	ves (B9) and 4B es (B13) Ddor (C1 eres on red Iron tion in Ti d Plants emarks) emarks)	(except ) Living Ro (C4) Illed Soilt (D1) (LF	Hydric Se pots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Sa Satura Geom Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard () Veutral Test ( d Ant Mound Heave Humn	Yes 2 or more reg ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR / nocks (D7)	No uired) RA 1, 2 gery (C9 A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Teld Observations: Surface Water Present? Yes Vater Table Present? Yes	is required; i gery (B7)	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized P Presence Recent Irc Stunted of Other (Ex)	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc on Reduct r Stressed olain in R Depth (in Depth (in	ves (B9) and 4B es (B13) Ddor (C1 eres on ied Iron tion in Ti d Plants emarks) emarks): nches): nches):	(except ) Living Rd (C4) (D1) (LF	Hydric Se bots (C3) s (C6) RR A)	Secondan Water 4A Draina Dry-Si Satura Geom Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard () Neutral Test ( d Ant Mound Heave Humn	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR / nocks (D7) Yes	No uired) RA 1, 2 gery (C9 A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Teld Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes	is required; i is required; i igery (B7)	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted of Other (Ex)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizospho of Reduc on Reduc on Reduc on Reduc on Reduc stressed olain in R	ves (B9) and 4B es (B13) Ddor (C1 eres on red Iron tion in Ti d Plants emarks) emarks) nches): nches):	(except ) ) Living Rc (C4) illed Soits (D1) (LF	Hydric So bots (C3) s (C6) RR A) Wetlan	Secondan Water 4A Draina Dry-Si Satura Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard (I Neutral Test ( d Ant Mound Heave Humn y Present?	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imag on (D2) D3) (D5) s (D6) (LRR / nocks (D7) Yes	No uired) RA 1, 2 gery (CS A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry PTDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Vater Table Present? Yes Vater Table Present? Yes Saturation Present? Yes includes capillary fringe)	is required; is required; gery (B7) urface (B8)	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Ex) No X No X No X No X	apply) ined Lear 1, 2, 4A, (B11) vertebrati Sulfide C Rhizosphi of Reduct r Stressea olain in R Depth (in Depth (in Depth (in Depth (in Depth (in Depth (in	ves (B9) and 4B es (B13) Ddor (C1 eres on red Iron ( tion in Ti d Plants emarks) nches): nches): nches): nches):	(except ) Living Rc (C4) (D1) (LF	Hydric So bots (C3) s (C6) RR A) Wetlan	Secondan Water 4A Draina Dry-S: Satura Geom Shallo X FAC-1 Raise Frost-	/ Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible o orphic Positi w Aquitard () seutral Test ( d Ant Mound Heave Humn	Yes 2 or more req ves (B9) (ML (B10) Table (C2) on Aerial Imaj on (D2) D3) (D5) s (D6) (LRR / nocks (D7) Yes	No uired) RA 1, 2 gery (CS A)
Type: Cobbles / Grav Depth (inches): 14 Remarks: Dark surface but bright beneath, dry YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one 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 Ima Sparsely Vegetated Concave Si Teld Observations; iurface Water Present? Yes iaturation Present? Yes iaturation Present? Yes iaturation Present? Yes	is required; is required; gery (B7) urface (B8)	check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted o Other (Ex) No X No X No X ing well, aeris	apply) ined Lear 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosphe of Reduc on	ves (B9) and 4B es (B13) Ddor (C1 eres on ted Iron t tion in Ti d Plants emarks) nches): nches): nches): nches):	(except ) Living Re (C4) Illed Soilt (D1) (LF	Hydric So bots (C3) s (C6) RR A) Wetlan	Secondan Water 4A Draina Dry-Sr Satura Geom Shallo X FAC-1 Raise Frost-	y Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible ( orphic Positi w Aquitard () Veutral Test ( d Ant Mound Heave Humn y Present?	Yes 2 or more req ives (B9) (ML (B10) Table (C2) on Aerial Imaj on (D2) D3) (D5) s (D6) (LRR / nocks (D7) Yes	No uired) RA 1, 2 gery (CS A)

U.S. Army Co WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	orps of Eng - Western Me proponent a	<b>jineers</b> ountains, Va gency is CE	lleys, and ( ECW-CO-I	Coast Region R	OMB Control #: 0710-0 Requirement Contro (Authority: AR 335-1	024, Exp: 11/30/20 I Symbol EXEMPT: 5, paragraph 5-2a)	024 N V
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling D	)ate: 8/2/20	)22
Applicant/Owner: CDOT - Region 1				State: CO	O Sampling F	oint: WL	.24
nvestigator(s): Fillipi, Kizlinski, Head		Section,	Township, Ra	ange: SE4 S33, T3	3S, R72W		
andform (hillside, terrace, etc.): floodplain		Local relief (c	oncave, con	vex, none): flat		Slope (%):	1-2
ubregion (LRR): LRR E, MLRA 48A Lat: 39.7	4275		Long: 1	105.44379	Da	tum: NAD8	3
oil Map Unit Name: Mammoth-Ohman-Rock outcro	p complex, 30	to 60 percent	slopes	NWI	classification: UPL	-	
re climatic / hydrologic conditions on the site typica	for this time o	f year?	Yes X	No (lfn	o, explain in Remai	ks.)	
ve Vegetation Soil or Hydrology	significantly	disturbed? /	Are "Normal	Circumstances" pre	sent? Yes X	No	
Are Vegetation Soil or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers	in Remarks.)		
SUMMARY OF FINDINGS - Attach site r	- nap showir	ng samplin	ig point lo	ocations, transe	ects, important	features,	etc
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No	ls th with	e Sampled A in a Wetland	Area 1? Yes_	<u>X</u> No		
Remarks: Floodplain wetland on an inside bend of Clear Creel	ĸ						1.
/EGETATION – Use scientific names of	plants.						
	Absolute	Dominant	Indicator	name dan	and dealerships		
(Plot size: 30 )	% Cover	Species?	Status	Dominance les	t worksheet:		
2				Are OBL FACW	nant Species That	4	(A)
3.				Total Number of	Dominant Species		. W. W.
4.				Across All Strata	li.	4	(B)
Sapling/Shrub Stratum (Plot size: 15		=Total Cover		Percent of Domi Are OBL, FACW	nant Species That /, or FAC:	100.0%	(A/E
1. Salix exigua	40	Yes	FACW		A read brook	_	-
2. Salix bebbiana		Tes	FACW	Total % Co	ex worksheet:	ultioly by	
4		<u> </u>		OBL species	10 x1=	10	
5.	< <u> </u>			FACW species	50 x 2 =	100	
	50	=Total Cover		FAC species	10 x 3 =	30	
Herb Stratum (Plot size: 5)				FACU species	0 x 4 =	0	
Agrostis stolonifera	10	Yes	FAC	UPL species	0 x 5 =	0	. e.
2. Scirpus pallidus 3.	10	Yes	OBL	Column Totals: Prevalence In	70 (A) ndex = B/A =	2.00	(B)
4 5				Hydrophytic Ve	getation Indicator	s:	_
3.	- E - E			1 - Rapid Te	st for Hydrophytic \	/egetation	
7,				X 2 - Dominan	ce Test is >50%		
3		$\rightarrow$		X 3 - Prevalen	ce Index is ≤3.01		
				4 - Morpholo	igical Adaptations (	Provide suppo	ortin
14				5 - Wetland	Non-Vaccular Dias	ts <sup>1</sup>	
····	20	=Total Cover		Problematic	Hydrophytic Veget	ation <sup>1</sup> (Explain	n)
Woody Vine Stratum (Plot size: 5	_)			Indicators of hy be present, unles	dric soil and wetlan ss disturbed or prot	d hydrology m plematic.	nust
2.		=Total Cover	_	Hydrophytic Vegetation Present?	Yes X No		
THE PARTY A REPORT OF A				<ul> <li>Example 10 f</li> </ul>			

