WETLAND DELINEATION REPORT

East Vail Workforce Subdivision Eagle County, Colorado



prepared for:

TRIUMPH DEVELOPMENT

12 VAIL ROAD, SUITE 700, VAIL, CO 81657

&

WESTERN ECOLOGICAL RESOURCE

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1.0 INTRODUCTION

Triumph Development has plans to construct a workforce housing project near the I-70 Exit in East Vail. The development would be located on the western part of the ±23.3-acre property, on a 5.397-acre parcel which is the focus of this wetland delineation. The eastern 17.915 acres will be designated for Natural Area Preservation. Specifically, the project site is located in the southeast ¼ of Section 2 of Township 5 South and Range 80 West in Eagle County, Colorado (Figures 1 & 2).

To aid in project planning, a wetland delineation was completed for the 5.397-acre project area where the development would be located. This report describes the wetlands and waters identified in terms of their vegetation, soil, and hydrology, and includes photos and a Wetland Map. Please note, all Figures are included in Section 6.0, Tables are in Section 7.0, and Photos are in Section 8.0. Appendix A contains copies of the field data forms.

2.0 ENVIRONMENTAL SETTING

The East Vail Workforce Housing project site is located on a south to southwest-facing hillside above the Frontage Road on the north side of I-70 (Photo 1). The 5.397-acre parcel where the development would be located is dominated by aspen (Populus tremuloides) forest with scattered Engelmann spruce (Picea engelmanii) and a mixed mountain shrub community that includes serviceberry (Amelanchier alnifolia), snowberry (Symphoricarpos rotundifolius), chokecherry (Prunus virginiana var. melanocarpa), Woods' rose (Rosa woodsii), and mountain mahogany (Cercocarpus montanus), among other species (Photo 2). There is a small seep wetland near a landslide area at the eastern boundary (Photos 3 & 4), and a narrow ephemeral stream channel that crosses the western side (Photo 5). Elevations of the delineation area range from a high of 8,520 in the northeastern corner to a low of 8,374 in the southwestern corner where the ephemeral stream channel flows off the project site.

3.0 DELINEATION METHODS

Wetlands were delineated by Heather Houston of Birch Ecology, LLC and formerly of Western Ecological Resource, Inc. and David Buscher of Buscher Soil & Environmental, Inc. in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (1987) and the Regional Supplement for the Western Mountains, Valleys and Coast (2010) on October 24, 2017. In general, wetland boundaries were delineated and flagged based upon the prevalence of hydrophytic vegetation, hydric soils and indicators of a wetland hydrology. Field forms for the three test pits with vegetation, soil and hydrology data are included in Appendix A. These test pits are located in both wetland and upland habitats. In general, plant species names follow Weber and Whitmann (1992). The wetland status of plants follows the 2016 National List for the Western Mountains, Valleys and Coast Region. Classification of wetlands follows Cowardin et al. (1979). Wetland flagging was surveyed by Peak Land Surveying of Vail, Colorado.

4.0 WETLANDS & WATERS OF THE U.S.

Approximately 377 square feet of a seep wetland are located within the 5.397-acre project area boundary. In addition, approximately 68 linear feet of an ephemeral stream channel bisect the project site, as illustrated by the Wetland Map (Figure 3) and summarized in Table 1.

4.1 Wetland A

4.1.1 Location

Wetland A is a seep located near the eastern boundary of the project site. The wetland extends into the project area from the Natural Area Preservation parcel to the east. Approximately 377 square feet of this wetland occur within the 5.397-acre project site (Photos 3 & 4).

4.1.2 Classification

Under the Cowardin Classification System for Wetlands and Deepwater Habitats (Cowardin et al., 1979), Wetland A is in the Palustrine System, Scrub-Shrub Wetland Class.

4.1.3 Vegetation

Wetland A is a seep within the aspen forest (Photos 3, 4 & 6). In the area mapped as wetlands, the shrubby overstory is dominated by willows (Salix bebbiana, S. scouleriana), redosier dogwood (Cornus sericea), and bush honeysuckle (Distegia involucrata), with serviceberry, snowberry, Woods' rose, common juniper (Juniperus communis), and mountain maple (Acer glabrum) in the moist soil at the periphery. The understory of the delineated wetland is dominated by a sparse cover of beaked sedge (Carex utriculata) growing with cow parsnip (Heracleum sphondylium ssp. montanum), starry false Solomon's seal (Maianthemum stellatum) and monkshood (Aconitum columbianum), as well as the shade-tolerant introduced species orchard grass (Dactylis glomerata).

