

September 23, 2019

To: Mrs. Jordan Swisher, Brue Baukol Capital Partners
From: Heidi Gerstung, ERO Resources Corporation
Re: Phillips 66 Site – Delineation of the Goodhue Ditch and Rock Creek

Background

Brue Baukol Capital Partners retained ERO Resources Corporation (ERO) to conduct a wetland delineation along the Goodhue Ditch and Rock Creek within portions of the Phillips 66 Site (property) in Boulder and Broomfield Counties, Colorado (project area; Figure 1). ERO reviewed the entirety of the property on January 17 and 21, 2019 to determine if any areas within the property had characteristics of a water of the U.S. (WUS) and had a defined surface connection to the South Platte River, the closest traditionally navigable water. An approved Jurisdictional Determination was subsequently completed for the property, and the U.S. Army Corps of Engineers (Corps) determined that portions of the property (the Goodhue Ditch and its abutting wetlands and Rock Creek and its abutting wetlands) were jurisdictional (Corps File No. NWO-2019-00148-DEN, attached).

On August 23, 2019, Heidi Gerstung and Anna Wistrom with ERO surveyed the project area for wetlands, streambeds, and open water (2019 site visit).

The natural resources and associated regulations described in this memo are valid as of the date of this memo and may be relied upon for the specific use for which it was prepared by ERO under contract to Brue Baukol Capital Partners. Because of their dynamic natures, site conditions and regulations should be reconfirmed by a qualified consultant before relying on this memo for a use other than that for which ERO was contracted. ERO assumes the landowner or municipality is responsible for obtaining all federal, state, and local permits for construction of the project.

General Description of Project Area

Project Location

The project area is along the Goodhue Ditch and Rock Creek within the Phillips 66 Site (property) located northwest of U.S. Highway 36 and 96th Street (Northwest Parkway) in Sections 20, 21, and 29, Township 1 South, Range 69 West of the 6th Principal Meridian in Boulder and Broomfield Counties, Colorado. The UTM coordinates for the approximate center of the property are Zone 13 488402mE and 4421737mN (Figure 1). The

Denver
1842 Clarkson Street
Denver, CO 80218
303.830.1188

Durango
1015 ½ Main Avenue
Durango, CO 81301
970.422.2136

Hotchkiss
P.O. Box 932
161 South 2nd Street
Hotchkiss, CO 81419
970.872.3020

Idaho
4001 East Main Street
Emmett, ID 83617
208.365.7684

longitude/latitude of the property is 105.135760°W/39.945675°N. The elevation of the property ranges from 5,330 to 5,490 feet above sea level.

Site Description

The project area consists of the Goodhue Ditch and Rock Creek within the property (Figure 2a and Figure 2b). The Goodhue Ditch is approximately 2 to 6 feet wide within the project area and flows generally southeast (Photo 1; Figure 2a). Wetlands occur along the southern portion of the Goodhue Ditch (Photo 2). Vegetation along the banks of the Goodhue Ditch consists primarily of smooth brome (*Bromus inermis*) and plains cottonwood (*Populus deltoides*) with abutting wetlands dominated by peachleaf willow (*Salix amygdaloides*), sandbar willow (*Salix exigua*), reed canarygrass (*Phalaris arundinacea*), and marshpepper knotweed (*Polygonum hydropiper*) (Photo 2). Rock Creek is an intermittent drainage, is approximately 6 to 8 feet wide within the project area and flows generally northeast (Figure 2b). Wetlands occur along much of Rock Creek within the project area (Photos 3 and 4). Vegetation along Rock Creek consists primarily of plains cottonwood, peachleaf willow, sandbar willow, narrowleaf cattail (*Typha angustifolia*), Emory's sedge (*Carex emoryi*), and softstem bulrush (*Schoenoplectus tabernaemontani*).

Methods

ERO conducted the wetland delineation following the methods for routine on-site wetland determinations in areas less than 5 acres as described in the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and used methods in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (Corps 2010) to record data on vegetation, soils, and hydrology on routine determination forms. The Corps defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 Code of Federal Regulations (CFR) 328.3(c)). Wetland boundaries were determined by a visible change in vegetation community, soils, topographic changes, and other visible distinctions between wetlands and uplands.

The wetland indicator status of plant species was identified using the *National Wetland Plant List* (Lichvar et al. 2016), taxonomy was determined using *Colorado Flora: Eastern Slope* (Weber and Wittmann 2012), and nomenclature was determined using *The PLANTS Database* (U.S. Department of Agriculture, Natural Resources Conservation Service 2019). If present, hydric soils were identified using field observation for hydric soil indicators accepted by the Corps. Soil data were not always collected if hydrophytic vegetation and hydrology were present and did not appear altered (Environmental Laboratory 1987). In addition, soil data were not collected in conditions where there was a clear lack of hydrology and hydrophytic vegetation indicators. Where soil data were collected, a Munsell soil color chart was used to determine soil color.