Depth	Matrix		Redo	x Featur	es					
inches)	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Texture		Remarks	
0-2	10YR 3/2	100	11 - N - P		-		Loamy/Cla	yey	the second second second	
2-6	10YR 3/2	95	7.5YR 5/6	5	c	M	Sandy	1.1	Prominent redox conce	entrations
6-16	10YR 4/4	80	7.5YR 5/6	20	C	M	Sandv		Distinct redox concer	ntrations
0.10	10111 111		r.orn.ord				Gundy			ill allorid
		$\equiv$				$\leq$		-22		
		_			_	_			-	
					-	<u> </u>	-	-0	-	
ype: C=Co	ncentration, D=Depl	etion, RM	Reduced Matrix, C	CS=Cove	red or Co	oated Sa	nd Grains.	<sup>2</sup> Locat	ion: PL=Pore Lining, M=I	Matrix.
ydric Soil Ir	ndicators: (Applica	ble to all	LRRs, unless othe	erwise n	oted.)		In	dicators	s for Problematic Hydric	Soils":
Histosol (	A1)		Sandy Gle	yed Mat	rix (S4)		-	_2 cm	Muck (A10) (LRR A, E)	1212
Histic Epi	pedon (A2)		X Sandy Red	dox (S5)			-	Iron-M	langanese Masses (F12)	(LRR D)
Black His	tic (A3)		Stripped N	latrix (Se	5)			_Red F	arent Material (F21)	
Hydrogen	Sulfide (A4)		Loamy Mu	icky Mine	eral (F1)	(except	MLRA 1)	-Very S	shallow Dark Surface (F2:	2)
1 cm Muc	K (A9) (LRR D, G)		Loamy Gle	eyed Mat	rix (F2)		-	Other	(Explain in Remarks)	
Depleted	Below Dark Surface	(A11)	Depleted M	viatrix (F)	3)		9.			
_ Thick Dar	k Surface (A12)		Redox Dar	rk Surfac	e (F6)		"In	dicators	of hydrophytic vegetation	n and
Sandy ML	ICKY Mineral (S1)		Depleted I	Jark Sun	ace (F7)			wetlar	id hydrology must be pres	sent,
2.5 cm M	ucky Peat or Peat (a	52) (LRR	G)Redox Dej	pression	S (F8)			unless	s disturbed or problematic	9.
estrictive L	ayer (if observed):									
Type:										
11 2 1 1 1 1 1 T	0.512						Section and			10-2-
Depth (ind Remarks: Aultiple depos	ches):		<u>-</u>				Hydric Soil F	Present	Yes <u>X</u>	No
Depth (ind emarks: lultiple depos	sitional layers		-				Hydric Soil F	Present	Yes <u>X</u>	No
Depth (ind Remarks: Aultiple depose YDROLOO Vetland Hyd	shes): sitional layers GY rology Indicators:		<u></u>				Hydric Soil F	Present	? Yes <u>X</u>	No
Depth (ind emarks: lultiple depose YDROLOO Vetland Hyd rimary Indica	shes): sitional layers GY rology Indicators: ators (minimum of o	ne is requ	red; check all that :	apply)			Hydric Soil F	Present	Yes X	No
Depth (ind emarks: lultiple depose YDROLOO Vetland Hyd rimary Indica Surface V	sitional layers GY rology Indicators: ators (minimum of o Vater (A1)	ne is requ	red; check all that a Water-Sta	apply) ined Lea	ves (B9)	(except	Hydric Soil F	Present <sup>*</sup> econdar Water	Yes X	No
Depth (ind emarks: Nultiple depose YDROLOG Vetland Hyd rimary Indica Surface V High Wat	sitional layers  GY  rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	në îs requ	red: check all that a Water-Sta MLRA	apply) ined Lea 1, 2, 4A,	ves (B9) and 4B)	(except	Hydric Soil F	Present econdar _ Water 4A	Yes X /Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B)	No uired) .RA 1, 2
Depth (ind emarks: lultiple depose YDROLOO /etland Hyd rimary Indice Surface V High Wat X Saturation	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3)	ne îs requ	red: check all that a Water-Sta MLRA Salt Crust	apply) ined Lea 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric Soil F	econdar Water 4A Draina	Yes X /Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10)	No uired) .RA 1, 2
Depth (ind Remarks: Aultiple deport YDROLOO Vetland Hyd Primary Indics Surface V High Wate X Saturation Water Ma	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1)	ne îs requ	red; check all that is Water-Sta Salt Crust Salt Crust Aquatic In:	apply) ined Lea 1, 2, 4A, (B11) vertebrat	ves (B9) and 4B) es (B13)	(except	Hydric Soil F	econdar Water 4A Draina Dry-S	Yes X /Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2)	No guired) .RA 1, 2
Depth (ind lemarks: Aultiple depose YDROLOO Yetland Hyd Irimary Indics Surface V High Wate X Saturation Water Ma Sediment	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2)	ne is requ	red: check all that : Water-Sta Salt Crust Aquatic In: Hydrogen	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide (	ves (B9) and 4B) es (B13) Ddor (C1)	(except	Hydric Soil F	econdan Water 4A Draina Dry-S Satura	Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima	No auired) .RA 1, 2 gery (C9
Depth (ind Remarks: Aultiple depose YDROLOO Yetland Hyd Primary Indics Surface V High Wate X Saturation Water Ma Sediment Drift Depo	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2) osits (B3)	ne is requ	red: check all that is Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph	ves (B9) and 4B) es (B13) Ddor (C1) eres on I	(except ) ) Living Rc	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom	PYes_X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2)	No auired) .RA 1, 2 gery (C9
Depth (ind ermarks: Aultiple depose YDROLOO Vetland Hyd Irimary Indice Surface V High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4)	ne is requ	red: check all that is Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc	ves (B9) and <b>4B</b> ) es (B13) Ddor (C1) eres on I sed Iron (	(except ) ) Living Rc (C4)	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom	P Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3)	No auired) .RA 1, 2 gery (C9
Depth (ind Remarks: Aultiple depose YDROLOO Yetland Hyd Vetland Hyd Vetland Hyd Vatar Ma Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) sits (B5)	ne îs requ	red: check all that is Water-Sta MLRA Salt Crust Aquatic lov Hydrogen Oxidized F Presence Recent Iro	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc in Reduc	ves (B9) and 4B) es (B13) Ddor (C1) eres on I eed Iron ( tion in Ti	(except ) Living Rc (C4) Illed Soils	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallo (FAC-t	P Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5)	No auired) .RA 1, 2 gery (C9
Depth (ind ermarks: Aultiple depose YDROLOO Vetland Hyd Vetland Hyd Vatland Hyd Kater Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) isits (B5) Soil Cracks (B6)	ne is requ	red: check all that is Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence Recent Iro Stunted or	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallo FAC-t Raise	P Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6) (LRR	No <u>wired)</u> .RA 1, 2 gery (C9 A)
Depth (ind Remarks: Aultiple depose YDROLOO Yetland Hyd Yimary Indica Surface V High Walt X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	ches): sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) h (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) usits (B5) Soil Cracks (B6) n Visible on Aerial In	ne is requ	red: check all that i Water-Sta MLRA Salt Crust Aquatic Ini Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse plain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants 'emarks)	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallo FAC-f Raise Frost-	P Yes X A Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7)	No <u>auired)</u> .RA 1, 2 gery (C9 A)
Depth (ind emarks: hultiple depose yDROLOO /etland Hyd rimary Indics Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	sitional layers sitional layers ators (minimum of o Vater (A1) er Table (A2) n (A3) rrks (B1) Deposits (B2) osits (B3) or Crust (B4) sits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave	ne is requ nagery (B Surface (	red; check all that : Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse plain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants ermarks)	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallc FAC-f Raise Frost-	P Yes X (Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7)	No RA 1, 2 gery (C9 A)
Depth (ind lemarks: Aultiple depose YDROLOO Yetland Hyd trimary Indica Surface V High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depc Surface S Inundation Sparsely ield Observ	sitional layers sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) or Table (A2) or A3) urks (B1) Deposits (B2) or Crust (B4) or Crust (B4) or Crust (B4) solits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave ations:	në is requ nagery (B Surface (	red: check all that i Water-Sta MLRA Salt Crust Aquatic Ion Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants remarks)	(except ) Living Rc (C4) Iled Soits (D1) (LR	Hydric Soil F	econdan Water Draina Dry-S Satura Geom Shallo FAC-f Raise Frost-	P Yes X (Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7)	No auired) .RA 1, 2 gery (C9) A)
Depth (ind lemarks: Aultiple depose YDROLOO Vetland Hyd trimary Indica Surface V High Wate X Saturation Water Ma Sediment Drift Depose Algal Mate Iron Depose Surface S Inundation Sparsely ield Observ turface Wate	sitional layers sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) or (A3) urks (B1) Deposits (B2) or (Crust (B4) or (B4) or (Crust (B4)) solits (B5) Soil Cracks (B6) n Visible on Aerial In Vegetated Concave ations: r Present? Ye	në îs requ nagery (B Surface ( s	red; check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I ied Iron ( tion in Ti d Plants ermarks) nches):	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallo FAC-t Raise Frost-	Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7)	No auired) .RA 1, 2 .gery (C9) A)
Depth (ind Remarks: Aultiple depose YDROLOO Vetland Hyd 'rimary Indica Surface V High Wat X Saturation Water Ma Sediment Drift Depose Algal Mat Iron Depose Surface S Inundation Sparsely ield Observ urface Wate /ater Table F	sitional layers sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) or Table (A2) or A3) urks (B1) Deposits (B2) or Crust (B4) or Crust (B4) o	në îs requ nagery (B Surface ( s	red; check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olain in R Depth (i Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I ied Iron ( tion in Ti d Plants 'emarks) nches): _ nches): _	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallo FAC-t Raise Frost-	Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7)	No uuired) .RA 1, 2 .gery (C9)
Depth (ind lemarks: Aultiple depose YDROLOO Vetland Hyd trimary Indica Surface V High Walt X Saturation Water Ma Sediment Drift Depose Surface S Inundation Sparsely ield Observ water Table F saturation Pre-	sitional layers sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) or (A3) urks (B1) Deposits (B2) or Crust (B4) or Crust (B4) or Crust (B4) or Crust (B4) solit Cracks (B6) in Visible on Aerial In Vegetated Concave ations: r Present? Ye esent? Ye	ne is requ nagery (B Surface ( s s	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp 88)	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc of Reduc stresse olain in R Depth (i Depth (i Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I eres on I ied Iron ( tion in Ti d Plants 'emarks) 'emarks) nches): _ nches):	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdar Water 4A Draina Dry-S Satura Shalic FAC-t Raise Frost-	Yes X Yes X	No auired) .RA 1, 2 .gery (C9) A)
Depth (ind lemarks: Aultiple depose YDROLOO Vetland Hyd trimary Indica Surface V High Walt X Saturation Water Ma Sediment Drift Depose Surface S Inundation Sparsely ield Observ water Table F aturation Pre-	sitional layers sitional layers GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) or (A3) urks (B1) Deposits (B2) or Crust (B4) or Crust (B4) or Crust (B4) or Crust (B4) or Crust (B6) or Crust (B6) n Visible on Aerial In Vegetated Concave ations: r Present? Ye esent? Ye llary fringe)	ne is requ nagery (B Surface ( ss	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Stunted or Other (Exp 88) No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse olain in R Depth (i Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I eres on I ition in Ti d Plants 'emarks) nches): nches):	(except ) Living Rc (C4) Iled Soils (D1) (LR	Hydric Soil F	econdar Water 4A Draina Dry-S Satura Shalic FAC-t Raise Frost-	Yes X Yes X	No auired) .RA 1, 2 gery (C9 A)
Depth (ind Remarks: Aultiple depose YDROLOO Vetland Hyd Ymary Indica Surface V High Walt X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Teld Observ Surface Water Vater Table F Saturation Pre ncludes capi Describe Rec	sitional layers <b>GY</b> <b>rology Indicators:</b> <u>ators (minimum of o</u> Vater (A1) er Table (A2) in (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) usits (B5) Soil Cracks (B6) in Visible on Aerial In Vegetated Concave ations: r Present? Ye essent? Ye ess	ne is requ nagery (B Surface ( s	red: check all that is Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88) No X No X No X No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse blain in R Depth (i Depth (i Depth (i I photos,	ves (B9) and 4B) es (B13) Ddor (C1) eres on I eed Iron ( tion in Ti d Plants emarks) nches): 	(except ) Living Rc (C4) Iled Soils (D1) (LR 11 s inspect	Hydric Soil F	econdan Water 4A Draina Dry-S Satura Geom Shallc FAC-I Raise Frost-	Yes X (Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7) y Present? Yes X	No auired) .RA 1, 2 .gery (C9) A)
Depth (ind Remarks: Aultiple depose YDROLOG Yetland Hyd Yimary Indica Surface V High Wate X Saturation Water Ma Sediment Drift Depose Algal Mat Iron Depose Surface S Inundation Sparsely Tield Observ Jurface Water Vater Table F jaturation Pre- ncludes capi Jescribe Reco	sitional layers sitional layers ators (minimum of o Vater (A1) er Table (A2) or (A3) urks (B1) Deposits (B2) or Crust (B4) urks (B5) soil Cracks (B6) n Visible on Aerial In Vegetated Concave ations: r Present? Ye essent? Ye essent? Ye llary fringe) orded Data (stream	në is requ nagery (B Surface ( s s gauge, m	red: check all that : Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88) No X No X No X No X No X No X	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Strøsse olain in R Depth (i Depth (i Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I iced Iron ( tion in Ti d Plants ermarks) icemarks): nches): nches): nches): previous	(except ) Living Rc (C4) Iled Soils (D1) (LR <u>11</u> s inspect	Hydric Soil F	econdan Water 4A Draine Dry-S Satura Shallo FAC-t Raise Frost- ydrolog	Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7) y Present? Yes X	No RA 1, 2 gery (C9) A)
Depth (ind Remarks: Multiple depose YDROLOO Vetland Hyd Primary Indica Surface V High Wate X Saturation Water Ma Sediment Drift Depose Algal Mater Iron Depose Surface S Inundation Sparsely Field Observ Surface Water Vater Table F Saturation Pre includes capi Describe Reco	sitional layers sitional layers ators (minimum of o Vater (A1) er Table (A2) trable (A2) trable (A2) or Crust (B4) or Crust (B4) or Crust (B4) or Crust (B4) or Crust (B4) sold Cracks (B6) in Visible on Aerial In Vegetated Concave ations: r Present? Ye essent? Ye llary fringe) orded Data (stream	ne is requ nagery (B Surface ( s s gauge, m	red: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 88) No X No x	apply) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc Stresse olain in R Depth (i Depth (i Depth (i I photos,	ves (B9) and 4B) es (B13) Odor (C1) eres on I eres on I eres on I ised Iron ( tion in Ti d Plants 'emarks) nches): nches): previous	(except ) Living Rc (C4) Iled Soils (D1) (LR 11 s inspect	Hydric Soil F	econdar Water 4A Draina Dry-S Satura Shalic FAC-t Raise Frost-	Yes X / Indicators (2 or more rec -Stained Leaves (B9) (ML , and 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Ima orphic Position (D2) w Aquitard (D3) deutral Test (D5) d Ant Mounds (D6) (LRR Heave Hummocks (D7) y Present? Yes X	No auired) .RA 1, 2 .gery (C9 A)

	proponenta	gency is Co	000-00-1	×	automan .	
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County	Sampling Date:	8/2/2022
oplicant/Owner: CDOT - Region 1		10.0		State: CO	Sampling Point	WL26
vestigator(s): Fillipi, Kizlinski, Head		Section, 1	ownship, Ra	ange: SW4 S34, T3S,	R72W	
ndform (hillside, terrace, etc.);		Local relief (c	oncave, conv	vex, none):	Sic	ope (%):
ibregion (LRR): LRR E, MLRA 48A Lat: 39.	74642		Long: 1	05.43599	Datum	NAD83
il Map Unit Name: Resort-Cathedral-Rubble land	complex, 30 to	60 percent sl	opes	NWI clas	sification:	
e climatic / hydrologic conditions on the site typica	al for this time o	f year?	Yes X	No (If no, e	xplain in Remarks.)	
e Vegetation, Soil, or Hydrology	significantly	disturbed? A	re "Normal (	Circumstances" presen	t? Yes X I	10
e VegetationSoil_X or Hydrology	naturally pro	blematic? (	lf needed, ex	kplain any answers in R	emarks.)	
UMMARY OF FINDINGS – Attach site	map showir	ng samplin	g point lo	cations, transect	s, important fea	atures, et
lydrophytic Vegetation Present? Yes X	No	is the	Sampled A	Area		
lydric Soil Present? Yes X	No	withi	n a Wetland	I? Yes X	No	
Vetland Hydrology Present? Yes X	No	11.11				-
emarks:	a contractor	And the second	24 x 7 x 7			
mall wetland along bank of Clear Creek near rafti	ng take out, foc	t traffic, minor	disturbance	19		
EGETATION – Use scientific names of	f plants.	-				
rea Stratum (Plateize: 20)	Absolute 86 Cover	Dominant Species?	Indicator	Dominongo Tost w	orkshoot	
	10 00001	opecies	Glatas	Number of Deminer	t Secoles That	
-				Are OBL, FACW, or	FAC:	4 (A
				Total Number of Do	minant Species	
				Across All Strata:		4(B
		=Total Cover		Percent of Dominan	t Species That	
Saling/Shrub Stratum (Plot size: 15	_)	Ver	FACIAL	Are OBL, FACW, or	FAC:1	00.0%_(A
		105	- FAGAA	Prevalence Index v	vorksheet:	_
			-	Total % Cover	of: Multip	ly by:
				OBL species	10 x 1 =	10
				FACW species	35 x 2 =	70
Auto and a final	20	=Total Cover		FAC species	20 x 3 =	60
erb Stratum (Plot size: 5)		4.5		FACU species	0 x4=	0
Agrostis stoionifera	10	Ves	OBL	Column Totals	0 x 5 =	140 / 6
Juncus balticus	15	Yes	FACW	Prevalence Index	c = B/A = 2	5
					1 (1717) <del></del>	
				Hydrophytic Veget	ation Indicators:	1111
				1 - Rapid Test f	or Hydrophytic Vege	tation
í				X 2 - Dominance	Test is >50%	
		<u> </u>		X 3 - Prevalence I	ndex is ≤3.0	ide overed
0				data in Rema	irks or on a separate	sheet)
1.				5 - Wetland Nor	-Vascular Plants <sup>1</sup>	
	45	=Total Cover		Problematic Hy	drophytic Vegetation	(Explain)
Voody Vine Stratum (Plot size: 5	)			Indicators of hydric	soil and wetland hy	drology mus
		_		be present, unless o	listurbed or problem	atic.
				Hydrophytic		
		and the second second		and the second sec		
Bara Cround in Harb Stratum		=Total Cover		Vegetation Procent?	e V No	