4.1.4 Hydrology

This wetland is a seep fed by groundwater discharge and snowmelt runoff. As noted on the data form for Pit 3, the soil was saturated below a depth of 11 inches on the date of the delineation, and there was flowing water nearby in a small channel.

4.1.5 Soils

Three soil pits were used to define the limits of Wetland A. Pits 1 and 2 were located just outside the wetland boundary (Photo 7) in a shallow drainage swale. Both pits lacked hydric soil and indicators of a wetland hydrology. Pit 3 was located inside the wetland boundary. The soil was hydric and was saturated below a depth of 11 inches (Photo 8).

4.2 Ephemeral Stream Channel

4.2.1 Location

A 2-foot-wide, rocky ephemeral stream channel is located in the western portion of the project site (Photo 5). Approximately 68 linear feet of this channel is within the project boundary.

4.2.2 Classification

The ephemeral stream is in the Riverine System, Intermittent Subsystem, Streambed Class.

4.2.3 Hydrology

The ephemeral stream is fed by snowmelt runoff and likely seasonal groundwater discharge from the steep hillside above the parcel. The stream flows south across the site and into a 24-inch culvert in the bottom of a depression, where the inlet is buried by rocks. The outfall is on the south side of I-70, and it discharges into Gore Creek.

5.0 ANALYSIS OF JURISDICTIONAL STATUS

Wetland A is a seep that does not connect to other waters of the U.S. and is likely a nonjurisdictional feature. In contrast, the ephemeral stream has a direct surface connection to Gore Creek via a 24-inch culvert below I-70. Therefore, the ephemeral stream is likely jurisdictional.

6.0 FIGURES

Booth Creek SALS Gaging OPT Project Area Pitkin Creek 8344 Parcel Boundary Gore Creek BOUNDARY Gaging Sta I-70 East Vail Exit 00 Gaging Sta 2400 800

39°38'0"N

subed

Societ

39°39'0"N



106°19'0"W





106°18'0"W

Figure 1. Project Location Map East Vail Workforce Subdivision

National Geographic



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Figure 2. Aerial Photograph East Vail Workforce Subdivision







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Legend:

- Wetlands
- ⊖_{Pit 1} Soil Pits
- Ephemeral Stream Channel
- Culverts
- Project Boundary

Wetland Flagging Surveyed by: Peak Land Surveying Inc. of Vail, CO



Figure 3. Wetland Map East Vail Workforce Housing



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7.0 TABLES

TABLE 1Potential Waters of the U.S. SummaryEast Vail Workforce Housing Project

Potential Waters of the U.S.	Size	<u>Location</u>
Wetlands		
Wetland A	377 ft ²	39.645810
	(<0.01 ac)	-106.307616
Total Wetlands	377 ft ²	
Aquatic Habitats		
Ephemeral stream channel	68 LF	39.646449
		-106.310683
Total Aquatic Habitats	68 LF	