Intermittent, ephemeral, and perennial drainages with characteristics of a defined streambed, streambank, ordinary high water mark (OHWM), and other erosional features also were identified. The OHWM identifies the lateral jurisdictional limits of nonwetland WUS. Federal jurisdiction over nonwetland WUS extends to the OHWM, defined in 33 CFR 328.3 as “the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” The Corps defines “stream bed” as “the substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders.”

Project Area Conditions

ERO mapped approximately 0.635 acre of open water and 0.357 acre of wetlands along the Goodhue Ditch and Rock Creek in the project area during the 2019 site visit (Figure 2a and Figure 2b). The project area conditions along the Goodhue Ditch and Rock Creek are discussed individually in more detail below.

Goodhue Ditch

Streams and Open Water

The Goodhue Ditch is in the northeast corner of the property and contains a defined bed and bank with fringe wetlands along portions of the banks. The Goodhue Ditch is shown on the U.S. Geological Survey (USGS) Louisville topographic quadrangle and on the National Hydrography Dataset (NHD) as a canal/ditch and intermittent stream (Figure 1 and Figure 2a). ERO mapped approximately 0.428 acre of open water along the Goodhue Ditch in the project area during the 2019 site visit.

Wetlands

During the 2019 site visit, ERO mapped approximately 0.121 acre of wetlands abutting the Goodhue Ditch within the project area. ERO collected data from three data points (DP) near the Goodhue Ditch (DP1, DP2, and DP3).

Vegetation

The wetland fringe vegetation within the Goodhue Ditch is dominated by sandbar willow (facultative wetland (FACW)), peachleaf willow (FACW), marshpepper knotweed (obligate (OBL)), and reed canary grass (FACW). Upland vegetation is dominated by smooth brome, Canada thistle (*Cirsium arvense*), and Scotch thistle (*Onopordum acanthium*). At DP1 and DP2, the vegetation met the rapid test for hydrophytic vegetation. DP3 consisted primarily of smooth brome (upland (UPL)) and did not meet the dominance test or prevalence index for hydrophytic vegetation.

Soils

Soil data were collected from two locations in the Goodhue Ditch portion of the project area (DP1 and DP2) (Figure 2a). Soils at DP1 had a matrix color of 10YR 3/2 from 0 to 2 inches with no redox features observed and a matrix color of 10YR 4/2 from 2 to 12 inches with 10 percent faint redox features of 7.5YR 4/4. No hydric soils were observed at DP1. Soils at DP2 had a matrix color of 10YR 4/2 from 0 to 6 inches with 5 percent prominent redox features of 7.5YR 4/6 observed and a matrix color of 10YR 3/2 from 6 to 12 inches with 5 percent distinct redox features of 7.5YR 4/4 observed. The hydric soil indicator at DP2 was depleted matrix. Soils were not collected within the adjacent upland (DP3) due to the lack of hydrophytic vegetation and hydrologic indicators.

Hydrology

Hydrologic indicators observed at DP1 and DP2 included the presence of surface water, saturation, geomorphic position, and the FAC-Neutral test. No hydrologic indicators were observed at DP3.

Rock Creek

Streams and Open Water

Rock Creek, shown on the USGS topographic quadrangle and on the NHD as an intermittent stream, occurs within the project area (Figure 1 and Figure 2b). ERO mapped approximately 0.207 acre of open water along Rock Creek in the project area during the 2019 site visit.

Wetlands

During the 2019 site visit, ERO mapped approximately 0.236 acre of wetlands abutting Rock Creek within the project area. ERO collected data from four DPs near Rock Creek (DP4, DP5, DP6, and DP7).

Vegetation

Wetland vegetation along Rock Creek is dominated by plains cottonwood (FAC), peachleaf willow (FACW), sandbar willow (FACW), narrowleaf cattail (OBL), Emory's sedge (OBL), watercress (*Nasturtium officinale* - OBL), curlytop knotweed (*Polygonum lapathifolium* - OBL), and common spikerush (*Eleocharis palustris* - OBL). Vegetation at DP4 met the rapid test for hydrophytic vegetation, and vegetation at DP5 met the dominance test for hydrophytic vegetation. Vegetation at DP5 and DP7 consisted primarily of the upland species including smooth brome (UPL) and Canada thistle (facultative upland (FACU)), with an overstory of plains cottonwood (facultative (FAC)), and did not meet the dominance test or prevalence index for hydrophytic vegetation.