SOIL

mpling Point: WL26

opin main	04	Color (moist)	0%	Type	Loc <sup>2</sup>	Texture	Remarks
0.5 10VD 3/2	00	7 5VD 4/6	10	- C	M	Sandy	Prominant redov concentrati
0-5 10TR 3/2		7.5TR 4/0	-10			Sandy	
5-10 10YR 3/2	65	7.5YR 4/6		<u> </u>		Sandy	Prominent redox concentration
					-		
	=		$\equiv$	_	$\equiv$		<u> </u>
				-	-		
pe: C=Concentration, D=Dep	letion, RM=	Reduced Matrix, C	CS=Cover	red or C	oated Sa	nd Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix
Histored (A1)	adie to all L	Sandy Cla	erwise no	v (SA)		ind	2 cm Muck (A10) (I BB A E)
Histic Epipedon (A7)		X Sandy Rec	dov (S5)	IN (04)			Iron-Manganese Masses (E12) /I RR
Black Histic (A3)		Stripped N	Aatriv (SR				Red Parent Material (E21)
Hydrogen Sulfide (A4)		Loamy Mu	cky Mine	ral (E1)	lexcent l	MIRA 1	Very Shallow Dark Surface (E22)
1 cm Muck (A9) /I RR D GL		Loamy Gla	eved Matr	ix (F7)	(overhill		Other (Explain in Remarks)
Depleted Below Dark Surfac	e (A11)	Depleted M	Matrix (E3	12 (1 2)			Conter (Explain in Remarks)
Thick Dark Surface (A12)	- WALLY	Bedox Dar	rk Surface	P (E6)		<sup>9</sup> Inc	licators of hydrophytic venetation and
Sandy Mucky Mineral (S1)		Depleted [	Dark Surf	ace (F7)		1115	wetland hydrology must be present
2.5 cm Mucky Peat or Peat (	S2) (I RR G	Bedox Der	pressions	(F8)			unless disturbed or problematic
strictive Laver (if observed)	-	100 C					
strictive Layer (if observed) Type: Cobbles / C	: Gravel						
estrictive Layer (if observed) Type: Cobbles / C Depth (inches): emarks: nallow, refulsal at 10 in, dense	: Gravel 10 cobbles					Hydric Soil Pr	esent? Yes <u>X</u> No
Type: Cobbles / C Depth (inches): marks: hallow, refulsal at 10 in, dense	: Gravel 10 cobbles					Hydric Soil Pr	esent? Yes <u>X</u> No
Strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense COROLOGY etland Hydrology Indicators:	Gravel 10 cobbles					Hydric Soil Pr	esent? Yes <u>x</u> No
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of a	Gravel 10 cobbles	ed; check all that a	apply)			Hydric Soil Pr	esent? Yes <u>X</u> No
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of of Surface Water (A1)	: Gravel 10 cobbles	ed: check all that a	apply) ined Leav	ves (B9)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1,
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of o Surface Water (A1) High Water Table (A2)	: Gravel 10 cobbles	ed: check all that a Water-Sta MLRA	apply) ined Leav	ves (B9) and 4 <b>B</b> )	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY etland Hydrology Indicators: mary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3)	: Gravel 10 cobbles	ed; check all that a Water-Sta MLRA Salt Crust	apply) ined Leav 1, 2, 4A, (B11)	ves (B9) and 4 <b>B</b> )	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY etland Hydrology Indicators: mary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	: Gravel 10 cobbles	ed; check all that a Water-Sta MLRA Salt Crust Aquatic In	apply) ined Leav 1, 2, 4A, (B11) vertebrate	ves (B9) and 48) es (B13)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of e Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	: Gravel 10 cobbles	ed: check all that is Water-Stai MLRA Salt Crust Aquatic In Hydrogen	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O	ves (B9) and 48) es (B13) edor (C1	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in. dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of e Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	: Gravel 10 cobbles	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe	ves (B9) and 4B) es (B13) idor (C1) eres on 1	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): emarks: allow, refulsal at 10 in, dense <b>DROLOGY</b> etland Hydrology Indicators: mary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	: Gravel 10 cobbles	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct	ves (B9) and 4B) es (B13) dor (C1) eres on I ed Iron (	(except Living Ro C4)	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): emarks: allow, refulsal at 10 in, dense <b>DROLOGY</b> etland Hydrology Indicators: mary Indicators (minimum of c 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)	: Gravel 10 cobbles	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct	ves (B9) and 4B) es (B13) edor (C1) eres on I ed Iron ( ion in Ti	(except ) Living Ro (C4) Iled Soils	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense <b>DROLOGY</b> atland Hydrology Indicators: mary Indicators (minimum of of 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)	Sravel 10 cobbles	ed: check all that i Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of Reduct Stressec	ves (B9) and 4B) es (B13) dor (C1, eres on I ed Iron ( ion in Ti 1 Plants	(except ) Living Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Crast Means (Meansache (D7)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of of 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 I Sparseky Venetated Conceve	magery (B7	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp (a)	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Reduce of Reduce of Reduce of Reduce stressec olain in Re	ves (B9) and 4B) es (B13) dor (C1 eres on I ed Iron ( ion in Ti I Plants emarks)	(except ) Living Ro C4) lied Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of of 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 Sparsely Vegetated Concave	magery (B7	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp (8)	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of Reduct Stressec olain in Re	ves (B9) and 4B) es (B13) edor (C1 eres on l ed Iron ( ion in Ti 1 Plants ermarks)	(except ) Living Ro C4) lied Soils (D1) (LR	Hydric Soil Pr           Sec           ots (C3)           (C6)           X           R A)	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense DROLOGY atland Hydrology Indicators: mary Indicators (minimum of c 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 I Sparsely Vegetated Concave and Observations: Cobbles Concave Cobbles Concave Concave Cobbles Concave Cobbles Cobbles Concave Cobbles Cobbles Concave Cobbles Cobbles Cobbles Concave Cobbles Cobbles	magery (B7	ed; check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp 18)	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct n Reduct Stressec olain in Re	ves (B9) and 4B) es (B13) dor (C1, eres on l ed Iron ( ion in Ti 1 Plants ermarks)	(except Living Ro (C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): marks: allow, refulsal at 10 in, dense <b>DROLOGY</b> atland Hydrology Indicators: mary Indicators (minimum of c 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 I Sparsely Vegetated Concave and Observations: rface Water Present?	magery (B7 e Surface (E	ed: check all that a Water-Stal MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp 18)	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct n Reduct Stressec olain in Re Depth (in	ves (B9) and 4B) es (B13) dor (C1 eres on I ed Iron ( ion in Ti I Plants emarks) emarks):	(except Living Ro C4) lied Soils (D1) (LR	Hydric Soil Pr Sec ots (C3) (C6) X R A)	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Setrictive Layer (if observed)         Type:       Cobbles / C         Depth (inches):         emarks:         nallow, refulsal at 10 in, dense <b>DROLOGY</b> etland Hydrology Indicators:         imary Indicators (minimum of a         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 I         Sparsely Vegetated Concave         eld Observations:         Irface Water Present?         Yeater Table Present?         Yeater Table Present?	magery (B7 a Surface (B as x	ed: check all that is Water-Stai MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp 18) No X No X No X No X	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of Reduct of Reduct Stressec olain in Re Depth (in Depth (in	ves (B9) and 4B) es (B13) edor (C1, eres on I ed Iron ( ion in Ti J Plants emarks) mohes): mohes):	(except Living Ro C4) lied Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Strictive Layer (if observed)         Type:       Cobbles / C         Depth (inches):         emarks:         nallow, refulsal at 10 in, dense <b>DROLOGY</b> etland Hydrology Indicators:         imary Indicators (minimum of a         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 I         Sparsely Vegetated Concave         eld Observations:         trace Water Present?       Ye         duration Present?       Ye         cludes capillary fringe)       Ye	magery (B7 e Surface (B es X	ed: check all that a Water-Sta MLRA Salt Crust Aquatic Int Hydrogen Oxidized R Presence Recent Iro Stunted or ) Other (Exp 18) No X No X No X No X	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of Reduct of Reduct Stressec plain in Re Depth (in Depth (in Depth (in	ves (B9) and 4B) es (B13) dor (C1 eres on I ed Iron ( ion in Ti J Plants emarks) nches): nches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
strictive Layer (if observed) Type: Cobbles / C Depth (inches): emarks: allow, refulsal at 10 in, dense <b>'DROLOGY</b> etfand Hydrology Indicators: imary Indicators (minimum of of 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 I Sparsely Vegetated Concave etf Observations: Inface Water Present? Ye ater Table Present? Ye cludes capillary fringe) soribe Recorded Data (stream	magery (B7 e Surface (E es a gauge, mo	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or Other (Exp 8) No X No X No X No X No X No X	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of Reduct Stressec olain in Re Depth (ir Depth (ir Depth (ir Depth (ir	ves (B9) and 4B) es (B13) edor (C1, eres on l ed fron ( ion in Ti 1 Plants emarks) nches): 	(except iving Ro C4) lied Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No
strictive Layer (if observed) Type: Cobbles / C Depth (inches): emarks: allow, refulsal at 10 in, dense <b>DROLOGY</b> atland Hydrology Indicators: mary Indicators (minimum of of 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 I Sparsely Vegetated Concave Ald Observations: rface Water Present? Ye turation Present? Ye dudes capillary fringe) scribe Recorded Data (stream	magery (B7 e Surface (B es X on gauge, mo	ed: check all that a Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized R Presence Recent Iro Stunted or )Other (Exp (8) No No No No ntoring well, aeria	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduce n Reduct Stressec olain in Re Depth (ir Depth (ir Depth (ir Depth (ir I photos,	ves (B9) and 4B) es (B13) dor (C1, eres on I ed Iron ( ion in Ti I Plants emarks) iches): hches): hches): previous	(except iving Ro C4) lied Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No

ENG FORM 6116-9, JUL 2018

might/Site: Eloud Hill to Veterana Memorial Turna	Tradition of the set	CitylCou	he Clear C	Treak County Complian Data: 2/2/002
policiant/Outpart CDOT Basics 1			ity. Clear c	State: CO Sampling Date. 0/2/202
plicant/owner: CDOT - Region 1		0	and the first	State. CO Samping Point. WL2
Vestigator(s): Filipi, Kiziinski, Head		Section, I	ownsnip, Ra	ange: SE4 534, 135, R72W
ndform (hiliside, terrace, etc.): floodplain	00 740000	Local relief (co	oncave, conv	vex, none): flat Slope (%):
bregion (LRR): LRR E, MLRA 48A Lat:	39.742229	All and making	Long: -	105.431354 Datum: NAD83
il Map Unit Name: Resort-Cathedral-Rubble land	complex, 30 to	60 percent slo	opes	NWI classification: UPL
e climatic / hydrologic conditions on the site typic	al for this time of	f year?	Yes X	No (If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	significantly of	disturbed? A	re "Normal (	Circumstances" present? Yes X No
e Vegetation, Soil, or Hydrology	naturally prot	blematic? (	f needed, ex	xplain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site	map showin	ig samplin	g point lo	ocations, transects, important features, e
vdrophytic Vegetation Present? Yes X	No	is the	Sampled A	Area
lydric Soil Present? Yes X	No	withi	n a Wetland	1? Yes X No
Vetland Hydrology Present? Yes X	No			
emarks:		1.3.1.1.1		
mall wetland adjacent to bridge along Clear Cree	k. Same wetland	d on opposite	bank (WL28	3 and WL29)
EGETATION – Use scientific names o	Absolute	Dominant	Indicator	T
ree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksheet:
				Number of Dominant Species That
		<u> </u>	<u> </u>	Are OBL, FACW, or FAC:3(A
				Total Number of Dominant Species
		-Total Cover		Across All Strata:3(E
Sepling/Shrub Stratum (Plot size: 15		- Total Cover		Are OBL FACW or FAC: 100.0% (A
. Salix exigua		Yes	FACW	
				Prevalence Index worksheet:
\ <u></u>				Total % Cover of: Multiply by:
			_	OBL species x 1 =40
		Total Correct		FACW species $25 \times 2 = 50$
arh Stratum (Plot size: 5)		= rotal Cover		FAC species $0 \times 3 = 0$
Carex nebrascensis	30	Yes	OBI	UPL species $0 \times 5 = 0$
Juncus drummondii	5	No	FACW	Column Totals: 65 (A) 90 (E
Eleocharis palustris	10	Yes	OBL	Prevalence Index = B/A = 1.38
			<u> </u>	
			_	Hydrophytic Vegetation Indicators:
-	<u> </u>	<u> </u>		X 1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
	1.11	<del> </del>	_	A Mambelonical Adaptations (Provide suppor
				in morphological machanons (Fromus suppor
0				data in Remarks or on a separate sheet)
0		_		data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup>
0	45	Total Cover	_	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
0		=Total Cover		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 mu
0		=Total Cover		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 mu be present, unless disturbed or problematic.
0		=Total Cover		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 mu be present, unless disturbed or problematic. Hydrophytic