TABLE 2 Vascular Plant Species List East Vail Workforce Housing Project

<u>Scientific Name</u>	<u>Common Name</u>	Family	<u>Origin*</u>	Wetland <u>Status**</u>
Trees				
Picea engelmannii	Engelmann spruce	Pinaceae	N	FAC
Populus tremuloides	Asnen	Salicaceae	N	
	730011	Juliedeede		17.00
Shrubs				E A OLI
Acer glabrum	Mountain maple	Aceraceae	N	FACU
Amelanchier alnifolia	Serviceberry	Rosaceae	N	FACU
Artemisia tridentata var. vasevana	Mountain big sagebrush	Asteraceae	Ν	NL
Cercocarpus montanus	Mountain mahoaanv	Rosaceae	Ν	NL
Chrvsothamnus parrvi	Parry's rabbitbrush	Asteraceae	Ν	NL
Cornus sericea	Redosier doawood	Cornaceae	N	FACW
(C. stolonifera)				
Distegia involucrata	Bush honeysuckle	Caprifoliaceae	Ν	FAC
Juniperus communis	Common juniper	Cupressaceae	Ν	UPL
Prunus virginiana	Choke cherry	Rosaceae	Ν	FACU
var. melanocarpa				
Ribes inerme	Whitestem gooseberry	Grossulariaceae	N	FAC
Rosa woodsii	Woods' rose	Rosaceae	N	FACU
Salix bebbiana	Bebb willow	Salicaceae	N	FACW
Salix monticola	Mountain willow	Salicaceae	N	OBL
Salix scouleriana	Scouler willow	Salicaceae	N	FAC
Symphoricarpos	Snowberry	Caprifoliaceae	N	NL
rotundifolius				
Perennial Graminoids				
Bromus inermis	Smooth brome	Poaceae	I	UPL
Carex utriculata	Beaked sedge	Cyperaceae	Ν	OBL
Dactylis glomerata	Orchard grass	Poaceae	I	FACU
Elymus trachycaulus	Slender wheatgrass	Poaceae	Ν	FAC
Phleum pratense	Timothy	Poaceae	I	FAC
Poa compressa	Canada bluegrass	Poaceae	Ι	FACU
Perennial Forbs				
Achillea Ianulosa	Yarrow	Asteraceae	N	Facu
Aconitum columbianum	Monkshood	Helleboraceae	N	FACW
Agastache urticifolia	Nettleleaf aight hyssop		N	FACU
Arctostaphylos uva-ursi	Kinnickinnick	Fricaceae	N	FACU
Aster foliaceus	Leafy bracted aster	Asteraceae	N	FACU
Cirsium arvense	Canada thistle	Asteraceae	+	FAC
Frasera speciosa	Monument plant	Gentianaceae	N	NI
Geranium richardsonii	Richardson's Geranium	Geraniaceae	N	FAC
Heracleum sphondylium	Cow parsnip		N	FAC
ssp. montanum		A PIUCOUE	1 1	
Linaria vulgaris	Toadflax	Scrophulariaceae	+	NL

TABLE 2 Vascular Plant Species List East Vail Workforce Housing Project

<u>Family</u>	<u>Origin*</u>	Wetland <u>Status**</u>
Berberidaceae	Ν	NL
Convallariaceae	Ν	FAC
Celastraceae	Ν	FACU
Pyrolaceae	Ν	FACU
Asteraceae	Ν	FAC
Thalictraceae Fabaceae	N N	FAC FAC
	FamilyBerberidaceaeConvallariaceaeCelastraceaePyrolaceaeAsteraceaeThalictraceaeFabaceae	FamilyOrigin*Berberidaceae ConvallariaceaeN NCelastraceae PyrolaceaeN NAsteraceaeN NThalictraceae FabaceaeN N

* <u>Origin</u>

N = Native I = Introduced

I+ = Colorado State Noxious Weed

** Wetland Status

OBL = Obligate Wetland FACW = Facultative Wetland FAC = Facultative FACU = Facultative Upland UPL = Obligate Upland NO/NL = No Status in this Region

8.0 PHOTOS



Photo 1. View from the project site to the southeast, toward the I-70 corridor and East Vail Exit. (10/18/17).



Photo 2. The steep forested hillside above the project site is dominated by aspen. (10/24/17).



Photo 3. Wetland A is a seep with a shrubby overstory dominated by willows and dogwood, with beaked sedge and cow parsnip in the understory. (10/24/17).



Photo 4. Wetland A is on a steep, southwestern-facing slope. (10.18/17).



Photo 5. The rocky ephemeral stream channel has a bed that averages about two feet wide. (10/24/17).



Photo 6. Aspen forest next to Wetland A. (10/24/17).



Photo 7. Pits 2 (foreground) and 1 (background) are in a drainage swale below Wetland A. (10/24/17).



Photo 8. Pit 3 is within Wetland A.