Soils

Soil data were collected from two locations in the Rock Creek portion of project area (DP4 and DP6) (Figure 2b). Soils at DP4 had a matrix color of 10YR 4/2 from 0 to 6 inches with 15 percent prominent redox features of 7.5YR 4/6 and 7 percent depletion of Gley 1 2.5/N

observed. From 6 to 12 inches, soils at DP4 had a matrix color of 10YR 4/1 with 10 percent prominent redox features of 7.5YR 4/4 and 20 percent depletions of Gley 1 2.5/N observed. The hydric soil indicator met at DP4 was depleted matrix. Soils at DP6 had a matrix color of 10YR 4/2 from 0 to 3 inches with 25 percent depletions of Gley 1 2.5/N observed. DP6 is located within a wetland mitigation site and met the criteria for problematic hydric soils due to recently developed wetlands. Soils were not collected within the adjacent uplands (DP5 and DP7) due to the lack of hydrophytic vegetation and hydrologic indicators.

Hydrology

Hydrologic indicators observed at DP4 included high water table, saturation, oxidized rhizospheres on living roots, geomorphic position, and the FAC-Neutral test. Hydrologic indicators observed at DP6 included surface water, high water table, saturation, geomorphic position, and the FAC-Neutral test. No hydrologic indicators were observed at DP5 or DP7.

Recommendations

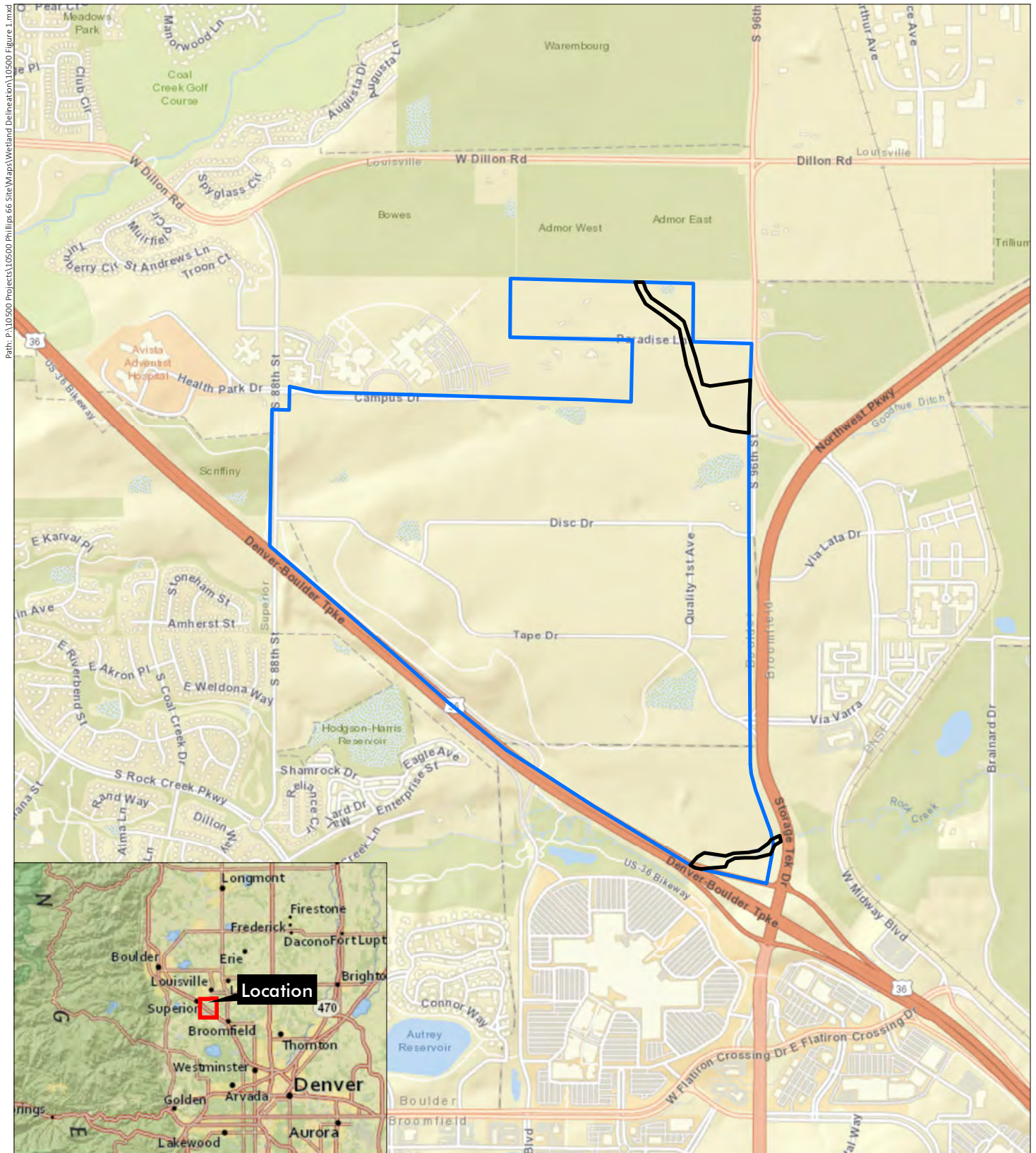
The Goodhue Ditch and its abutting wetlands and Rock Creek and its abutting wetlands were previously determined jurisdictional (Corps 2019). If work is planned within these areas, a Section 404 permit would be required for the placement of dredged or fill material below the OHWM. If no work is planned within these areas, no action would be necessary.