SOIL

nches) Color (moist)	% Color	(moist)	%	Type	Loc*	Tex	ture		Remarks	
0-9 10YR 3/2	100 7.5	YR 4/6	30	c	М	Sar	ndy	Prominen	t redox conce	ntrations
			Ξ	Ξ				2		
		ad Motrix /					21 000	tion: DI -Dor	o Lining M-M	otriv
dric Soil Indicators: (Applicable	to all LRRs	nless oth	erwise n	nted of Co	Dated Sal	iu Grains.	Indicator	s for Problem	e Lining, M=N	autx.
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) 1 cm Muck (A9) (LRR D, G) Depleted Below Dark Surface (A Thick Dark Surface (A12)	11)	Sandy Gle Sandy Re Stripped M Loamy Gl Depleted Redox Da	eyed Mati dox (S5) Matrix (S6 ucky Mine leyed Mat Matrix (F) ark Surfac	rix (S4) 3) eral (F1) rix (F2) 3) e (F6)	(except l	ALRA 1)	2 cm Iron-M Red F Very 5 Other	Muck (A10) (i Manganese M Parent Materia Shallow Dark (Explain in R s of hydrophy	LRR A, E) lasses (F12) (I al (F21) Surface (F22) lemarks) tic vegetation	RR D)
Sandy Mucky Mineral (S1)		Depleted	Dark Sur	face (F7)			wetlar	nd hydrology	must be prese	nt,
2.5 cm Mucky Peat or Peat (S2)	(LRR G)	Redox De	pression	s (F8)			unles	s disturbed or	r problematic.	
estrictive Layer (if observed):										
Type: Cobbles / Grav Depth (inches): 9 emarks: hallow to dense cobbles, but surfac	el	S5				Hydric So	bil Present	2	Yes <u>X</u>	No
Type: Cobbles / Grav Depth (inches): 9 emarks: hallow to dense cobbles, but surfac	el	S5				Hydric S	oil Present	?	Yes <u>X</u>	No
Type: Cobbles / Grav Depth (inches): 9 emarks: hallow to dense cobbles, but surfac YDROLOGY /etland Hydrology Indicators:	el	\$5				Hydric So	oil Present	?	Yes <u>X</u>	No
Type: Cobbles / Grav Depth (inches): 9 emarks: hallow to dense cobbles, but surfac YDROLOGY /etland Hydrology Indicators: rrimary Indicators (minimum of one i	e redox meets	S5 eck all that	apply)			Hydric Si	bil Present	? y Indicators (;	Yes X	No
Type: Cobbles / Grav Depth (inches): 9 emarks: hallow to dense cobbles, but surfac YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one i Surface Water (A1)	e redox meets	S5 eck all that Water-Sta	apply) ained Lea	ves (B9)	(except	Hydric So	Secondar Wate	? y Indicators (2 Stained La	Yes X 2 or more requives (B9) (MLF	No
Type: Cobbles / Grav Depth (inches): 9 Remarks: shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Schwater (A2)	e redox meets	S5 eck all that Water-Sta MLRA	apply) ained Lea 1, 2, 4A,	ves (B9) and 4B)	(except	Hydric So	bil Present Secondar Water 4A	? y Indicators () r-Stained Lea , and 4B)	Yes X 2 or more requives (B9) (MLF	No
Type: Cobbles / Grav Depth (inches): 9 Remarks: shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Macke (P4)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust	apply) ained Lea 1, 2, 4A, t (B1)	ves (B9) and 4B)	(except	Hydric So	Secondar Water Drain Drain	y Indicators () Stained Lea , and 4B) age Patterns	Yes X 2 or more requives (B9) (MLF (B10)	No
Type: Cobbles / Grav Depth (inches): 9 Permarks: shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X. Satiment Denceits (B2)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In	apply) ained Lea 1, 2, 4A, t (B11) vvertebrat	ves (B9) and 4B) des (B13)	(except	Hydric So	Secondar Water Drains Dry-S Satur	? Stained Lea , and <b>4B</b> ) age Patterns eason Water	Yes X 2 or more required ves (B9) (MLF (B10) Table (C2) p. Aerial Impo	No
Type: Cobbles / Grav Depth (inches): 9 Remarks: shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X. Sediment Deposits (B2) X. Drift Deposits (B3)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Ovidized I	apply) ained Lea 1, 2, 4A, t (B11) ivertebrat Sulfide ( Bbizoenb	ves (B9) and 4B) es (B13) Odor (C1)	(except	Hydric So	Secondar Water Drain: Dry-S Satur X Geom	y Indicators () r-Stained Lea , and 4B) age Patterns eason Water ation Visible (	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag	No
Type: Cobbles / Grav Depth (inches): 9 Remarks: Shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) X Drift Deposits (B3) Alreal Mat or Crust (B4)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	apply) ained Lea 1, 2, 4A, t (B11) suertebrat Sulfide ( Rhizosph	ves (B9) and 4B) tes (B13) Odor (C1) eres on (	(except	Hydric So	Secondar Water 4A Drain: Dry-S Satur X Geom	y Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible o norphic Position w Anuiterd ()	Yes X 2 or more requives (B9) (MLR (B10) Table (C2) on Aerial Imag on (D2) D3)	No irred) RA 1, 2 ery (C9)
Type: Cobbles / Grav Depth (inches): 9 Remarks: Shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) X Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide ( Rhizosph of Reduc	ves (B9) and 4B) des (B13) Odor (C1) eres on I sed Iron ( tion in T	(except	Hydric So ots (C3)	Secondar Water 4A Drain: Dry-S Satur X Geom Shallo X EAC	y Indicators () Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible o orphic Positio w Aquitard ()	Yes X 2 or more requives (B9) (MLR (B10) Table (C2) on Aerial Imag on (D2) D3) D5)	No ired) RA 1, 2 ery (C9)
Type: Cobbles / Grav Depth (inches): 9 Remarks: Shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) X Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soll Cracks (B6)	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunied o	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide ( Rhizosph of Reduc on Reduc	ves (B9) and 4B) dor (C1) eres on I ced Iron ( tion in Ti d Plants	(except ) Living Ro C4) lied Soils (D1) (LB	Hydric So ots (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Georr Shallo X FAC-J Raise	y Indicators (3 Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible of porphic Positii w Aquitard (1 Neutral Test ( d Ant Mound	Yes X 2 or more required ves (B9) (MLR (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A	No
Type: Cobbles / Grav Depth (inches): 9 Remarks: shallow to dense cobbles, but surfac YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) X Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse nain in R	ves (B9) and 4B) es (B13) Door (C1) eres on 1 ced Iron ( tion in Ti d Plants (emarks)	(except Living Ro C4) lied Soils (D1) (LR	Hydric So ots (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Geom Shallo X FAC-J Raise Frost-	y Indicators () Stained Lea , and 4B) age Patterns eason Water ation Visible of porphic Positii ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humn	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7)	No ired) RA 1, 2 ery (C9
Type: Cobbles / Grav Depth (inches): 9 Remarks: shallow to dense cobbles, but surfac YDROLOGY Yetland Hydrology Indicators: Yrimary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) X Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su	e redox meets	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ind Stunted o Other (Ex	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R	ves (B9) and 4B) es (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants temarks)	(except Living Ro (C4) Iled Soils (D1) (LR	Hydric So ofs (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Geom X FAC-I Raise Frost-	y Indicators () -Stained Lea , and 4B) age Patterns eason Water ation Visible of norphic Positio w Aquitard (I Neutral Test ( d Ant Mound Heave Humn	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7)	No ired) RA 1, 2 ery (C9) )
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       9         Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imag         Sparsely Vegetated Concave Su         Field Observations:	e redox meets s required; che gery (B7)	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	apply) ained Lea 1, 2, 4A, t (B11) avertebrat Sulfide ( Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R	ves (B9) and 4B) Door (C1) eres on I sed Iron ( tion in Ti d Plants temarks)	(except Living Ro C4) lied Soils (D1) (LR	Hydric So ots (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Geor Shallo X FAC-I Raise Frost-	y Indicators () r-Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible of orphic Positi ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humn	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7)	No
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       9         Shallow to dense cobbles, but surface         YDROLOGY         Vefland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Image         Sparsely Vegetated Concave Surface Water Present?	e redox meets s required; che gery (B7) rface (B8)	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex X	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse plain in R Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants (emarks) nches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric So ots (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Geon Shallo X FAC-1 Raise Frost-	y Indicators () Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible of orphic Positi ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humn	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7)	No (red) RA 1, 2 ery (C9)
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       9         Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X         Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Image         Sparsely Vegetated Concave Surface Water Present?         Yes	e redox meets s required; che gery (B7) rface (B8)	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex X X	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i	ves (B9) and 4B) tes (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants (emarks) (emarks) nches):_ nches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric So ots (C3) (C6) R A)	Secondar Water 4A Drain: Dry-S Satur X Geon X FAC-1 Raise Frost-	y Indicators () Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible ( ophic Positi ophic Positi ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humn	Yes X 2 or more required ves (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7)	No
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       9         Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X         Sediment Deposits (B2)         Aligal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Image         Sparsely Vegetated Concave Surface Water Present?         Yes         Saturation Present?	e redox meets s required; che gery (B7) rface (B8)	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex X X X	apply) ained Lea 1, 2, 4A, t (B11) ivertebrat Sulfide C Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i	ves (B9) and 4B) ees (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants lemarks) remarks) nches):_ nches):	(except ) Living Ro (C4) Iled Soils (D1) (LR	Hydric So ofs (C3) (C6) R A) Wetlan	Secondar Water 4A Drain: Dry-S Satur X Geom X FAC-1 Raise Frost-	y Indicators () Stained Lea , and <b>4B</b> ) age Patterns eason Water ation Visible ( iophic Positi ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humm Heave Humm	Yes X 2 or more required ves (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No irred) RA 1, 2 ery (C9)
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       9         Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one i         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Image         Sparsely Vegetated Concave Su         Teld Observations:         Surface Water Present?       Yes         Vater Table Present?       Yes         Saturation Present?       Yes	e redox meets s required; che s required; che gery (B7) fface (B8) No No No No	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex X X X	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse plain in R Depth (i Depth (i	ves (B9) and 4B) des (B13) Odor (C1) eres on I ced Iron ( tion in Ti d Plants 'emarks) 'emarks) nches): nches):	(except ) Living Ro C4) Iled Soils (D1) (LR	Hydric So ofs (C3) (C6) R A) Wetlan	Secondar Water 4A Drain: Dry-S Satur X Geom Shallo X FAC-1 Raise Frost-	y Indicators (2 Stained Lea , and 4B) age Patterns eason Water ation Visible ( iorphic Positi- ow Aquitard (1 Neutral Test ( d Ant Mound Heave Humm y Present?	Yes X 2 or more required ves (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       5         Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imag         Sparsely Vegetated Concave Su         Field Observations:         Surface Water Present?       Yes         Vater Table Present?       Yes         Vater Table Present?       Yes         Daturation Present?       Yes         Describe Recorded Data (stream gate)	e redox meets is required; che gery (B7) rface (B8) No No No	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	apply) ained Lea 1, 2, 4A, t (B11) vvertebrat Sulfide ( Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i Depth (i al photos,	ves (B9) and 4B) Ddor (C1) eres on I sed Iron ( tion in Ti d Plants 'emarks) inches): nches): nches):	(except Living Ro C4) lied Soils (D1) (LR	Hydric So ofs (C3) (C6) R A) Wetlan	Secondar Water 4A Drain: Dry-S Satur Shalk X FAC-I Raise Frost-	y Indicators () r-Stained Lea , and 4B) age Patterns eason Water ation Visible o iorphic Positii w Aquitard (I Neutral Test ( d Ant Mound: Heave Humn y Present?	Yes X 2 or more requives (B9) (MLF (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No
Type:       Cobbles / Grav         Depth (inches):       9         Remarks:       Shallow to dense cobbles, but surface         YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (minimum of one)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         X Sediment Deposits (B2)         X Drift Deposits (B3)         Algal Mat or Crust (B4)         iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Image         Sparsely Vegetated Concave Surface Water Present?         Yes         Vater Table Present?         Yes         Saturation Present?         Surface Surface Water Present?         Yes         Saturation Present?	e redox meets s required; che sery (B7) rface (B8) No No No	S5 eck all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex X X x well, aerie	apply) ained Lea 1, 2, 4A, t (B11) nvertebrat Sulfide C Rhizosph of Reduc on Reduc on Reduc r Stresse plain in R Depth (i Depth (i Depth (i	ves (B9) and 4B) es (B13) Odor (C1) eres on I sed Iron ( tion in Ti d Plants (emarks) nches): nches): nches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric So ofs (C3) (C6) R A) Wetlan	Secondar Water 4A Drain: Dry-S Satur X Geon Shallo X FAC-J Raise Frost-	y Indicators () r-Stained Lea , and 4B) age Patterns eason Water ation Visible o orphic Positi ow Aquitard (I Neutral Test ( d Ant Mound: Heave Humn y Present?	Yes X 2 or more requives (B9) (MLR (B10) Table (C2) on Aerial Imag on (D2) D3) D5) s (D6) (LRR A nocks (D7) Yes X	No

ENG FORM 6116-9, JUL 2018

U.S. Army Co WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-10-3; the p	western Mo roponent a	<b>ineers</b> ountains, Va gency is CE	alleys, and C ECW-CO-F	Coast Region R	OMB Control #: 0710-0024, E5 Requirement Control Symb (Authority: AR 335-15, para	(p: 11/30/2024 of EXEMPT: graph 5-2a)
Project/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	inty: Clear C	Creek County	Sampling Date:	8/2/2022
Applicant/Owner: CDOT - Region 1		E		State: CO	Sampling Point:	WL31
nvestigator(s): Fillipi Kizlinski Head		Section.	Township, Ra	ange: SF4 S34 T3S	. R72W	
andform (hillside terrace etc.); floodolain		Local relief /c		vev none) flat	Sla	na (%): 1.2
	41736	Local relier (c	lene:	105 4200	Debuga	NAD02
	41/20	÷	Long.	100.4000	Datum:	NADOS
Soli Map Unit Name: Resort-Cathedral-Rubble land o	omplex, 30 to	60 percent si	opes			
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes X	No (If no,	explain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? /	Are "Normal (	Circumstances" prese	ent? Yes X N	°
Are Vegetation, Soil _ X _, or Hydrology	naturally prol	plematic? (	If needed, ex	xplain any answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site n	nap showin	ig samplin	ig point lo	ocations, transec	ts, important fea	tures, etc.
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No	ls th with	e Sampled A in a Wetland	Area 1? Yes	XNo	
Remarks: Wetland on the floodplain of Clear Creek. Portions of of wetland intact.	f wetland near	dirt driveway	/ on inside be	and disturbed with ero	sional depostion of fill.	but majority
VEGETATION – Use scientific names of	plants.					
	Absolute	Dominant	Indicator	1005	- 10 C	
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test	worksheet:	
1		<u> </u>		Number of Domina	ant Species That	
2			<u> </u>	Are OBL, FACW,	or FAC:	2 (A)
3	-	<u> </u>		Total Number of D	ominant Species	2 (0)
4		-Total Cover		Across All Strata.	1	2 (8)
Sapling/Shrub Stratum (Plot size: 15	5	- Total Gover		Are OBL, FACW,	or FAC:	0.0%_(A/B
1. Salix exigua	50	Yes	FACW	1	and the second second	
2. Salix bebblana		No	FACW	Prevalence Index	worksheet:	. h.c
3. Betula occidentalis	10	NO	FACVV	OPL appaires		10
5	· — ·			EACW energies	10 x1=	250
	65	=Total Cover		FAC species	10 x 3 =	30
Herb Stratum (Plot size: 5 )		(bidi bater		FACU species	0 x4=	0
1. Juncus balticus	60	Yes	FACW	UPL species	0 x.5 =	0
2. Agrostis stolonifera	10	No	FAC	Column Totals:	145 (A)	290 (B)
3. Eleocharis palustris	10	No	OBL	Prevalence Ind	ex = B/A = 2.00	0
4.						
5.				Hydrophytic Vege	etation Indicators:	
6.				X 1 - Rapid Test	for Hydrophytic Veget	ation
7,		_		X 2 - Dominance	e Test is >50%	
8				X 3 - Prevalence	e Index is ≤3.0 <sup>1</sup>	
9				4 - Morphologi	cal Adaptations (Provi	de supporting
10				data in Ren	tarks or on a separate	sneet)
11		Tala		5 - Wetland N	on-Vascular Plants	(FRALL NOT
Woody Vine Stratum (Distaire)	80	= Total Cover		Problematic H	yurophytic vegetation	(Explain)
1	·	_		Indicators of hydr be present, unless	ic soil and wetland hyd disturbed or problema	rology must itic.
-				the Court of the second		
2				Hydrophytic		
2	_	=Total Cover		Hydrophytic Vegetation		