9.0 REFERENCES

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APPENDIX A. FIELD DATA FORMS

WETLAND DETERMINATION		/I – Western Mou	ntains, Valleys, and Coast Region
Project/Site: East vail Workforce H Applicant/Owner: Triumph Perclopm	evily a	City/County:	IC Sampling Date: ID/24///
Investigator(s): 10USTON 9 SUSCIUM		Section, Township, Rar	nge: <u>Sec. 2155R80W</u>
Landform (hillslope, terrace, etc.):		Local relief (concave) o	convex, none): Slope (%):
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Unit Name:/VIA		>/	NWI classification:
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes 🔀 No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	_ significantly of	disturbed? Are "	Normal Circumstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology	_ naturally prol	blematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No <u>×</u> No <u>×</u>	Is the Sampled within a Wetlan	Area nd? Yes No
Remarks: WP918= 0387812 H38927	71		
VEGETATION – Use scientific names of pla	ants.		
<u>Tree Stratum</u> (Plot size:) 1	Absolute <u>% Cover</u>	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
23.			Total Number of Dominant
4		= Total Cover	Percent of Dominant Species 60% (AP)
Sapling/Shrub Stratum (Plot size: 10×10) 1. Acevalabrum 2. Salixtocf. mont. colm 3. JUNIPENUS Communis 4. Symphovicar pos roturdifo 5.	40 30 5 10	Y FACU Y OBL A UPL N NL	Prevalence Index worksheet:
Herb Stratum (Plot size: <u>10×10</u>) 1. <u>Hevac Ieum Sphondy Iium</u> 2. Dacty Iis alomerata	<u>40</u> 7.0	= Total Cover <u>Y</u> FAC Y FAC	FACU species x 4 = UPL species x 5 = Column Totals: (A) Draviologoe Index = P(A =)
3. Pyrolla rotinolifolia. 4. Carex SP (leaves only) 5. Thalictrum femolteri	15 25	N FACU N FACW N FAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
8 9			 3 - Prevalence Index is ≤3.0° 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
Weady Vina Stratum (Dist size:	82	= Total Cover	be present, unless disturbed or problematic.
1)			Hydrophytic
2 % Bare Ground in Herb Stratum		= Total Cover	Vegetation Present? Yes No
Remarks:			

Fast Vail SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Type¹ Texture Remarks (inches) % 00 00 ²Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) ___ Sandy Redox (S5) ____ 2 cm Muck (A10) Histic Epipedon (A2) ____ Red Parent Material (TF2) ____ Stripped Matrix (S6) ___ Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Black Histic (A3) ____ Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ____ Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Hydric Soil Present? Depth (inches): Yes No Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)

Timary manoatoro (miniman	or one require				
Surface Water (A1)			Water-Stained Leaves (B9	9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)			MLRA 1, 2, 4A, and 48	В)	4A, and 4B)
Saturation (A3)			Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)			Aquatic Invertebrates (B13	3)	Dry-Season Water Table (C2)
Sediment Deposits (B2)			Hydrogen Sulfide Odor (C	1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		_	Oxidized Rhizospheres al	ong Living Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)		_	Presence of Reduced Iron	n (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)			Recent Iron Reduction in	Tilled Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stressed Plant	s (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Ae	rial Imagery (F	37)	Other (Explain in Remarks	S)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Cor	cave Surface	(B8)			
Field Observations:	and the second se		,		
Surface Water Present?	Yes	No_V	Depth (inches):		
Water Table Present?	Yes	No_	_ Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No_V	Depth (inches):	Wetland Hy	drology Present? Yes No
Describe Recorded Data (str	eam gauge, m	nonitoring	well, aerial photos, previous	s inspections), if availa	able:
Remarks: $/h \leq$	hallow	v a	hainege s	usele.	
			*		