References

- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report 7-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. *Phytoneuron* 2016-30:1-17. Published April 28, 2016. ISSN 2153 733X. Last accessed July 11, 2018.
- U.S. Army Corps of Engineers (Corps). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)*. J.S. Wakeley, R.W. Lichvar, and C.V. Noble (eds.). ERDC/EL TR-10-1. Vicksburg, MS: U.S. Army Engineer Research and Development.
- U.S. Army Corps of Engineers (Corps). 2019. NWO-2019-00148-DEN, Phillips 66 Site (JD). April 4.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019. *The PLANTS Database*. <http://plants.usda.gov>. National Plant Data Team, Greensboro, NC 27401-4901 USA. September 19.
- Weber, W.A. and R.C. Wittmann. 2012. *Colorado Flora: Eastern Slope*. 4th edition. University Press of Colorado. Boulder, CO.

Attachments

Figure 1 – Vicinity Map
Figure 2a – Goodhue Ditch Existing Conditions
Figure 2b – Rock Creek Existing Conditions
Photo log
Wetland delineation datasheets
Jurisdictional Determination



Phillips 66 Site Delineation

Sections 20, 21, and 29, T1S, R69W; 6th PM
 UTM NAD 83: Zone 13N; 488402mE, 4421737mN
 Longitude 105.135760°W, Latitude 39.945675°N
 USGS Louisville, CO Quadrangle
 Boulder and Broomfield Counties, Colorado