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Color         Color         Color         Texture         Remarks           0-4         10YR 3/6         100         7.5YR 4/6         2         C         M         Sandy         Faint reduc concentration           4-14         10YR 3/6         100         7.5YR 4/6         2         C         M         Sandy         Prominent reduc concentration           4-14         10YR 3/6         100         7.5YR 4/6         2         C         M         Sandy         Prominent reduc concentration           100         7.5YR 4/6         2         C         M         Sandy         Prominent reduc concentration           100         7.5YR 4/6         2         C         M         Sandy         Prominent reduc concentration           100         7.5YR 4/6         2         C         M         Sandy         Prominent reduc concentration           100         Midia Carris         7         Sandy Midia Carris         Tork faint Simple Matrix         Tork faint Sim	lepth	Matrix		Redo	ox Feature	s			
0-4         10% R 26         100         7.5% R 4/6         2         C         M         Sandy         Faint redox concentrations           4-14         10% R 3/3         100         7.5% R 4/6         2         C         M         Sandy         Prominent redox concentrations           4-14         10% R 3/3         100         7.5% R 4/6         2         C         M         Sandy         Prominent redox concentrations           4-14         10% R 3/3         100         7.5% R 4/6         2         C         M         Sandy         Prominent redox concentrations           ytic         501 Indicators: (Applicable to all L RRs, unless otherwise noted.)         Indicators: for Problematic hydric Solls*:         Indicators for Problematic hydric Solls*:           Histic Explexion (A2)         X         Sandy Reddy (RS)         Red Parent Material (P2)         Icm Muck (A9) (LRR D, 6)         Depleted Bank Waters (F3)         Indicators of hydrology must be present;         Depleted Bank Waters (F3)         Indicators of hydrology must be present;         Indicators of hydrology must be present;         Depleted Bank Water (F3)         Indicators (Car more required);         Type;         Depleted Bank Water (F3)         Indicators (Car more required);         Indicators (Car more required);         Type;         Depleted Bank Water (F3)         Indicators (Car more required);         T	nches) C	olor (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Texture	Remarks
4-14         10YR 3/3         100         7.5YR 4/6         2         C         M         Sendy         Prominent redox concentration           ypc:         C-Concentration, D=Depietion, RM-Reduced Matrix, CS=Covered or Coeled Sand Grains <sup>2</sup> Locistion: PL=Pere Lining, M=Matrix, Afric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for Problematic Hydric Solls?:           Histosol (A1)         Sandy Redox (S5)         Indicators for Problematic Hydric Solls?:         Indicators for Problematic Hydric Solls?:           Histosol (A1)         Sandy Redox (S5)         Indicators for Shallow Redox (S5)         Indicators for Shallow Redox (S1)           Black Histic (A2)         Sandy Redox (S5)         Indicators for Shallow Redox (S2)         Other Classian in Remarks)           Thick Dark Surface (A1)         Depleted Dark Surface (F2)         Other Classian in Remarks)         Indicators of hydrophytic veptation and wetland hydrology must be present, unless disturbed or problematic.           Type:	0-4	10YR 3/6	100	7.5YR 4/6	2	С	М	Sandy	Faint redox concentrations
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coeled Sand Grains <sup>2</sup> Location: PL=Pore Lining, M=Matrix, discors for Problematic Hydric Solls <sup>2</sup> ;         drite Soll Indicators:       Sandy Gleyed Matrix (S4)       2 om Muck (AN) (RR A, 6)         Histos Cpucdon (A2)       X Sandy Reduc (S5)       Indicators for Problematic Hydric Solls <sup>2</sup> ;         Histos Cpucdon (A2)       X Sandy Reduc (S5)       Inon. Mous (A10) (RR A, 6)         Loam Muck (A1)       Loamy Mucky Mineral (11) (except MLRA 1)       Very Shaliwo Dark Surface (F2)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F2)       Indicators of hydrophytic vegatation and wetland hydrology must be present, unless disturbed or problematic.         Strictive Layer (for Doservod):       Presided Dark Surface (F2)       unless disturbed or problematic.         Type:	4-14	10YR 3/3	100	7.5YR 4/6		<u>c</u>	M	Sandy	Prominent redox concentration
per       C=Concentration, D=Depietion, RM=Reduced Matrix, CS=Covered or Coeled Sand Grains <sup>1</sup> Location: PL=Pore Lining, M=Matrix, Medicators for Problematic Hydric Solis <sup>2</sup> : Indicators for Problematic Hydric Solis <sup>2</sup> : C=Concentration, D=Depietable to all LRRs, unless otherwise noted.)          Indicators for Problematic Hydric Solis <sup>2</sup> : C=Covered or Coeled Sand Grains <sup>1</sup> Location: PL=Pore Lining, M=Matrix, Medicators for Problematic Hydric Solis <sup>2</sup> : C=Covered or Covered or Coeled Sand Grains          Indicators for Problematic Hydric Solis <sup>2</sup> : C=Covered or Coeled Sand Grains          Indicators for Problematic Hydric Solis <sup>2</sup> : C=Covered or Coeled Sand Grains          Indicators of hydrophytic Vegetation and Sandy Macky Mineral (F1) (except MLRA 1)          Very Shallow Dark Surface (F2) (LRR 0)          Depieted Bark Surface (F3) (F3) (F3) (F3) (F3) (F3) (F3) (F3)					_	_	_	-	
pe:       C-Concentration, D-Depietion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains <sup>2</sup> Location: PL-Pore Lining, M-Matrix, Michael Matrix, CS-Covered or Coated Sand Grains <sup>2</sup> Location: PL-Pore Lining, M-Matrix, Michael Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       X Sandy Reduck (S5)       Indicators for Problematic Hydric Salls?:         Black Histic (A3)       Singriped Matrix (S4)       Indicators for Problematic Hydric Salls?:         Hydrogen Suffide (A4)       Learny Muxdy Mineral (F1) (escept MLRA 1)       Very Shaline (P21)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)       Indicators of hydrophytic vegatation and Sandy Mucky Mineral (F1) (escept MLRA 1)       Very Shaline (C22)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetand hydrology Indicators:       unless disturbed or problematic.         Strictive Layer (if observed):       Type:       Hydric Sail Present?       Yes <u>x</u> No_         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         Surface Water (A1)       MiLRA 1, 2, 4A, and 4B       Dry-Season Water Table (C2)       Secondary Indicators: (2 or more reouried)         Surface Water (A1)			<u> </u>				5		<u> </u>
ps: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coeled Sand Grains. <sup>1</sup> Location: PL=Pore Lining, M=Matrix, fidic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedin (A2)              Indicators for Problematic Hydric Soils*: Locany Media Matrix, (S4)              Locany Media Matrix, (S4) Loomy Media Matrix, (S6)              Indicators for Problematic Hydric Soils*: Red Parent Material (F2)              Red Parent Material (F2)              Red Parent Material (F2)              Red Parent Material (F2)              Red Parent Material (F2)              Very Shallow Dark Surface (F22)              Other (Explain in Remarks)              Depleted Balow Dark Surface (F22)              Other (Explain in Remarks)              Depleted Matrix (F3) <sup>1</sup> Indicators of hydrophytic vegetation and Sandy Mickly Minerai (F3)              Indicators of hydrophytic vegetation and wetland hydrology mush be present; trans indicators (If B)              Publeted Dark Surface (F5)              wetland hydrology mush be present; trans indicators (If Minimum of one is required, theok all that apply)              Secondary Indicators (12 or more required). Water-Stained Leaves (B9) (except Hydric Soil Present? Yes X No marks: tions of wetlaind near dirt driveway disturbed Dry Season Water Table (C2) Seturation (K3) Saturace (K1) Mucha Table, (A) Mucha Table, (B1) Againt Mar Cracks (B1) Saturace (K1) Mucha Table, (			$\equiv$				$\equiv$	-	
dric Soll Indicators: (Applicable to all LRRs, unless diterwise noted.)       Indicators: for Problematic Hydric Solls <sup>2</sup> :         Histosol (A1)	pe: C=Concent	tration, D=Depl	etion, RM=	Reduced Matrix, 0	CS=Cover	red or Co	pated Sa	nd Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histoc Epipedon (A2)       Sandy Gleyed Matrix (S4)       2 cm Muck (A10) (LRR A, E)         Histic Epipedon (A2)       X Sandy Redox (S5)       Iron-Manganese Masses (F12) (LRR D)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12) (LRR D)         Pigrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F22)         1 cm Muck (A9) (LRR D, G)       Loamy Gleyed Matrix (F3)       Iron-Manganese Masses (F12)         Depleted Below Dark Surface (A12)       Depleted Dark Surface (F6)       Irndicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic.         Strictive Layer (If observed):       Type:	dric Soil Indica	tors: (Applica	ble to all l	RRs, unless oth	erwise no	oted.)		Ind	cators for Problematic Hydric Soils
Hidic Epipedon (A2)       X       Sandy Redox (S5)       Iron-Manganese Masses (F12) (LRR D)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12) (LRR D)         Pydrogen Sulfide (A4)       Loamy Mukky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present;         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F2)       unless disturbed or problematic.         Strictive Layer (if observed):       Type.       unless disturbed or problematic.         Type.       Depleted Dark Surface (B2)       Watric Soil Present?       Yes X       No         Surface Vater (A1)       Weter-Stained Leaves (B2) (except       Watric Soil Present?       Yes X       No         Surface Water (A1)       Water-Stained Leaves (B2) (except       Water-Stained Leaves (B2) (MLRA 1, 2       Ad, and 4B)       Saturation (A3)       Satifice Livertebrates (B13)       Dyrainage Patterns (B10)       Drainage Patterns (B10)       Drainage Patterns (B10)       Drainage Patterns (B10)       Saturation (A4, B)       Saturation (A4, B)	Histosol (A1)			Sandy Gle	eyed Matri	ix (S4)			2 cm Muck (A10) (LRR A, E)
Black Histic (A3)       Stripped Matrix (S9)       Red Parent Material (F21)         Hydrogen Suffice (A4)       Loamy Musky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F22)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F5)       Indicators of hydrophylic vegetation and wetland hydrology must be present.         2.5 cm Musky Peat or Peat (S2) (LRR G)       Redox Depressions (F5)       unless disturbed or problematic.         Type:	Histic Epipedo	n (A2)		X Sandy Re	dox (S5)				Iron-Manganese Masses (F12) (LRR
Flydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (F22)         1 cm Muck (A9) (LRR 0, G)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Both Surface (A12)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation and wetland hydrology must be present, 2.5 cm Mucky Minerai (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         strictive Layer (If observed): Type:	Black Histic (A	(3)		Stripped N	Matrix (S6)	)			Red Parent Material (F21)
1 cm Nuck (A9) (LRR D, 6) Loamy Gleyed Matrx (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A1) Depleted Matrx (F3) Sandy Mucky Mneral (S1) Depleted Dark Surface (F5) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Dept (inches): Depleted Dark Surface (F5) Under Solid Present? Yes X No Secondary Indicators. (2 or more required) Surface Water (A1) Water Stained Leaves (B9) (except Water-Stained Leaves (B9) (except Water-Stained Leaves (B3) Satifications (B1) Satifications (B1) Deposits (B2) Dri Deposits (B2) Hydrogo is (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Stande or Stressed Plants (D1) (LRR A) Recent Iron Reduction in Tiled Solis (C3) Frost-Heave Hummocks (D7) Surface Sol Creaks (B8) Stunted or Stressed Plants (D1) (LRR A) Reised Ant Mounds (D6) (LRR A) Saturation (F5) Wetland Hydrology Present? Yes X No Cher (Explain in Remarks) Surface Vater Present? Yes No X Depth (inches): Control Stream Plants (D2) Water Marks (B1) Saturation (F5) Surface Sol Creaks (B8) Stunted or Stressed Plants (D1) (LRR A) Reised Ant Mounds (D6) (LRR A) Saturation (F5) Surface Present? Yes No X Depth (inches): Cher Present? Yes No X Depth	Hydrogen Sulfi	ide (A4)		Loamy Mu	icky Mine	ral (F1)	(except	MLRA 1)	Very Shallow Dark Surface (F22)
Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface (F5)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Dark Surface (F7)         wetland hydrology must be present,       unless disturbed or problematic.         strictive Layer (If observed):       Type:         Type:	1 cm Muck (As	9) (LRR D, G)		Loamy Gl	eyed Matr	ix (F2)			Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Below	w Dark Surface	(A11)	Depleted I	Matrix (F3	6)			
Sandy Mucky Mineral (S1)       Depleted Dark Sulface (F7)       wetland hydrology must be present, unless disturbed or problematic.         2.5 om Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         Type:	Thick Dark Sur	rface (A12)		Redox Da	rk Surface	e (F6)		<sup>a</sup> Inc	licators of hydrophytic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G)       Redox Depressions (F8)       unless disturbed or problematic.         Strictive Layer (if observed):       Type:	Sandy Mucky I	Mineral (S1)		Depleted I	Dark Surfa	ace (F7)			wetland hydrology must be present,
strictive Layer (if observed):         Type:	2.5 cm Mucky	Peat or Peat (S	52) (LRR (	3)Redox De	pressions	(F8)			unless disturbed or problematic.
Type:	estrictive Layer	(if observed):							
Depth (inches):       Hydric Soil Present?       Yes X       No         mmarks:       artions of wetland hear dirt driveway disturbed         /DROLOGY         etland Hydrology Indicators:       imar/ Indicators (minimum of one is required; check all that apply)       Secondary Indicators (2 or more required)         _Surface Water (A1)									
emarks:         price Water All driveway disturbed         for ROLOGY         ettand Hydrology Indicators:         imary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Sait Crust (B11)       Drainage Patterns (B10)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)       Shallow Aquitard (D3)         Algal Mate Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Hot X       Depth (inches):       Metand Hydrology Present? Yes X No_         etd Observations:       Inface Water Present? Yes No X Depth (inches):       Metand Hydrology Present? Yes X No_       No	Type:			3			6.14	Section and	
fettand Hydrology Indicators:       Secondary Indicators:         rimary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (2 or more required)	Type: Depth (inches) emarks: ortions of wetland	): d near dirt drive	way distur	bed				Hydric Soil Pr	esent? Yes <u>X</u> No
imary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Water Present?       Yes       No       X         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       X       Depth (inches):       wetland Hydrology Present? Yes X       No         etd Observations:       Vest Same Same Same Same Same Same Same Same	Type: Depth (inches) emarks: rrtions of wetland	): d near dirt drive	way distur	bed				Hydric Soil Pr	esent? Yes <u>X</u> No
Surface Water (A1)       Water-Stained Leaves (B9) (except       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Sait Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No X Depth (inches):       Wetland Hydrology Present? Yes No       No         et a Observations:       Irrace Water Present? Yes       No X Depth (inches):       Wetland Hydrology Present? Yes X No       No         ictudes capillary fringe)       So X Depth (inches):       Wetland Hydrology Present? Yes X No       No         scribe Recorded Data (str	Type: Depth (inches) emarks: ortions of wetland	): d near dirt drive gy Indicators:	way distur	bed	_			Hydric Soil Pr	esent? Yes <u>X</u> No
High Water Table (A2)       MLRA 1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       X       Depth (inches):         etd Observations:       Inface Water Present?       Yes       No       X       Depth (inches):         inturation Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present? Yes       No         etd Observations:       Index corded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Staulable:	Type: Depth (inches) emarks: wrtions of wetland <b>'DROLOGY</b> etland Hydrolog imary Indicators	): d near dirt drive gy Indicators: (minimum of of	way distur	bed red; check all that	арріу)			Hydric Soil Pr	esent? Yes X No
Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X       FAC-Neutral Test (D5)         Sufface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       X       Depth (inches):         etd Observations:       Irrface Water Present?       Yes       No       X       Depth (inches):         ituration Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       No         etded code active resent?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       No         etd Observations:       Irrface Water Present? <t< td=""><td>Type: Depth (inches) emarks: ortions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water</td><td>): d near dirt drive gy Indicators: (minimum of or (A1)</td><td>way distur</td><td>red: check all that Water-Sta</td><td>apply)</td><td>ves (B9)</td><td>(except</td><td>Hydric Soil Pr</td><td>esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1,</td></t<>	Type: Depth (inches) emarks: ortions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water	): d near dirt drive gy Indicators: (minimum of or (A1)	way distur	red: check all that Water-Sta	apply)	ves (B9)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1,
Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Inches):       Inches):       Inches):         etd Observations:       No       X       Depth (inches):       Inches):         ituration Present?       Yes       No       X       Depth (inches):       Inches):         ituration Present?       Yes       No       X       Depth (inches):       Inches):	Type: Depth (inches) emarks: ortions of wetland <b>DROLOGY</b> ettand Hydrolog imary Indicators Surface Water High Water Ta	ay Indicators: (minimum of or (A1) (ble (A2)	way distur	red: check all that Water-Sta WLRA	apply) ined Leav 1, 2, 4A,	ves (B9) and <b>4</b> B)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (C9         Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Os X       Depth (inches):       Mo         ater Table Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present? Yes       No         cludes capillary fringe)       No       X       Depth (inches):       Wetland Hydrology Present? Yes       No         escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       marks:       etand Hydrology is present but barely	Type: Depth (inches) emarks: writions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3	): d near dirt drive gy Indicators: (minimum of or (A1) uble (A2) )	way distur	red: check all that Water-Sta MLRA Salt Crust	apply) ined Leav 1, 2, 4A, (B11)	ves (B9) and 4B)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10)
Drift Deposits (B3)       Oxidized Rhizospheres on Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       X       Depth (inches):         ald Observations:       No       X       Depth (inches):       Wetland Hydrology Present? Yes       X       No         cludes capillary fringe)       Yes       No       X       Depth (inches):       Wetland Hydrology Present? Yes       X       No         escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       fravailable:       Imarks:	Type: Depth (inches) emarks: ritions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i	): d near dirt drive gy Indicators: (minimum of or (A1) (ble (A2) ) B1)	way distur	red: check all that Water-Sta MLRA Salt Crust Aquatic In	apply) ined Leav 1, 2, 4A, (B11) vertebrate	ves (B9) and <b>4B</b> ) 25 (B13)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         eld Observations:       No       X       Depth (inches):         inface Water Present?       Yes       No       X         No       X       Depth (inches):       Wetland Hydrology Present?       Yes         Ituration Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         cludes capillary fringe)       Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:       If available:	Type: Depth (inches) emarks: writions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i Sediment Dep	): d near dirt drive gy Indicators: (minimum of or (A1) uble (A2) ) B1) osits (B2)	way distur	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen	apply) inted Leav 1, 2, 4A, (B11) vertebrate Sulfide O	ves (B9) and 48) es (B13) dor (C1)	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (f
Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       X FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Mo       X       Depth (inches):         eld Observations:       No       X       Depth (inches):         ater Table Present?       Yes       No       X         vituation Present?       Yes       No       X         cludes capillary fringe)       No       X       Depth (inches):         escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Wetland Hydrology is present but barely	Type: Depth (inches) emarks: ortions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i Sediment Dep Drift Deposits (	): d near dirt drive gy Indicators: (minimum of or (A1) uble (A2) ) B1) osits (B2) (B3)	way distur	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe	ves (B9) and 4B) es (B13) dor (C1) eres on I	(except	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2)
Surface Soil Cracks (B6)Stunted or Stressed Plants (D1) (LRR A)Raised Ant Mounds (D6) (LRR A) 	Type: Depth (inches) emarks: ortions of wetland <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i Sediment Deposits ( Algal Mat or Ci	): d near dirt drive gy Indicators: (minimum of or (A1) uble (A2) ) B1) osits (B2) (B3) rust (B4)	way distur	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduce	ves (B9) and 4B) es (B13) edor (C1) eres on 1 eres on 1	(except Living Ro C4)	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3)
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turation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No     cludes capillary fringe)     scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:     emarks:     etiand Hydrology is present but barely	Type: Depth (inches) emarks: ortions of wetland DROLOGY etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (I Sediment Dep Drift Deposits ( Algal Mat or Ct Iron Deposits ( Surface Soil Ct Inundation Visi Sparsely Vege etld Observation inface Water Pre	a near dirt drive ay Indicators: (minimum of or (A1) tole (A2) ) B1) osits (B2) (B3) rust (B4) (B5) racks (B6) ible on Aerial In tated Concave rs: sent? Ye	magery (B) Surface (I	red; check all that Water-Sta WLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Ex) 38)	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct r Stressed plain in Re Depth (in	ves (B9) and 4B) es (B13) dor (C1) eres on I ed Iron ( ion in Ti I Plants emarks) nches): _	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (f Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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escribe Recorded Data (stream gauge, monitoring well, aenal protos, previous inspections), if available:	Type: Depth (inches) emarks: ortions of wetland <b>(DROLOGY</b> etland Hydrolog imary Indicators Surface Water Ta Saturation (A3 Water Marks (i Sediment Dep Corift Deposits ( Algal Mat or Ci Iron Deposits ( Surface Soil C Iron Deposits ( Surface Soil C Inundation Visi Sparsely Vege etd Observation urface Water Pre- saturation Present	ay Indicators: (minimum of or (A1) (A1) (A2) (B3) rust (B4) (B5) racks (B6) (B5) racks (B6) (B6) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7)	magery (B) Surface (B ss	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or 7) Other (Exp 38) No X No X No X No X	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressec plain in Re Depth (in Depth (in	ves (B9) and 4B) es (B13) dor (C1) eres on I ed Iron ( ion in Ti 1 Plants emarks) mches): nches):	(except iving Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No
emarks: letland Hydrology is present but barely	Type: Depth (inches) emarks: ortions of wetland (DROLOGY etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i Sediment Depo Gorift Deposits ( Algal Mat or Ci Iron Deposits ( Surface Soil Ci Inundation Visi Sparsely Vege etd Observation urface Water Pre- saturation Present includes capillary	thear dirt drive gy Indicators: (minimum of or (A1) bble (A2) ) B1) osits (B2) (B3) rust (B4) (B5) racks (B6) ible on Aerial In tated Concave is: sent? Ye: ? Ye:	magery (B) Surface (B) Surface (B) Surface (B)	red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Inc Stunted or 7) Other (Ex) 38) No X No X No X No X	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re Depth (in Depth (in	ves (B9) and 4B) es (B13) edor (C1) eres on I ed Iron ( ion in Ti I Plants emarks) aches): hches):	(except iving Rc C4) lied Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No
etland Hydrology is present but barely	Type: Depth (inches) emarks: ortions of wetland <b>(DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Depo Drift Deposits ( Algal Mat or Ct Iron Deposits ( Surface Soil Ct Inundation Visi Sparsely Vege etd Observation Irface Water Pre ater Table Present icludes capillary escribe Recorded	): d near dirt drive gy Indicators: (minimum of or (A1) bble (A2) ) B1) osits (B2) (B3) rust (B4) (B5) racks (B6) ible on Aerial Ir stated Concave ns: sent? Ye ent? Ye fringe) d Data (stream	magery (B) Surface (B) Surface (B) Surface (B) Surface (B)	bed red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Ex) 38) No X No X No X No X Differing well, aerie	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of	ves (B9) and 4B) es (B13) dor (C1) eres on I ed Iron ( ion in Ti J Plants emarks) nches): 	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No
	Type: Depth (inches) emarks: ortions of wetland <b>(DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3) Water Marks (I Sediment Depo Inft Deposits ( Algal Mat or Ch Iron Deposits ( Surface Soil C Inundation Visi Sparsely Vege etd Observation inface Water Pre ater Table Present cludes capillary escribe Recorded	): d near dirt drive gy Indicators: (minimum of or (A1) bble (A2) ) B1) osits (B2) (B3) rust (B4) (B5) racks (B6) ible on Aerial Ir tated Concave is: sent? Ye ent? Ye fringe) d Data (stream	magery (B) Surface (I s s gauge, mo	bed  red: check all that Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or T) Other (Ex) 38) No X No X No X No X onitoring well, aeris	apply) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct of	ves (B9) and 4B) es (B13) dor (C1) eres on I ed Iron ( ion in Ti J Plants emarks) mches): mches): mches): mches):	(except Living Ro C4) Iled Soils (D1) (LR	Hydric Soil Pr	esent? Yes X No condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) drology Present? Yes X No