WETLAND DETERMINATION DAT		I – Weste	ern Moun	tains, Valleys, and Coast Region
Project/Site: <u>East Vail Workfwce Hi</u> Applicant/Owner: <u>Triumph Develop mem</u> Investigator(s): <u>HOUSTON & BUSCUE</u> Landform (hillslope, terrace, etc.): <u>SWOLE</u> Subregion (LRR): <u>E</u> Soil Map Unit Name: <u>M/A</u> Are climatic / hydrologic conditions on the site typical for this to Are Vegetation <u>, Soil</u> , or Hydrology <u>sig</u> Are Vegetation <u>, Soil</u> , or Hydrology <u>na</u> SUMMARY OF FINDINGS – Attach site map s Hydrophytic Vegetation Present? <u>Yes</u> No	Lat: L time of yea prificantly d turally prob	ity/County: Section, Tow Local relief r? Yes isturbed? olematic? sampling	nship, Ran concave, c No Are "h (If nee g point lo	Sampling Date: Image: Imag
Hydric Soil Present? Yes No	$\frac{\chi}{4}$	ls the withi	e Sampled n a Wetlan	Area d? Yes No
Wetland Hydrology Present?Yes NoRemarks: $WP 919 = 0.387810$ 4389768 4389768		in s Olosev	world v	, surface saturation
VEGETATION – Use scientific names of plants	S.	Dominant	Indicator	Deminance Test worksheet:
1. Populus Tremulaides	<u>% Cover</u>	Species?	<u>Status</u> FACU	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size: $10 \times 10^{\prime}$)	20	= Total Cov	/er	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>7510</u> (A/B)
1. Salix cf. bebloidnor	20	Y	FACW	Prevalence Index worksheet:
2. Symphoni carpors vortund folius	15	Y	NL	OPL species
3. Pts-legion involveration	-5-	N	FAC	FACW species x 2 =
4. FTMPICNAL WIEV GINIHOUM	7_	N	AW	FAC species x 3 =
5. OV NUS SEVERIA	2	<u>_N</u>	17HU	FACU species x 4 =
Herb Stratum (Plot size: 10×10')	-4/-	= Total Cov	/er	UPL species x 5 =
1. Dacty is glomerated	20	1	FACU	Column Totals: (A) (B)
2. HRALLS TYME LAND CHARLES	30	-ti-	EAC	Prevalence Index = B/A =
A P. WINDE WIN WINA ALA	6	N	FAC,	Hydrophytic Vegetation Indicators:
5 Armitian Coleman Joi Crean	10	N.	FACIN	1 - Rapid Test for Hydrophytic Vegetation
6.)			11000	2 - Dominance Test is >50%
7				 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
0				5 - Wetland Non-Vascular Plants ¹
10	1			Problematic Hydrophytic Vegetation ¹ (Explain)
11.			W	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	80	= Total Cov	er	be present, unless disturbed or problematic.
1				Hudronhutio
2.				Vegetation
% Bare Ground in Herb Stratum		= Total Cov	ver	Present? Yes No
Remarks: below pit #1				

soil East Vail

10/24/17 Sampling Point:

0

J. J. K.

Depth Matrix	n needed to documen Redox Fo	eatures	or confirm	the absence	e of Indicators.)
(inches) Color (moist) %	Color (moist)	%Type ¹	Loc ²	Texture	Remarks
0-16 104/22/1 100	Harden >	12411) ²⁷ 125091	11.13 S ¹⁰	6	
16-18 1001222, 100	O <u>865519</u> 55(25)**	Garden and Alexandre	W.M	" Carlor	
10 10/10					
Control Contro					-
					-
					· ·
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=C	overed or Coate	d Sand Gra	ains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all I	RRs, unless otherwis	se noted.)		Indicat	ors for Problematic Hydric Soils':
Histosol (A1)	Sandy Redox (S5)	•		2 c	m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (Se	(E1)	MIDA 1)	Re	d Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleved Mat	riv (F2)	WILKA I)		ry Shallow Dark Surface (TFTZ)
Depleted Below Dark Surface (A11)	Depleted Matrix (F:	3)		0	
Thick Dark Surface (A12)	Redox Dark Surfac	e (F6)		³ Indicat	tors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Sur	face (F7)		wetl	and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depression	s (F8)		unle	ess disturbed or problematic.
Restrictive Layer (if present):					
Туре:					
Depth (inches):				Hydric So	il Present? Yes No
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one required	; check all that apply)			Seco	ondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained	d Leaves (B9) (e	xcept		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	1)			Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invert	ebrates (B13)			Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sul	fide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhiz	ospheres along	Living Root	ts (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of F	Reduced Iron (C4	.)	—	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron R	eduction in Tilled	d Soils (C6))	FAC-Neutral Test (D5)
Surface Soll Cracks (B6)	Stunted or Str	essed Plants (D	1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Sparsely Vegetated Concave Surface (P		r in Remarks)			riost-neave numinocks (D7)
Field Observations:					
Surface Water Present? Ves	Depth (inche	e).			
Water Table Present? Yes N	Depth (inche	s):	-		
Saturation Present? Yes N	lo Depth (inche	s):	_ Wetla	nd Hydrolog	gy Present? Yes No
(includes capillary tringe) Describe Recorded Data (stream dauge, mo	nitoring well, aerial pho	tos, previous ins	pections), i	f available:	
	interning in eni, wernar prio		peederie),, .		
Remarks: Just below	Pit 1	in s	Same	de.	rierge suele,