 Project Area
 Property Boundary

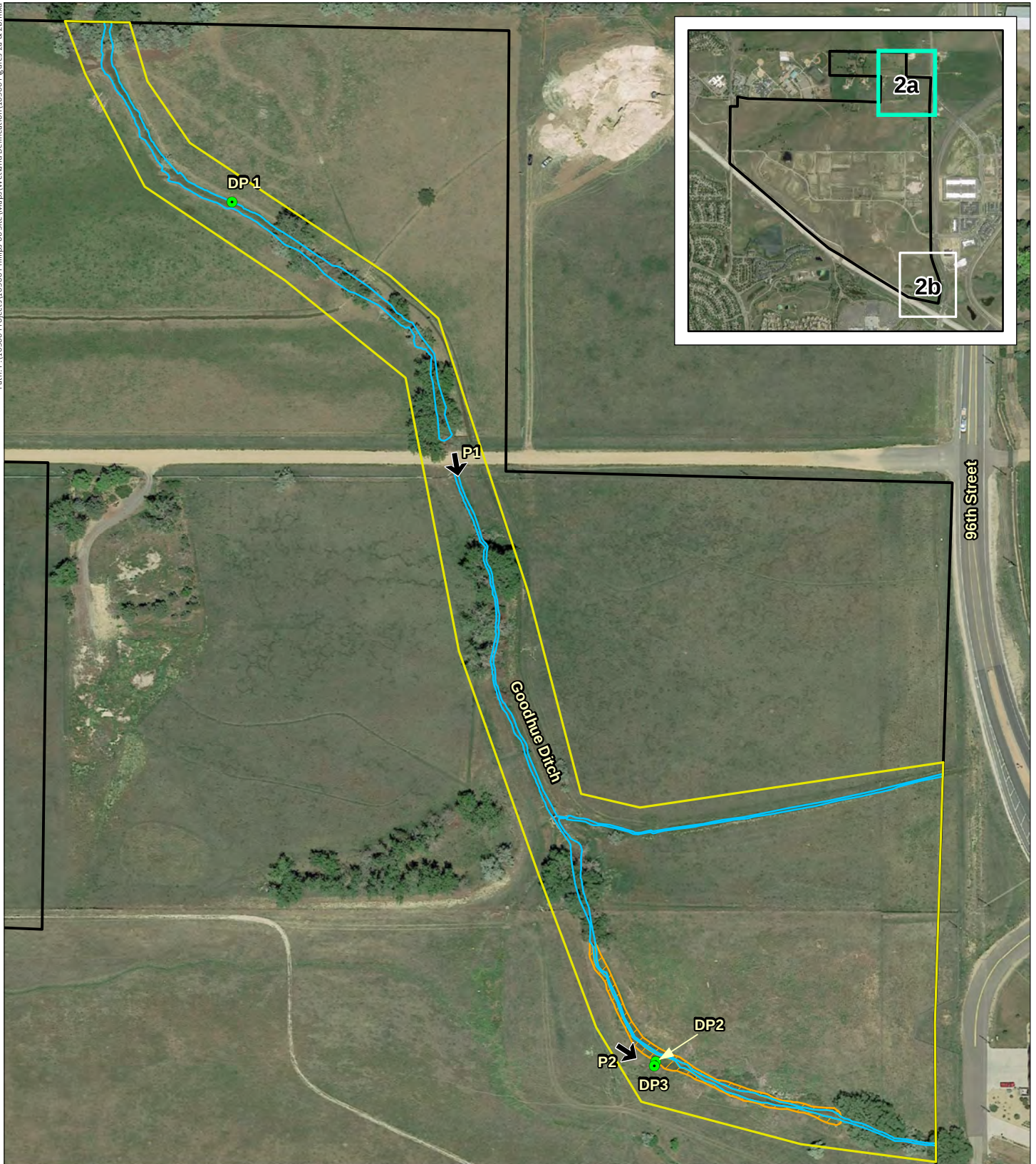
0 750 1,500
 Feet



Figure 1 Vicinity Map

Prepared for: Brue Baukol
 File: 10500 Figure 1.mxd (GS)
 September 19, 2019

ERO
 ERO Resources Corp.



Phillips 66 Site Delineation

- Data Point
- ➔ Photo Point
- 🌊 Ordinary High Water Mark (0.635 ac)
- 🌊 Wetland (0.357 ac)
- ▭ Property Boundary
- ▭ Project Area

Image Source: Google Earth®, May 2018

0 100 200 Feet



Figure 2a Goodhue Ditch Existing Conditions

Prepared for: Brue Baukol
File: 10500 Figures 2a & 2b.mxd (GS)
September 19, 2019

ERO
ERO Resources Corp.



Phillips 66 Site Delineation

- Data Point
- ➔ Photo Point
- Ordinary High Water Mark (0.635 ac)
- Wetland (0.357 ac)
- Property Boundary
- Project Area

Image Source: Google Earth®, May 2018

0 100 200 Feet



Figure 2b

Rock Creek Existing Conditions

Prepared for: Brue Baukol
File: 10500 Figures 2a & 2b.mxd (GS)
September 19, 2019

ERO
ERO Resources Corp.

PHOTO LOG
WETLAND DELINEATION—PHILLIPS 66 SITE
BOULDER AND BROOMFIELD COUNTIES, COLORADO
AUGUST 23, 2019



Photo 1 - Overview of Goodhue Ditch. View is to the southeast.



Photo 2 - Overview of wetlands abutting Goodhue Ditch. View is to the southeast.

PHOTO LOG
WETLAND DELINEATION—PHILLIPS 66 SITE
BOULDER AND BROOMFIELD COUNTIES, COLORADO
AUGUST 23, 2019



Photo 3 - Overview of Rock Creek and abutting wetlands. View is to the southwest.



Photo 4 - Overview of Rock Creek and abutting wetlands. View is to the northeast.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Louisville/Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP1
 Investigator(s): H.Gerstung, A.Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): G Lat: 39.953435°N Long: 105.131959°W Datum: NAD83
 Soil Map Unit Name: Nunn clay loam, 1 to 3 percent slopes NWI classification: R5UBFx

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

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: within Goodhue Ditch			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____		_____	_____	
2. _____		_____	_____	
3. _____		_____	_____	
4. _____		_____	_____	
<u>_____</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species x 1 = _____ FACW species x 2 = _____ FAC species x 3 = _____ FACU species x 4 = _____ UPL species x 5 = _____ Column Totals: (A) (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <u>_____</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Carex emoryi</u> <u>20</u> Yes OBL 2. <u>Polygonum hydropiper</u> <u>12</u> Yes OBL 3. <u>Cirsium arvense</u> <u>1</u> No FACU 4. <u>Pascopyrum smithii</u> <u>4</u> No FACU 5. <u>Amorpha fruticosa</u> <u>3</u> No FACW 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ <u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ <u>_____</u> = Total Cover				
% Bare Ground in Herb Stratum <u>60</u>				

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100	-	0	-	-	clay loam	
2-12	10YR 4/2	90	7.5YR 4/3	10	C	M	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

refusal after 12"; faint redox observed

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): Surface

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☒ No ☐ Depth (inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Louisville/Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP2
 Investigator(s): H.Gerstung, A.Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): G Lat: 39.949979°N Long: 105.129768°W Datum: NAD83
 Soil Map Unit Name: Nunn clay loam, 1 to 3 percent slopes NWI classification: R4SBC