ENG FORM 6116-9, JUL 2018

See ERDC/EL TR-10-3; the	proponent a	gency is CE	CW-CO-F	(Authority: AK 335-15, paragraph 5-2a)
roject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County Sampling Date: 9/7/22
oplicant/Owner: CDOT - Region 1			_	State: CO Sampling Point: WL32
vestigator(s): Fillipi, Kizlinski		Section 7	ownship, Ra	ange: NE4 S3 T4S R72W
ndform (hillside, terrace, etc.): depression		Local relief (c	oncave, conv	vex, none). <u>concave</u> Slope (%): <u>1</u> -
bregion (LRR): LRR E, MLRA 48A Lat: 39.	737890	_	Long: -	105.432492 Datum: NAD83
oil Map Unit Name: Cathedral-Rock outcrop compl	ex, 30 to 70 pe	rcent slopes		NWI classification: UPL
e climatic / hydrologic conditions on the site typica	I for this time o	fyear?	Yes X	No (If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology X	significantly	disturbed? A	re Normal	Circumstances" present? Yes X No
e Vegetation SoilX or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site I	map showir	ng samplin	g point lo	ocations, transects, important features, et
lydrophytic Vegetation Present? Yes X	No	Is the	Sampled A	Ārea
lydric Soil Present? Yes X	No	withi	n a Wetland	1? Yes X. No
Vetland Hydrology Present? Yes X	No	11.11		
emarks:	a second	a de través		
ohnson Guich flows NE and meets I-70 at the sam livert and caused WI 32 (PEM) and WI 33 (PSS)	pled location.	A culvert conv	eys flow ben el is present	heath 70; however, debris has interrupted flow to the through the wetland
EGETATION – Use scientific names of	plants.			
	Absolute	Dominant	Indicator	
(Plot size)	% Cover	Species	Status	Dominance Test worksheet:
				Are OBL FACW or FAC: 2 (A
				Total Number of Dominant Species
				Across All Strata: 3 (B
		=Total Cover	_	Percent of Dominant Species That
apling/Shrub Stratum (Plot size: 15	_)			Are OBL, FACW, or FAC:(A
Salix exigua	50	Yes	FACW	
Alnus Incana		NO	FACW	Total % Covor of Multiply by
54				$\frac{1}{\text{OBL species}}  0 \qquad \text{where } x = 0$
	1			FACW species 80 x 2 = 160
	55	=Total Cover		FAC species 0 x 3 = 0
erb Stratum (Plot size: 5)	1.00			FACU species 10 x 4 = 40
Phalaris arundinacea	20	Yes	FACW	UPL species 0 x 5 = 0
Rubus idaeus		Yes	FACU	Column Totals: 90 (A) 200 (B
Phalaris arundinacea	5	No	FACW	Prevalence Index = B/A = 2.22
				Hydrophylic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
		1		X 2 - Dominance Test is >50%
				X 3 - Prevalence Index is ≤3.0
				4 - Morphological Adaptations (Provide support
0.				Data in Remarks or on a separate sheet)
7		-Total Caura		D - Wetland Non-Vascular Plants'
Voody Vine Stratum (Plot size: 5		- Total Cover		Indirectors of budge cell and unstand budge
the size. 0	_/			be present, unless disturbed or problematic.
-				Part of the second s
				Hydrophytic
		=Total Cover		Hydrophytic Vegetation