Project/Site: East Vai Walkforce Hassing city/County: Eag Applicant/Owner: Triumph Development Investigator(s): Houstand Buschell Section, Township, Rang Landform (hillslope, terrace, etc.): Swalk Local relief (concave, cc Subregion (LRR): E Local relief (concave, cc Subregion (LRR): E Local relief (concave, cc Subregion (LRR): F No Are vegetation, Soil, or Hydrology significantly disturbed? Are "N Are vegetation, Soil, or Hydrology significantly disturbed? Are "N Are vegetation, Soil, or Hydrology naturally problematic? (If nee SUMMARY OF FINDINGS – Attach site map showing sampling point lo Hydrophytic Vegetation Present? Yes No Hydrophytic Vegetation Present? Yes No Remarks: below Selep in SWALL SWALL Source Vegetation 1 Absolute Dominant Indicator % Cover Species? Status 1 2 = Total Cover sapling/Shrub Stratum (Plot size: DXI0' = Total Cover sapling/Shrub Stratum (Plot size: DXI0'	Image: Sampling Date: Sampling Date: State: Sec. 2 TSSE80W e: Sec. 2 TSSE80W nvex, none): Slope (%): Slope (%)
Applicant/Owner: Triumph Development J nvestigator(s): HovStonic BUSCME Section, Township, Range Landform (hillslope, terrace, etc.): SWARE Local relief (concave, cc Subregion (LRR): E Lat: Local relief (concave, cc Soil Map Unit Name: MA Lat:	
Anvestigator(s): HowStords Buscher Section, Township, Rang a.andform (hillslope, terrace, etc.): Swill Local reliet (concave, cc Subregion (LRR):	e: <u>Sec. Z TSSR 80W</u> nvex, none): Slope (%): Long: Datum: NWI classification: (If no, explain in Remarks.) ormal Circumstances" present? Yes No ded, explain any answers in Remarks.) cations, transects, important features, etc. rea ? Yes No <i>Uted Soin</i> .
andform (hillslope, terrace, etc.): <u>SWUR</u> Local reliet (concave, or isubregion (LRR): <u>Lat:</u> toil Map Unit Name: <u>MA</u> are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>No</u> are Vegetation <u>Soil</u> , or Hydrology <u>significantly disturbed</u> ? Are "N are Vegetation <u>Soil</u> , or Hydrology <u>naturally problematic</u> ? (If nee SUMMARY OF FINDINGS – Attach site map showing sampling point lo Hydrophytic Vegetation Present? Yes <u>No</u> Hydric Soil Present? Yes <u>No</u> Wetland Hydrology Present? Yes <u>No</u> Is the Sampled A within a Wetlance Remarks: Delow Selep in SWALL SWALC Solver /EGETATION – Use scientific names of plants. Tree Stratum (Plot size: <u>)</u> 1. <u>Solver</u> 3. <u>Solver</u> 4. <u>Sapling/Shrub Stratum</u> (Plot size: <u>DXIO</u>) 1. <u>Solver</u> 5. <u>No</u> Solver 5. <u>No</u> Hydrology Status Cover Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver Solver 	nvex, none): Slope (%): Long: Datum: NWI classification:
ubregion (LRR):	Long: Datum: Datum: NWI classification: (If no, explain in Remarks.) Dormal Circumstances" present? Yes No ded, explain any answers in Remarks.) cations, transects, important features, etc. rea ? Yes Mtcd Soint.
Decomposition Decomposition<	NWI classification: (If no, explain in Remarks.) formal Circumstances" present? Yes No ded, explain any answers in Remarks.) cations, transects, important features, etc. rea ? Yes No Cutcol Sourd. Dominance Test worksheet:
Indep Only Name:	
re vegetation, Soil, or Hydrologysignificantly disturbed? Are "N re Vegetation, Soil, or Hydrologynaturally problematic? (If nee Hydrophytic Vegetation Present? Yes X No	
re vegetation, soil, or Hydrology significantly disturbed? Are in the intervention of the interventinterventintery of the interventinterventintervention of	binnal Circumstances present? Yes No ded, explain any answers in Remarks.) cations, transects, important features, etc. rea ? Yes No ØHCOL SOIN. Dominance Test worksheet:
Image: Problematic problematind problematic problematic problematic problematic pro	Deci, explain any answers in Remarks.) cations, transects, important features, etc. rea ? Yes MHCM SO(1). Dominance Test worksheet:
UMMARY OF FINDINGS – Attach site map showing sampling point lo Hydrophytic Vegetation Present? Yes No Is the Sampled / Hydric Soil Present? Yes No Is the Sampled / Wetland Hydrology Present? Yes No Is the Sampled / Wetland Hydrology Present? Yes No Is the Sampled / Remarks: below Seep in Small Swall Swall Swall Softward Softward ZEGETATION – Use scientific names of plants. Absolute Dominant Indicator Tree Stratum (Plot size:) % Cover Species? 1.	cations, transects, important features, etc. rea ? Yes X No ØHCOL SOIN. Dominance Test worksheet:
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Is the Sampled A within a Wetland Wetland Hydrology Present? Remarks: below Seep in SMAll Swale M Soffw EGETATION – Use scientific names of plants. Tree Stratum (Plot size:) 1. 2. 3. 4. 5. 2. 3. 4. 4. 2. 3. 4. 4. 5. COYAL'S Sever in Annual Plants In Stratum (Plot size:) 1. 2. 3. 4. 4. 5. COYAL'S Sever in Annual Plants 1. 2. 3. 4. 5. COYAL'S Sever in Annual Plant 5. COYAL'S Sever in Annual Plant 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7	rea ? Yes <u>X</u> No <u>Yes</u> WHEOL SO(1).
Hydric Soil Present? Yes X No Is the Sampled / within a Wetland Wetland Hydrology Present? Yes X No within a Wetland Remarks: Delow Selp in SMAIL SWALE // Softwork Softwork Softwork //EGETATION – Use scientific names of plants. Absolute Dominant Indicator //EGETATION – Use scientific names of plants. Absolute Dominant Indicator //EGETATION – Use scientific names of plants. Absolute Dominant Indicator //L //EGETATION – Use scientific names of plants. Dominant Indicator //L //EGETATION – Use scientific names of plants. Dominant Indicator //EGETATION – Use scientific names of plants. Dominant Indicator //EGETATION – Use scientific names of plants. Dominant Indicator //L //Edetation Species? Status 1. // ///Edetation ////////////////////////////////////	? Yes No 2 Yes Yes 2
Wetland Hydrology Present? Yes X No Main a rootain Remarks: below Seep in Small Swall Swall Swall Swall Softw EGETATION – Use scientific names of plants. Tree Stratum (Plot size:) Absolute	Dominance Test worksheet:
Tree Stratum (Plot size:) Absolute Dominant Indicator % Cover Species? Status 1. 2. 3. 4. 5. 1. 2. 3. 4. 5. 1. 2. 3. 4. 5. 1. 2. 3. 4. 5. 1. 2. 3. 4. 5. 1. 2. 3. 4. 5. 1. 2. 3. 3. 3. 3. 3. 4. 5. 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.6 1.7 1.8 1.5 <tr< td=""><td>Dominance Test worksheet:</td></tr<>	Dominance Test worksheet:
COMPANIES of plants. Absolute Dominant Indicator $\frac{\% \text{ Cover Species? Status}}{\text{Species? Status}}$ 1.	Dominance Test worksheet:
Tree Stratum (Plot size:) $\frac{1}{\%}$ Cover Species? Status 1 $\frac{1}{\%}$ Cover Species? Status 2 $\frac{1}{\%}$ Cover Species? Status 3 $\frac{1}{\%}$ Cover Species? Status 4 $\frac{1}{\%}$ Cover Species? Status 5 $\frac{1}{\%}$ Cover Species? Status 1 $\frac{1}{\%}$ Cover Species? Status 3 $\frac{1}{\%}$ Statum (Plot size: $\frac{10}{\%}$) 1. Solice Species? Status $\frac{1}{\%}$ FACW 2 $\frac{1}{\%}$ FACW 3. Juni per US Communics $\frac{1}{\%}$ FACW 4 $\frac{1}{\%}$ FACW 3. Juni per US Communics $\frac{1}{\%}$ FACU 5 $\frac{1}{\%}$ FACU 90 = Total Cover $\frac{1}{\%}$ FACU 90 = Total Cover $\frac{1}{\%}$ FACU	Dominance rest worksheet.
1.	Number of Dominant Species
2	That Are OBL, FACW, or FAC: (A)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total Number of Dominant
$\frac{1}{2} = Total Cover$	Species Across All Strata: (B)
$\begin{array}{c} \underline{Sapling/Shrub Stratum} (Plot size: \underline{OX[O']}) \\ \underline{Sqlik} (\underline{f}, \underline{be} \underline{bhi} \underline{0} \underline{n} \underline{0}) \\ \underline{Sqlik} (\underline{f}, \underline{sevetia} \underline{0}) \\ S$	Percent of Dominant Species
1. Salik $(f. bebbiand)$ 36YFACW2. COVAUS SEVECION25YFACW3. JUNI DEVUS COMMUNIS10NUPL4. Salie $(f. Scouleviand)$ 15NFAC5. [COSA WOODSII5NFACHerb Stratum (Plot size: 10×10^{7})90= Total Cover	That Are OBL, FACW, or FAC:(A/B)
2. COVAUS SEVERIA ZS Y FACU 3. JUNI PRAVIS COMMUNIS 10 N UPL 4. SOLIZ CE. SCOVIEVIANON 15 N FACU 5. [OSA WOODSII] 5 N FACU Herb Stratum (Plot size: 10×10') = Total Cover	Prevalence Index worksheet:
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total % Cover of: Multiply by:
4. Solid CF. Scouleviana 15 N FAC 5. COSA WOODSII 5 N FACU Herb Stratum (Plot size: 10×10') = Total Cover	
5. $COSOL WOODSII = Total Cover$ Herb Stratum (Plot size: $IOXIO'$) = Total Cover	FAC w species x 2 =
Herb Stratum (Plot size: $10 \times 10^{\prime}$) 90 = Total Cover	FACIL species x4 =
reio stratum (Flot size. 104110)	UPL species x 5 =
ralex Highlata 25 YOBL	Column Totals: (A) (B)
Hevacleum Sahandulium 20 Y EAC	
3. Dactulis glomeroiter 15 Y FACU-	Hydrophytic Vegetation Indicators:
A. Maighthemin stellartim 5 N FAC	1 - Rapid Test for Hydrophytic Vegetation
5	X 2 - Dominance Test is >50%
3	3 - Prevalence Index is ≤3.0 ¹
7	4 - Morphological Adaptations ¹ (Provide supporting
3	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants'
0	Problematic Hydrophytic Vegetation' (Explain)
	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic
2	
= Total Cover	Vegetation X
% Bare Ground in Herb Stratum	Vegetation Present? Yes No No
WP 420 = $058/815$ 1/1/ #1	Vegetation Present? Yes No No
438 9768	Vegetation Present? Yes <u>No</u> No <u>No</u>