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

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: In drainageway			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	<u> </u>	_____	_____	
2. _____	<u> </u>	_____	_____	
3. _____	<u> </u>	_____	_____	
4. _____	<u> </u>	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u> </u> x 1 = _____ FACW species <u> </u> x 2 = _____ FAC species <u> </u> x 3 = _____ FACU species <u> </u> x 4 = _____ UPL species <u> </u> x 5 = _____ Column Totals: <u> </u> (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Populus angustifolia</u>	<u>20</u>	Yes	FACW	
2. <u>Salix exigua</u>	<u>30</u>	Yes	FACW	
3. _____	<u> </u>	_____	_____	
4. _____	<u> </u>	_____	_____	
5. _____	<u> </u>	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	<u>25</u>	Yes	FACW	
2. <u>Polygonum hydropiper</u>	<u>10</u>	Yes	OBL	
3. <u>Dipsacus fullonum</u>	<u>5</u>	No	FACU	
4. <u>Echinochloa crus-galli</u>	<u>2</u>	No	FAC	
5. _____	<u> </u>	_____	_____	
6. _____	<u> </u>	_____	_____	
7. _____	<u> </u>	_____	_____	
8. _____	<u> </u>	_____	_____	
9. _____	<u> </u>	_____	_____	
10. _____	<u> </u>	_____	_____	
<u>42</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____	<u> </u>	_____	_____	
2. _____	<u> </u>	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>58</u>				
Remarks:				

SOIL

Sampling Point: DP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	95	7.5YR 4/6	5	C	M	SCL	
6-12	10YR 3/2	95	7.5YR 4/4	5	C	M	SCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☒ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): Surface

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☒ No ☐ Depth (inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Louisville/Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP3
 Investigator(s): H. Gerstung, A. Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): nonr Slope (%): 1
 Subregion (LRR): G Lat: 39.949960°N Long: 105.129775°W Datum: NAD83
 Soil Map Unit Name: Nunn clay loam, 1 to 3 percent slopes NWI classification: R4SBC

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: Terrace above drainage	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
1. _____		_____	_____	
2. _____		_____	_____	
3. _____		_____	_____	
4. _____		_____	_____	
<u>_____</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species x 1 = _____ FACW species <u>10</u> x 2 = <u>20</u> FAC species x 3 = _____ FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>55</u> x 5 = <u>275</u> Column Totals: <u>95</u> (A) <u>415</u> (B) Prevalence Index = B/A = <u>4.37</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Salix exigua</u>	<u>10</u>	Yes	FACW	
2. _____		_____	_____	
3. _____		_____	_____	
4. _____		_____	_____	
5. _____		_____	_____	
<u>10</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Onopordum acanthium</u>	<u>20</u>	Yes	UPL	
2. <u>Bromus inermis</u>	<u>35</u>	Yes	UPL	
3. <u>Cirsium arvense</u>	<u>20</u>	Yes	FACU	
4. <u>Dipsacus fullonum</u>	<u>10</u>	No	FACU	
5. _____		_____	_____	
6. _____		_____	_____	
7. _____		_____	_____	
8. _____		_____	_____	
9. _____		_____	_____	
10. _____		_____	_____	
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____		_____	_____	
2. _____		_____	_____	
<u>_____</u> = Total Cover				
% Bare Ground in Herb Stratum <u>15</u>				
Hydrophytic Vegetation Present? Yes ☐ No ☒				

Remarks:

SOIL

Sampling Point: DP3

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|--|--------------------------|------------------------------------|
| ☐ | Histosol (A1) | ☐ | Sandy Gleyed Matrix (S4) |
| ☐ | Histic Epipedon (A2) | ☐ | Sandy Redox (S5) |
| ☐ | Black Histic (A3) | ☐ | Stripped Matrix (S6) |
| ☐ | Hydrogen Sulfide (A4) | ☐ | Loamy Mucky Mineral (F1) |
| ☐ | Stratified Layers (A5) (LRR F) | ☐ | Loamy Gleyed Matrix (F2) |
| ☐ | 1 cm Muck (A9) (LRR F, G, H) | ☐ | Depleted Matrix (F3) |
| ☐ | Depleted Below Dark Surface (A11) | ☐ | Redox Dark Surface (F6) |
| ☐ | Thick Dark Surface (A12) | ☐ | Depleted Dark Surface (F7) |
| ☐ | Sandy Mucky Mineral (S1) | ☐ | Redox Depressions (F8) |
| ☐ | 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ | High Plains Depressions (F16) |
| ☐ | 5 cm Mucky Peat or Peat (S3) (LRR F) | | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soil not sampled due to upland vegetation and lack of hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

no wetland hydrology indicators observed

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP4
 Investigator(s): H. Gerstung, A. Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): bench Local relief (concave, convex, none): none Slope (%): <1
 Subregion (LRR): G Lat: 39.937224°N Long: 105.127267°W Datum: NAD83
 Soil Map Unit Name: Heldt clay, 0 to 3 percent slopes NWI classification: R4SBC