SOIL

DIL											
rofile Descriptio	on: (Describe t	o the depth	needed to do	ocument th	ne Indica	tor or co	onfirm the	absence of	indicators.	)	
epth	Matrix		Re	dox Featur	es						
nches) C	Color (moist)	%	Color (moist)	%	Type	Loc-	Tex	ture		Remarks	
0-14	10YR 4/2	100		_	_	_	Loamy	/Clayey			
		_				_					
					_						
					-	+	<u> </u>				
					_	_					
					_	-	_				
					_		-				
VDe: C=Concen	tration D=Denk	tion PM=5	Peduced Matrix	CS=Cove	red or C	neted Se	nd Grains	2 ocati	on' PI=Po	re Linino, M=	Matrix
dric Soil Indica	ators: (Applicat	ale to all 1	Rs unless of	herwise n	nted )	oated oa	no orama.	Indicators	for Proble	matic Hydric	Solls <sup>3</sup>
Historol (A1)	ators. (Appricat		Sandy (	Cloved Met	riv (SA)			2 cm A	Auck (A10)	(IRRAE)	Cons .
Histis Epinode			Sandy	Doday (C5)	14 (04)			lrop M		(EININ C) E/	
Block Histic //	(A2)		Sandy P	Motory (SS)	21			- Rod Do	anganese w	al (E24)	(LKKD)
Black Histic (A	10) Edia 18.41		Supper	I WAUTE (SC	9) 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000			- Ked Fa	arent waten	ar (FZI)	2
Hydrogen Sulf	nue (A4)		Loamy	VILICKY WINE		(except)	WLRAT)	very s	Tantow Dark	Sunace (F2	£1
1 cm Muck (A	9) (LRR D, G)	14440	Loamy	sleyed Mat	mx (F∠)			Other (	Explain in F	kemarks)	
_ Depleted Belo	w Dark Surface	(ATT)	Deplete	d Matrix (F)	3)			Acres		a ha ha a ha	
_ Thick Dark Su	irface (A12)		Redox L	Jark Surfac	e (F6)			Indicators	of hydrophy	/tic vegetation	n and
Sandy Mucky	Mineral (S1)		Deplete	d Dark Sur	face (F7)			wetlan	d hydrology	must be pres	sent,
2.5 cm Mucky	Peat or Peat (S	2) (LRR G)	Redox I	Depression	s (F8)			unless	disturbed o	r problematic	8.
antelative I aver	(if observed)					100 100					
estrictive Layer	(in observeu).										
Type:	(n'observed).					111					
Type: Depth (inches emarks: eposits of sedime	) <sup>2</sup>	storm even	t causing flows	in Johnsor	n Gulch t	hat feeds	Hydric S	oil Present? nd complex.	No redox, b	Yes X	No
Type: Depth (inches) emarks: eposits of sedim	) <sup>2</sup>	storm even)	t causing flows	in Johnsor	n Gulch t	hat feeds	Hydric S	oil Present? nd complex.	No redox, b	Yes X	No
Type: Depth (inches emarks: eposits of sedimo	) <sup>2</sup>	storm even	t causing flows	in Johnsor	n Gulch t	hat feeds	Hydric S this wetla	oil Present? nd complex.	No redox, b	Yes X	No
Type: Depth (inches) emarks: eposits of sedimo (DROLOGY etland Hydrolog)	) <sup>2</sup> ent from recent gy Indicators:	storm even	t causing flows	in Johnsor	n Gulch t	hat feeds	Hydric S	oil Present? nd complex.	No redox, b	Yes X	No
Type: Depth (inches) emarks: eposits of sedimo /DROLOGY etland Hydrolog imary Indicators	ent from recent	storm eveni	t causing flows	in Johnsor at apply)	) Gulch 1	hat feeds	Hydric S this wetla	oil Present? nd complex. <u>Secondary</u>	No redox, b	Yes X out granted.	No
Type: Depth (inches) amarks: aposits of sedimo <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water	p <sup>2</sup> ent from recent gy Indicators: (minimum of or r (A1) black(2)	storm eveni	t causing flows	in Johnsor at apply) itained Lea	ves (B9)	hat feeds	Hydric S	oil Present? nd complex. <u>Secondary</u> Water	No redox, b Indicators ( Stained Lea	Yes X out granted. 2 or more rec aves (B9) (MI	No
Type: Depth (inches) emarks: posits of sedime <b>DROLOGY</b> etiand Hydrolog imary Indicators Surface Water High Water Ta	gy Indicators: (minimum of or r (A1) able (A2)	storm eveni	t causing flows the causing flows the causing flows the causing flows the causing flows	in Johnsor at apply) itained Lea A 1, 2, 4A,	ves (B9) and 4B)	hat feeds	Hydric S	oil Present? nd complex. <u>Secondary</u> Water- 4A, Decise	No redox, b Indicators ( Stained Lea and 4B)	Yes X out granted.	No guired) LRA 1, 2
Type: Depth (inches) emarks: eposits of sedime <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3)	gy Indicators: (minimum of or r (A1) able (A2) 3)	storm eveni	t causing flows the causing fl	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11)	ves (B9) and 4B	hat feeds	Hydric S	oil Present? nd complex. Secondary Water- 4A, Draina	No redox, b Indicators ( Stained Lea and 4B) ge Patterns	Yes X out granted. 2 or more red aves (B9) (Mil (B10)	No guired) LRA 1, 2
Type: Depth (inches) emarks: posits of sedimi <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (	gy Indicators: (minimum of or r (A1) able (A2) B1)	storm eveni	t causing flows t causing flows t check all this X Water-S MLR Salt Cru Aquatic	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat	ves (B9) and 4B)	hat feeds	Hydric S	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se	No redox, b Indicators ( Stained Lea and 4B) ge Patterns sason Water	Yes X out granted. 2 or more red aves (B9) (Mil (B10) r Table (C2)	No guired) LRA 1, 2
Type: Depth (inches) marks: posits of sedimi <b>DROLOGY</b> etland Hydrolog mary Indicators Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep	gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2)	storm eveni	t causing flows t causing flows t check all this X Water-S MLR Salt Cru Aquatic Hydroge	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C	ves (B9) and 4B) Ses (B13)	hat feeds (except	Hydric S	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura	No redox, b Indicators ( Stained Lea and 4B) ge Patterns sason Water tion Visible	Yes X out granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima	No guired) LRA 1, 2
Type: Depth (inches) emarks: posits of sedime <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Te Saturation (A3 Water Marks ( Sediment Dep Drift Deposits	gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3)	storm eveni	t causing flows	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph	ves (B9) and 4B) bdor (C1, eres on 1	hat feeds (except ) Living Ro	Hydric S this wetla	oil Present? nd complex. Secondary Water- 4A, Draina, Dry-Se Satura Geome	No redox, b Indicators ( Stained Lea and 4B) ge Patterns sason Water tion Visible orphic Posit	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) 22)	No guired) LRA 1, 2
Type: Depth (inches) emarks: eposits of sedimi <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C	gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) (B4) (B4) (B4) (B4)	storm eveni	t causing flows	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosphu	ves (B9) and 4B) dor (C1 eres on l ced fron (	hat feeds (except ) Living Ro (C4)	Hydric S this wetla	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo	No redox, b Indicators ( Stained Lea and 4B) ge Patterns sason Water tion Visible orphic Positi w Aquitard (	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3)	No guired) LRA 1, 2 ngery (C9
Type: Depth (inches) emarks: eposits of sedimi <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) crust (B4) (B5)	storm even	t causing flows t causing flows t causing flows t causing flows t causing flows MLR MLR Salt Cru Aquafic Hydroge Oxidizen Recent	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosphi ce of Reduc Iron Reduc	ves (B9) and 4B) dor (C1, eres on 1 ted fron ( tion in Ti	hat feeds (except ) Living Ro (C4) liled Soils	Hydric S s this wetla oots (C3) s (C6)	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geome X FAC-N	No redox, b Indicators ( Stained Lea and 4B) ge Patterns rason Water tion Visible orphic Positi w Aquitard ( ieutral Test	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5)	No guired) LRA 1, 2 ngery (C9
Type: Depth (inches) emarks: eposits of sedime (DROLOGY) etland Hydrolog imary Indicators (Surface Water High Water Ta (Saturation (A3) Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) prust (B4) (B5) pracks (B6)	storm even	t causing flows t causing flows t causing flows t causing flows t causing flows t causing flows MLR MLR Aquatic Hydroge Oxidizen Present Stunted	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosphi ce of Reduc or Stresse	ves (B9) and 4B) dor (C1, eres on 1 eed Iron ( tion in Ti d Plants	hat feeds (except ) Living Ro (C4) Illed Soils (D1) (LR	Hydric S this wetla oots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina. Dry-Se Satura Geomo X FAC-N Raised	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( jeutral Test ( Ant Mound	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR	No guired) LRA 1, 2 ngery (C9 A)
Type: Depth (inches) emarks: eposits of sedimo (DROLOGY) etland Hydrolog imary Indicators (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	(if observed):     (if obse	storm eveni ne is require nagery (B7)	t causing flows t causing flows t causing flows t causing flows with the second t causing flows with the second t causing flows MLR Salt Cru Aquatic Hydroge Oxidizen Presend Recent Stunted Other (E	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph ce of Reduc itron Reduc or Stresse Explain in R	ves (B9) and 4B) dor (C1, eres on 1 eed Iron ( tion in Ti d Plants ermarks)	hat feeds (except ) Living Ro (C4) Illed Soils (D1) (LR	Hydric S s this wetla oots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Raised Frost-I	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( jeutral Test I Ant Mound leave Humi	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7)	No guired) LRA 1, 2 ngery (C9 A)
Type: Depth (inches) emarks: eposits of sedimo <b>DROLOGY</b> etland Hydrolog imary Indicators Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege	(if observed):     (if obse	nagery (B7) Surface (B6	t causing flows t causing flows t causing flows t causing flows with the second t causing flows with the second t causing flows MLR Salt Cru Aquatic Hydroge Oxidizen Presend Recent Stunted Other (E	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph ce of Reduc itron Reduc or Stresse Explain in R	ves (B9) and 4B) dor (C1, eres on 1 eed Iron ( tion in Ti d Plants ermarks)	hat feeds (except ) Living Ro (C4) Illed Soils (D1) (LR	Hydric S s this wetla oots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Raised Frost-F	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( jeutral Test I Ant Mound leave Humn	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7)	No guired) LRA 1, 2 ngery (C9 A)
Type: Depth (inches) emarks: eposits of sedime (DROLOGY atland Hydrolog imary Indicators (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege eld Observation	(if observed):     (if obse	nagery (B7) Surface (B8	t causing flows  t caus	in Johnson at apply) atained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph con Reduc or Stresse Explain in R	ves (B9) and 4B) dor (C1, eres on 1 eed Iron ( tion in Ti d Plants termarks)	hat feeds (except ) Living Ro (C4) Iled Soils (D1) (LR	Hydric S this wetla bots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Raised Frost-H	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( ieutral Test I Ant Mound leave Humn	Yes X ut granted. 2 or more rea aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) US (D6) (LRR mocks (D7)	No guired) LRA 1, 2 ngery (C9 A)
Type: Depth (inches) emarks: eposits of sedime (DROLOGY atland Hydrolog imary Indicators (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep (Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege eld Observation irface Water Pre	ent from recent gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) pible on Aerial In stated Concave ns: essent? Yes	nagery (B7) Surface (B8	t causing flows t causing flow	in Johnsor at apply) atained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph er of Reduc or Stresse Explain in R Depth (i	ves (B9) and 4B) es (B13) Odor (C1, eres on 1 eed Iron ( tion in Ti d Plants termarks) nches):_	hat feeds (except ) Living Ro (C4) Illed Soils (D1) (LR	Hydric S this wetla oots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina. Dry-Se Satura Geomo X FAC-N Raised Frost-F	No redox, b Indicators ( Stained Les and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( ieutral Test I Ant Mound leave Humn	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) US (D6) (LRR mocks (D7)	No guired) LRA 1, 2 ngery (C9
Type: Depth (inches) emarks: eposits of sedime (DROLOGY atland Hydrolog imary Indicators (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep (Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege eld Observation inface Water Pre-	ent from recent gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) pible on Aerial In stated Concave ns: esent? Yes	nagery (B7) Surface (B8 5 _ X_	t causing flows  t caus	in Johnsor at apply) atained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph er of Reduc or Stresse Explain in R Depth (i Depth (i	ves (B9) and 4B) res (B13) Odor (C1, eres on 1 eres on 1 eres on 1 d Plants termarks) remarks) nches):	hat feeds (except ) Living Ro (C4) Illed Soils (D1) (LR 	Hydric S this wetla oots (C3) s (C6) (R A)	oil Present? nd complex. Secondary Water- 4A, Draina. Dry-Se Satura Geomo X FAC-N Raised Frost-F	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( ieutral Test I Ant Mound leave Humn	Yes X ut granted. 2 or more rea aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Ids (D6) (LRR mocks (D7)	No auired) LRA 1, 2 ngery (C9
Type: Depth (inches) emarks: eposits of sedime (DROLOGY (etland Hydrolog rimary Indicators) (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep (Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege eted Observation urface Water Prese aturation Presen	(II ODSUITED): ent from recent gy Indicators: (minimum of or r (A1) able (A2) B1) bosits (B2) (B3) B2) brust (B4) (B5) brust (B4) (B5) brust (B4) (B5) brust (B6) bible on Aerial In etated Concave ns: esent? Yes ent? Yes t? Yes	nagery (B7) Surface (B8 s_X s_X	t causing flows  t caus	in Johnson at apply) atained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph en Sulfide C d Rhizosph iton Reduc or Stresse Explain in R Depth (i Depth (i	ves (B9) and 4B) res (B13) Odor (C1, eres on I sed Iron ( tion in Ti d Plants temarks) remarks) nches):_ nches):_	hat feeds (except ) Living Ro (C4) Iled Soils (D1) (LR 1 12 0	Hydric S this wetla oots (C3) (C6) (R A) Wetlan	oil Present? nd complex. Secondary Water- 4A, Draina. Dry-Se Satura Geome Shallon X FAC-N Raised Frost-H	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( ieutral Test I Ant Mound leave Humn	Yes X ut granted. 2 or more rea aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7) Yes X	No auired) LRA 1, 2 ngery (C9 A)
Type: Depth (inches) emarks: eposits of sedime (DROLOGY etland Hydrolog imary Indicators (Surface Water High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege etld Observation Inface Water Pre- ater Table Prese aturation Present includes capillary	(in observed). (in observed). ent from recent gy Indicators: (minimum of or r (A1) able (A2) (B1) bosits (B2) (B3) (B3) (B3) (B3) (B3) (B4) (B5) bracks (B6) bible on Aerial In etated Concave ns: esent? Yes fringe)	nagery (B7) Surface (B8 s_X s_X	t causing flows  t caus	in Johnson at apply) atained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph en Sulfide C d Rhizosph ite of Reduc or Stresse Explain in R Depth (i Depth (i	ves (B9) and 4B) res (B13) Odor (C1, eres on 1 ced Iron ( tion in Ti d Plants remarks) remarks) nches): nches):	hat feeds (except ) Living Ro (C4) Iled Soils (D1) (LR 1 12 0	Hydric S this wetla oots (C3) (C6) (R A) Wetlan	oil Present? nd complex. Secondary Water- 4A, Draina, Dry-Se Satura Geome Shallon X FAC-N Raised Frost-H	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( ieutral Test I Ant Mound leave Humn reave Humn	Yes X ut granted. 2 or more rea aves (B9) (MI (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7) Yes X	No  LRA 1, 2  A)
YDROLOGY /etland Hydrolog rimary Indicators < Surface Water < Surface Water < Saturation (A3 Water Marks ( < Sediment Dep < Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege leid Observation urface Water Pre- fater Table Present roludes capillary escribe Recordent	ent from recent gy Indicators: (minimum of or r (A1) able (A2) 3) B1) vosits (B2) (B3) crust (B4) (B5) crust (B6) crust (B6)	nagery (B7) Surface (B8) s X gouge, mon	t causing flows  t caus	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph ce of Reduc fron Reduc or Stresse Explain in R Depth (i Depth (i Depth (i n Depth (i	ves (B9) and 4B) ees (B13) Ddor (C1, eres on l eed Iron ( tion in Ti d Plants temarks) nches): nches): previous	hat feeds (except ) Living Ro (C4) Iled Soils (D1) (LR 1 12 0 s inspecti	Hydric S s this wetla bots (C3) s (C6) (R A) Wetlan	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo X FAC-N Raised Frost-H d Hydrology eilable:	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( eutral Test I Ant Mound Heave Humi	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7) Yes X	No guired) LRA 1, 2 ngery (C9) A)
YDROLOGY /etiand Hydrolog rimary Indicators < Surface Water < Surface Water < High Water Ta < Saturation (A3 Water Marks ( < Sediment Dep < Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege leid Observation urface Water Present roludes capillary escribe Recorder	ent from recent gy Indicators: (minimum of or r (A1) able (A2) )) (B1) bosits (B2) (B3) crust (B4) (B5) crust (B4) (B6) crust (B4) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7)	nagery (B7) Surface (B8) s_X s_X geuge, mon	t causing flows	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph ce of Reduc or Stresse Explain in R Depth (i Depth (i Depth (i Depth (i	ves (B9) and 4B) ees (B13) Ddor (C1, eres on l eed Iron ( tion in Ti d Plants ternarks) nches): nches): previous	(except ) Living Ro (C4) Iled Soils (D1) (LR 1 12 0 s inspecti	Hydric S a this wetla bots (C3) a (C6) (R A) Wetlan	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo Shallon X FAC-N Raised Frost-H d Hydrology ailable:	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( eutral Test I Ant Mound Heave Humi	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7) Yes X	No LRA 1, 2 ogery (C9) A)
Type: Depth (inches) emarks: eposits of sedimi (DROLOGY (DROLOGY (atland Hydrolog) imary Indicators (Surface Water High Water Ta (Saturation (A3 Water Marks ( Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsety Vege eld Observation urface Water Prese aturation Present includes capillary escribe Recorder	ent from recent gy Indicators: (minimum of or r (A1) able (A2) )) (B1) bosits (B2) (B3) Crust (B4) (B5) Cracks (B6) bible on Aerial In etated Concave DS: esent? Yes ent? Yes fringe) d Data (stream of	nagery (B7) Surface (B8) s_X s_X geuge, mon	t causing flows  t caus	in Johnsor at apply) itained Lea A 1, 2, 4A, st (B11) Invertebrat en Sulfide C d Rhizosph ce of Reduc or Stresse Explain in R Depth (i Depth (i Depth (i Depth (i	ves (B9) and 4B) ees (B13) Ddor (C1, eres on l eed Iron ( tion in Ti d Plants ternarks) nches): nches): previous	hat feeds (except ) Living Ro (C4) Iled Soils (D1) (LR 1 12 0 s inspecti	Hydric S a this wetla bots (C3) a (C6) (R A) Wetlan	oil Present? nd complex. Secondary Water- 4A, Draina Dry-Se Satura Geomo Shallon X FAC-N Raised Frost-H d Hydrology ailable:	No redox, b Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible orphic Positi w Aquitard ( eutral Test I Ant Mound Heave Humi	Yes X ut granted. 2 or more red aves (B9) (Mil (B10) r Table (C2) on Aerial Ima ion (D2) D3) (D5) Is (D6) (LRR mocks (D7) Yes X	No