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US Army Corps of Engineers

SOIL East Vail	10/24	Sampling Point:
Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc	lexture Remarks
0-10 109124 100	- danke 1 B Mella	Col-CL
10-22 10422/1 100	7.542314 _ C MM	Vala
22 large ib		
	Paduard Matrix, CS=Caused as Castad Sand Cs	21 agetian: DI = Daro Liping M=Matrix
Hydric Soil Indicators: (Applicable to all	LRRs. unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	31
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (ST)	Depleted Dark Surface (F7) Redox Depressions (F8)	unless disturbed or problematic
Restrictive Laver (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
Not enough	redox teatures for	F6, but probably
deploted parties.	balance trad alas mana, C	Soil (MIT) since is
Same The	no log classic coil	Criter were or
HYDROLOGY	that the raw of that the last me a second	
Wetland Hudrology Indicators:		
Primary Indicators (minimum of one require	t check all that annly)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B0) (excent	Water-Stained Leaves (B0) (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 along Living Roc	ots (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)	6) 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 (B	7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:		
Surrace vvater Present? Yes	No U Depth (inches):	>
Vvater Table Present? Yes	No Depth (inches):	
(includes capillary fringe)	No Depth (inches): weti	and Hydrology Present? Yes V NO
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, previous inspections),	if available:
Demarker		· · · · · · · · · · · · · · · · · · ·
Remarks.	1 Clausing 1 and	les in the line of the all
below Ser	ip, flowing wate	~ M nearby small
dhannel	ip, flowing wate	n in nearby small.
channel	ep, flowing wate	n M nearly small.
channel	ep, flowing wate	n in nearby small.