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

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Wetland fringe abutting Rock Creek			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus deltoides</u>	<u>30</u>	Yes	FAC	
2. <u>Salix amygdaloides</u>	<u>20</u>	Yes	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species: _____ x 1 = _____ FACW species: _____ x 2 = _____ FAC species: _____ x 3 = _____ FACU species: _____ x 4 = _____ UPL species: _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>50</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Salix exigua</u>	<u>20</u>	Yes	FACW	
2. <u>Salix amygdaloides</u>	<u>30</u>	Yes	FACW	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Ribes aureum</u>	<u>2</u>	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>52</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No ☐
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Poa palustris</u>	<u>3</u>	No	FACW	
2. <u>Typha angustifolia</u>	<u>20</u>	Yes	OBL	
3. <u>Cirsium arvense</u>	<u>10</u>	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u>Chenopodium album</u>	<u>2</u>	No	FACU	
5. <u>Carex emoryi</u>	<u>40</u>	Yes	OBL	
6. <u>Bromus inermis</u>	<u>15</u>	No	UPL	
<u>90</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No ☐
% Bare Ground in Herb Stratum <u>10</u>				
Remarks:				

SOIL

Sampling Point: DP4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	78	7.5YR 4/6	15	C	M&PL	CL	prominent
	10YR 4/2	-	Gley1 2.5/N	7	D	PL	CL	
6-12	10YR 4/1	70	7.5YR 4/4	10	C	M	CL	
	10YR 4/1	-	Gley1 2.5/N	20	D	M	CL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☒ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Dark Surface (S7) (LRR G) |
| ☐ High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| ☐ Reduced Vertic (F18) |
| ☐ Red Parent Material (TF2) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Depleted matrix

HYDROLOGY

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☒ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☒ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? Yes ☒ No ☐ Depth (inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP5
 Investigator(s): H. Gerstung, A. Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): G Lat: 39.937287°N Long: 105.127300°W Datum: NAD83
 Soil Map Unit Name: Heldt clay, 0 to 3 percent slopes NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks: Upland adjacent to wetland bench on Rock Creek.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
1. <u>Populus deltoides</u>	<u>30</u>	Yes	FAC															
2. <u>Salix amygdaloides</u>	<u>10</u>	Yes	FACW															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>85</u></td> <td>x 5 = <u>425</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>565</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>4.19</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>85</u>	x 5 = <u>425</u>	Column Totals: <u>135</u> (A)	<u>565</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>85</u>	x 5 = <u>425</u>																	
Column Totals: <u>135</u> (A)	<u>565</u> (B)																	
= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Populus deltoides</u>	<u>5</u>	Yes	FAC															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
= Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Bromus inermis</u>	<u>85</u>	Yes	UPL															
2. <u>Lactuca serriola</u>	<u>5</u>	No	FAC															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
= Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
= Total Cover																		
% Bare Ground in Herb Stratum <u>10</u>																		

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: DP5

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soil not sampled due to upland vegetation and lack of hydrological indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No indicators observed.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP6
 Investigator(s): H. Gerstung, A. Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): G Lat: 39.936876°N Long: 105.127595°W Datum: NAD83
 Soil Map Unit Name: Heldt clay, 0 to 3 percent slopes NWI classification: R4SBC

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐	Hydic Soil Present? Yes ☒ No ☐	Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: wetland mitigation area within Rock Creek drainageway			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus deltoides</u>	<u>10</u>	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>10</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species: _____ x 1 = _____ FACW species: _____ x 2 = _____ FAC species: _____ x 3 = _____ FACU species: _____ x 4 = _____ UPL species: _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Salix exigua</u>	<u>2</u>	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>2</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Typha angustifolia</u>	<u>15</u>	No	OBL	
2. <u>Schoenoplectus tabernaemontani</u>	<u>8</u>	No	OBL	
3. <u>Polypogon monspeliensis</u>	<u>2</u>	No	FACW	
4. <u>Nasturtium officinale</u>	<u>20</u>	Yes	OBL	
5. <u>Epilobium ciliatum</u>	<u>3</u>	No	FACW	
6. <u>Cirsium arvense</u>	<u>1</u>	No	FACU	
7. <u>Polygonum lapathifolium</u>	<u>20</u>	Yes	OBL	
8. <u>Eleocharis palustris</u>	<u>20</u>	Yes	OBL	
9. <u>Echinochloa crus-galli</u>	<u>1</u>	No	FAC	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>_____</u> = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>				
Remarks:				

SOIL

Sampling Point: DP6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	75	Gley1 2.5/N	25	D	M	Cobble	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Dark Surface (S7) (LRR G) |
| ☐ High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| ☐ Reduced Vertic (F18) |
| ☐ Red Parent Material (TF2) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☒ Other (Explain in Remarks) |