ENG FORM 6116-9, JUL 2018

See ERDC/EL TR-10-3; the p	proponent a	gency is CE	CW-CO-I	(Authority: AR 335-15, paragraph 5-2a)
oject/Site: Floyd Hill to Veterans Memorial Tunnel		City/Cou	nty: Clear C	Creek County Sampling Date: 9/7/22
oplicant/Owner: CDOT - Region 1				State: CO Sampling Point: WL33
vestigator(s): Fillipi, Kizlinski		Section 7	ownship, Ra	ange: NE4 S3 T4S R72W
ndform (hillside, terrace, etc.): depression		Local relief (c	oncave, con	vex, none). concave Slope (%). 1-
bregion (LRR): LRR E, MLRA 48A Lat: 39.	737889		Long: -	105.432582 Datum: NAD83
il Map Unit Name: Cathedral-Rock outcrop compl	ex, 30 to 70 pe	rcent slopes		NWI classification: UPL
e climatic / hydrologic conditions on the site typica	I for this time o	of year?	Yes X	No (If no, explain in Remarks.)
e Vegetation Soil or Hydrology X	significantly	disturbed?	ve Normal	Circumstances' present? Yes X No
e Vegetation Soil X or Hydrology	naturally pro	blematic? (	If needed, ex	xplain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site r	nap showii	ng samplin	g point lo	ocations, transects, important features, et
lydrophytic Vegetation Present? Yes X lydric Soil Present? Yes X Vetland Hydrology Present? Yes X	No No No	ls the withi	e Sampled A n a Wetland	Area 1? Yes <u>X.</u> No
emarks: ohnson Gulch flows NE and meets I-70 at the sam livert and caused WL32 (PEM) and WL33 (PSS) t	pled location to form at the it	A culvert conv niet. No chanr	eys flow ben el is present	neath 70; however, debris has interrupted flow to the through the wetland.
GETATION – Use scientific names of	Absolute	Dominant	Indicator	
ee Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksheet:
				Number of Dominant Species That
				Are OBL, FACW, or FAC: (A
				Total Number of Dominant Species
		=Total Cover		Percent of Dominant Species That
apling/Shrub Stratum (Plot size: 15	)			Are OBL, FACW, or FAC:100.0% (A
Alnus incana	5	Yes	FACW	
	$\sim \rightarrow$			Prevalence Index worksheet:
				Total % Cover ofMultiply by:
9	$\leftarrow$			OBL species $35 \times 1 = 35$ EACW species $35 \times 2 = 70$
	5	=Total Cover		FAC species $0 \times 3 = 0$
erb Stratum (Plot size: 5 )	1			FACU species 0 x 4 = 0
Phalaris arundinacea	30	Yes	FACW	UPL species 0 x 5 = 0
Typha angustifolia	30	Yes	OBL	Column Totals: 70 (A) 105 (B
Scirpus microcerpus	5	No	OBL	Prevalence Index = B/A =1.50
		_		Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
				X_3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations (Provide support
				5 Wotland New Viscoular Disets
1a	65	=Total Cover		Problematic Hydrophytic Vegetation (Evolution)
loody Vine Stratum (Plot size: 5	_)	Total COVE		Indicators of hydric soil and wetland hydrology mus
				be present, unless disturbed or problematic.
				Hydrophytic
		=Total Cover		Vegetation

800

npling Point: WL	.3	1
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nches) Color (moi	st) %	Color (moist)	% Ty	pe Loc <sup>2</sup>	Texture		Remarks	
0-14 10YR 2/	1 100				Sandy			
				_	-			
		-			5			
			===		1			
								_
	==			737				
ype: C=Concentration, D	=Depletion, RM=	Reduced Matrix, C	S=Covered	or Coated Sa	nd Grains.	<sup>2</sup> Location: PL	=Pore Lining, M=Matr	İX.
dric Soil Indicators: (Ap	oplicable to all I	LRRs, unless othe	erwise noted	1.)	Ind	icators for Pro	blematic Hydric Soi	ls":
HISTOSOL (A1)		Sandy Gle	yed Mathx (E	54)		2 cm Muck (A	10) (LRR A, E)	
Histic Epipedon (A2)		Sandy Re	dox (SS)			Iron-Manganes	se Masses (F12) (LR	R D)
Black Histic (A3)		Stripped N	latrix (S6)	_		Red Parent Ma	aterial (F21)	
Hydrogen Sulfide (A4)		Loamy Mu	icky Mineral (	(F1) (except	MLRA 1)	Very Shallow I	Dark Surface (F22)	
1 cm Muck (A9) (LRR I	D, G)	Loamy Gle	eyed Matrix (I	F2)	-	Other (Explain	in Remarks)	
Depleted Below Dark S	urface (A11)	Depleted I	Matrix (F3)		Q		a har har har har har har har har har ha	5
_ Thick Dark Surface (A1	2)	Redox Da	rk Surface (F	6)	find	licators of hydro	ophytic vegetation and	d
Sandy Mucky Mineral (	S1)	Depleted I	Dark Surface	(F7)		wetland hydrol	ogy must be present,	
2.5 cm Mucky Peat or F	Peat (S2) (LRR (	3)Redox De	pressions (F8	3)		unless disturbe	ed or problematic.	
estrictive Laver (if obser	ved):							
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ENG FORM 6116-9, JUL 2018



Photos



Photo Point 1: Wetland WL1 along the right bank of Clear Creek, facing downstream. Dominated by narrow-leaf willow, it is a fringe along the bank.



Photo Point 2: Facing upstream, wetland WL2 is a narrow-leaf willow dominated fringe along Clear Creek.



Photo Point 3: Water birch and Baltic rush dominate wetland WL4, facing downstream.



Photo Point 4: Facing downstream on a reach of Clear Creek. The channel is confined between rip rap along I-70 on the left bank, and a rip rap-stabilized bank on the right.



Photo Point 5: About 1,500 ft downstream from Photo Point 4, facing upstream through the same channelized reach.



Photo Point 6: Wetland WL5 is mostly narrow-leaf willow with some hydric herbs, situated on the floodplain, facing downstream.



**Photo Point 7:** Facing upstream along wetland WL6, a fringe along the creek dominated by Nebraska sedge and narrow-leaf willow.



Photo Point 8: Wetland WL7 is a dense mix of narrow-leaf willow, water birch, and gray willow, facing upstream.



Photo Point 9: Leafy tussock sedge dominates wetland WL8, a depression on the larger floodplain WL7, facing west.



Photo Point 10: Formed on an outside bend of the creek, narrow-leaf willow and Baltic rush dominate wetland WL10, facing upstream.



Photo Point 11: Facing upstream at wetland WL11, it is a fringe of water birch with other hydric herbs.



Photo Point 12: Wetland WL12 is mostly an island with a short connection to the shore, creating a side channel.



Photo Point 13: Wetland WL14 is mostly narrow-leaf willow and Baltic rush, confined to the bank between bridges. Facing west from the opposite bank.



Photo Point 14: Facing east, wetland WL15 is a monoculture of soft-stem club-rush. WL14 is in the background along the creek.



Photo Point 15: Facing downstream at wetland WL16, narrow-leaf willow and water birch are common with Baltic rush in the herbaceous layer.



Photo Point 16: Wetland WL17 is a small rocky island of narrow-leaf willow and gray willow, facing north from the narrow side channel along the right bank.



Photo Point 17: Facing upstream, this reach of Clear Creek is confined by rip rap on both banks, I-70 on the left bank and the trail on the right bank.



Photo Point 17: Facing downstream, no wetlands or floodplains are present through this reach.



**Photo Point 18:** Wetland WL18 is a narrow-leaf willow-dominated island, facing upstream near the western end of the feature.



Photo Point 19: Narrow-leaf willow and water birch dominate the shrub layer, while Baltic rush and spreading bent for a dense herb layer, facing upstream.



Photo Point 20: Facing upstream, this reach of Clear Creek is confined by a steep embankment to I-70 and a rip rap-stabilized right bank.



**Photo Point 20:** Facing downstream, channelization has prevented floodplain and wetland development through this reach.



Photo Point 21: Sawmill Gulch, facing downstream. OHWMs are three to four feet wide, clear bed and bank and change in vegetation.



Photo Point 22: Wetland WL21 is a dense fringe of water birch along the right bank of the creek, facing downstream.



Photo Point 23: Facing upstream, WL22 is a small island dominated by narrow-leaf willow. A narrow side channel flows between the island and the right bank of the creek.



Photo Point 24: Baltic rush and narrow-leaf willow dominate wetland WL23, formed along an inside bend in the creek, facing downstream.



**Photo Point 25:** Facing upstream at wetland WL24, narrow-leaf willow dominates this floodplain. The upstream end of island wetland WL25 is on the right, and WL23 is in the background, opposite bank.



**Photo Point 26:** Near Hwy 6/I-70 merge facing upstream, this reach is channelized with rip rap and concrete walls.



Photo Point 26: Clear Creek flowing under I-70, facing downstream. Flow is directed to the opening with concrete walls and rip rap.



Photo Point 27: Wetland WL26 is a narrow fringe of narrow-leaf willow and spreading bend, facing upstream.



Photo Point 28: Clear Creek, facing upstream, has been channelized through this reach.



Photo Point 28: Facing downstream, both banks have been stabilized with rip rap.



Photo Point 29: Rip rap stabilization continues downstream from Photo Point 28, facing upstream.



Photo Point 29: Facing downstream, steep rocky banks do not support wetland formation.



Photo Point 30: Wetland WL27 is a narrow fringe of Nebraska sedge and narrow-leaf willow, facing downstream.



**Photo Point 31:** From the embankment facing south, wetland WL31 is a fringe in the foreground, wetland WL30 is the large narrow-leaf willow along the opposite bank.



Photo Point 32: Facing south from above, wetland WL32 is the narrow-leaf willow portion, WL33 is the narrow-leaf cattail-dominated portion.



**Photo Point 33:** Wetland WL33 is formed where Johnson Gulch meets I-70 and backs up at a partiallyblocked culvert, facing south.



**Photo Point 34:** Drainage OW2, an intermittent or ephemeral tributary to Clear Creek. Facing upstream from the trail, a culvert carries it to wetland WL24 from this point.