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Unable to dig past 2";Problematic soils - recently developed alluvium in floodplain. Restoration project work apparent.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☒ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches): <u>0</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches): <u>0</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches): <u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phillips 66 Site City/County: Broomfield & Boulder Sampling Date: 8/23/2019
 Applicant/Owner: Brue Baukol Capital Partners State: CO Sampling Point: DP7
 Investigator(s): H. Gerstung, A. Wistrom Section, Township, Range: 20, 21, and 29, T1S, R69W
 Landform (hillslope, terrace, etc.): upland Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): G Lat: 39.936900°N Long: 105.127579°W Datum: NAD83
 Soil Map Unit Name: Heldt clay, 0 to 3 percent slopes NWI classification: none

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: Upland adjacent to wetland bench.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)														
1. <u>Populus deltoides</u>	<u>12</u>	Yes	FAC															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>12</u> = Total Cover				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>17</u></td> <td>x 3 = <u>51</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>321</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.5</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>17</u>	x 3 = <u>51</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>92</u> (A)	<u>321</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>17</u>	x 3 = <u>51</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>92</u> (A)	<u>321</u> (B)																	
<u>12</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Salix exigua</u>	<u>10</u>	Yes	FACW															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Cirsium arvense</u>	<u>30</u>	Yes	FACU															
2. <u>Rumex crispus</u>	<u>5</u>	No	FAC															
3. <u>Conium maculatum</u>	<u>5</u>	No	FACW															
4. <u>Conyza canadensis</u>	<u>10</u>	Yes	FACU															
5. <u>Chenopodium album</u>	<u>5</u>	No	FACU															
6. <u>Pascopyrum smithii</u>	<u>5</u>	No	FACU															
7. <u>Dipsacus fullonum</u>	<u>10</u>	Yes	FACU															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>70</u> = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>30</u>																		

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: DP7

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soil not sampled due to upland vegetation and lack of hydrological indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

no hydrology indicators observed



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD
LITTLETON, COLORADO 80128-6901

April 4, 2019

SUBJECT: Approved Jurisdictional Determination, Phillips 66 Site, Corps File No. NWO-2019-00148-DEN, Broomfield City/County, CO

Ms. Jordan Swisher
Brue Baukol Capital Partners
1555 Blake Street, Suite 210
Denver, CO 80202

Dear Ms. Swisher:

Reference is made to the above-mentioned project centered at approximately 39.945675°N, -105.135760°W, in the City and County of Broomfield, Colorado. You have requested an Approved Jurisdictional Determination (JD) for all aquatic resources found at the project location.

The project area has been reviewed in accordance with Section 404 of the Clean Water Act under which the U.S. Army Corps of Engineers regulates the discharge of dredged and fill material, and any excavation activity associated with a dredge and fill project in waters of the United States.

We have determined that the following aquatic resources are jurisdictional waters of the U.S., and a Department of the Army permit will be required for any work that impacts these resources:

- Goodhue Ditch and its abutting wetlands
- Rock Creek and its abutting wetlands

We have determined the following aquatic resources are not jurisdictional waters of the U.S.:

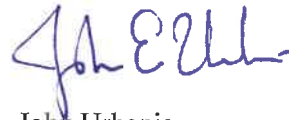
- Community Ditch Lateral
- South Boulder Coal Creek First Extension Lateral
- Stock Ponds 1, 2, 3, and 4, and their abutting wetlands
- Detention Ponds 1 and 2, and their abutting wetlands
- Duck Pond
- Ephemeral Drainage 1 Wetlands
- Ephemeral Drainage 2 Wetlands

At your request, an approved JD has been completed for two aquatic resources in this area. The approved JD is attached to this letter. If you are not in agreement with the JD decision, you may request an administrative appeal under regulation 33 CFR 331, by using the attached Appeal Form and Administrative Appeal Process form. The request for appeal must be received within 60 days from the date of this letter. If you would like more information on the jurisdictional appeal process, contact this office. It is not necessary to submit a Request for Appeal if you do not object to the JD.

This JD is valid for a period of five years from the date of this letter, unless new information warrants revisions of the JDs before the expiration date, or unless the Corps has identified, after a possible public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

If there are any additional questions or concerns, please contact **Mr. Nicholas Franke** of my office at **303-979-4120** or by email at Nicholas.A.Franke@usace.army.mil and reference **Corps File No. NWO-2019-00148-DEN**.

Sincerely,



John Urbanic
Chief, Denver Regulatory Office

Attachments:

Approved Jurisdictional Determination (April 4, 2019)
Approved Jurisdictional Determination Appeal Form
Approved Jurisdictional Determination Appeal Form Instruction Sheet

Copies Furnished:

Heidi Gerstung, ERO Resources Corp., 1842 Clarkson Street, Denver, CO/80218