Crossroads Church Development, Wetland Delineation Report

Prepared For:

Loveland Housing Authority
375 West 37th Street, Ste 200
Loveland, CO 80538

Completed by:

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1001 Jefferson Drive
Berthoud, CO 80513

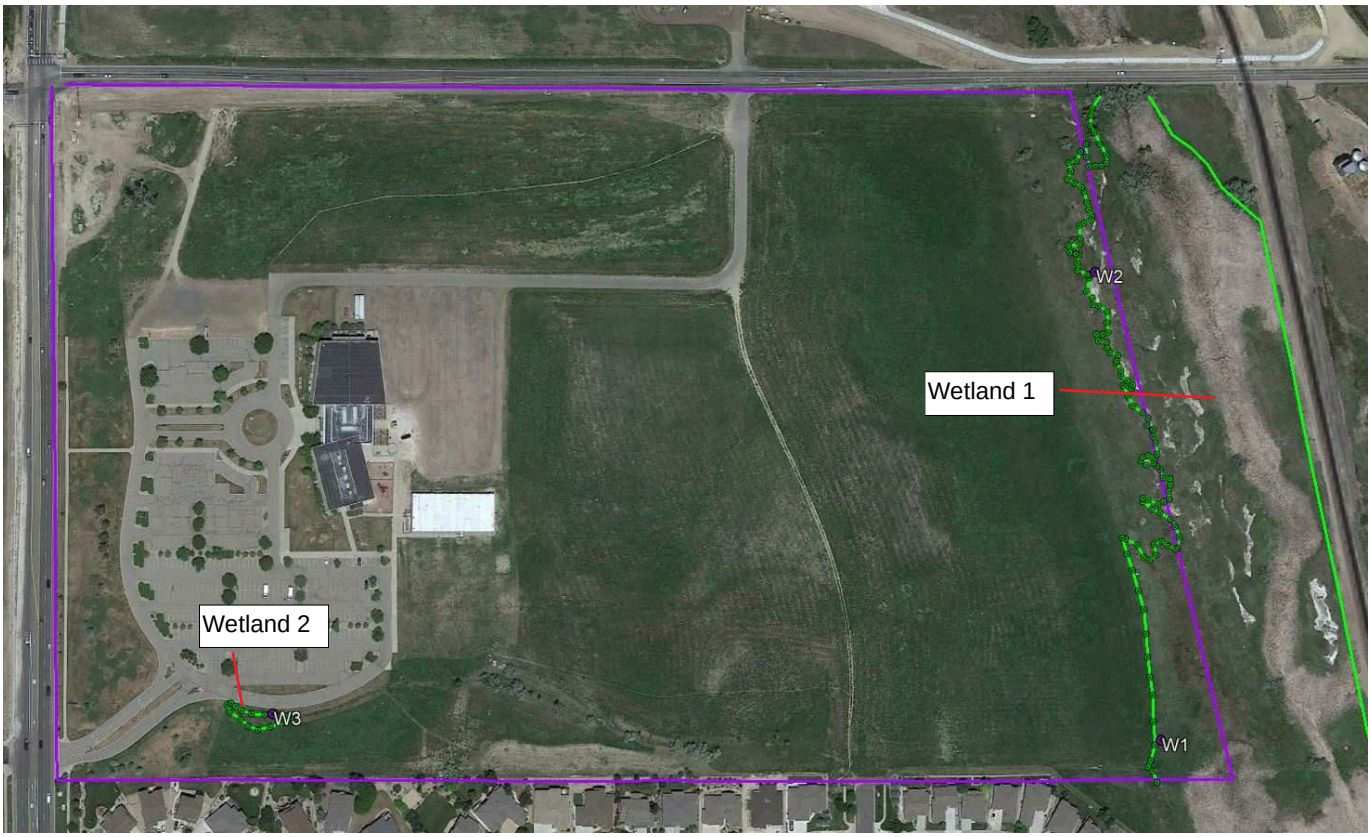
December 2022

1.0 Introduction

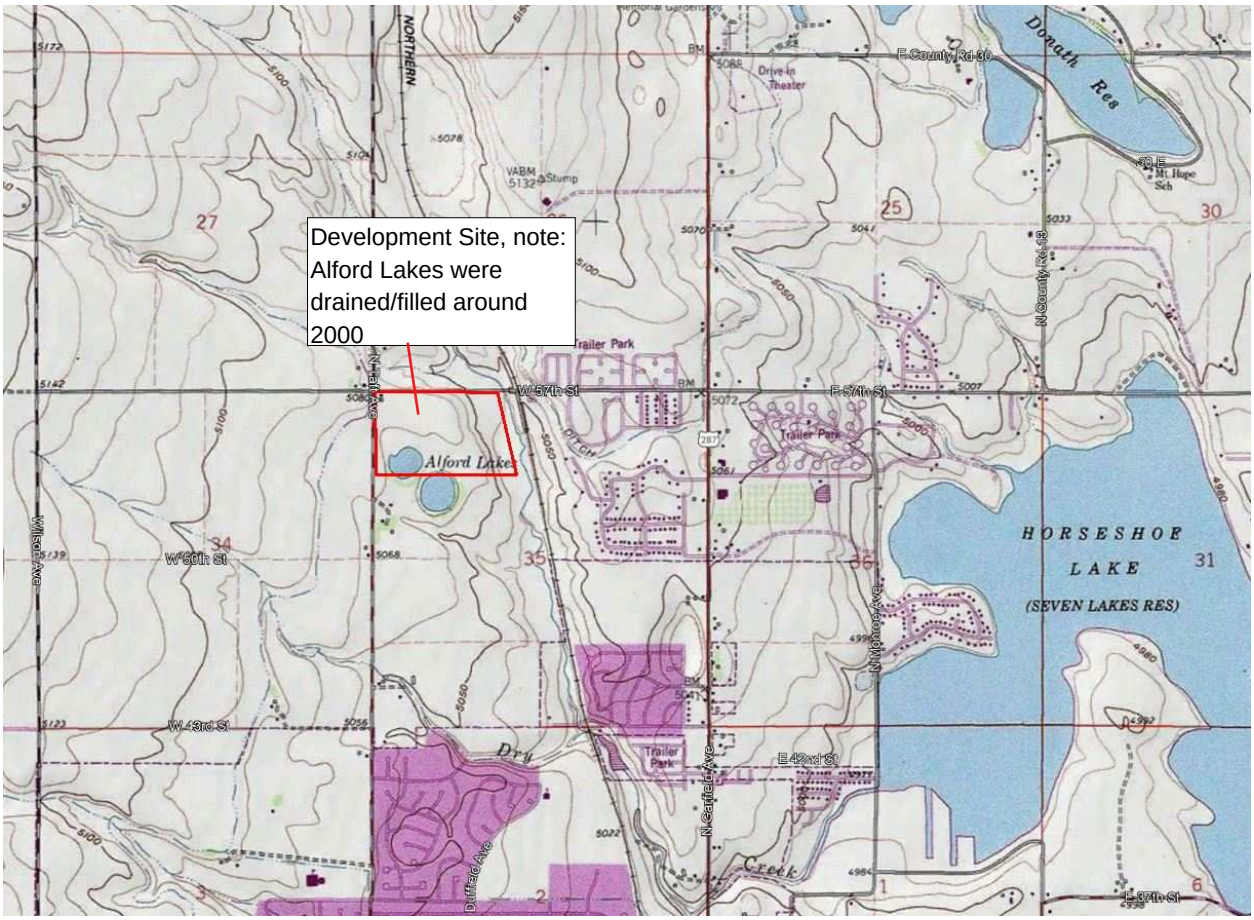
Wildland Consultants, Inc. (WCI) completed a wetland delineation for the Crossroads Church Development project in November 2022. The project is an affordable housing project, in association with non-profits: Habitat for Humanity and the Loveland Housing Authority. The Project is located in city of Loveland, Colorado. West 57th Street borders the north site boundary and North Taft Avenue borders the west site boundary. A perennial drainage that flows to Dry Creek borders the eastern site boundary (Maps 1 and 2).

Current land uses on the site include open space, pasture, and an existing church and parking lot. The wetland delineation included only the area outlined on Map 2. Site photographs are also provided in Attachment A.

Site Location: NW1/4, S35, T6N, R69W
Lat./Long. Center of Site : 40.449N, -105.092W
Elevation: 5,073 feet



Map 1. Aerial View of the Crossroads Church delineation area, Delineated Wetlands (Wetland 1 and 2) Wetland Sampling points shown (W1-W3).



Map 2. Site location map of the wetland delineation area for the Crossroads Church Development Project.

The objectives of the wetland delineation were to help with project design and planning, and to notify the U.S. Army Corps of Engineers (ACOE) of the wetlands on the site. The delineation will also support ACOE permitting for the project. The wetland delineation was completed by Eric Berg and Craig Severn of WCI. Mr. Berg is certified as a Professional Wetland Scientist. WCI has completed hundreds of wetland delineations throughout the Rocky Mountain area.

2.0 Methods

Site-specific soil information included in the Larimer County Soil Survey (SCS 1980) was reviewed prior to completing the wetland delineation. The wetland delineation was completed

according to the methodology recommended by the ACOE (ACOE 1987 and 2010 Wetland Delineation Manuals). Vegetation, soils, and hydrologic characteristics were evaluated and recorded during the wetland delineation. Standard ACOE Wetland data forms were completed at 5 wetland and 5 upland sites during the delineation. These forms provide basic information regarding soils, vegetation, and hydrology of the wetland area (wetland data forms are included in Attachment A). Wetland boundaries were surveyed by using a submeter GPS unit. The wetland boundaries were then included on a wetlands map (See Attachment A, Wetland Exhibits).

3.0 Results

Wetlands were delineated in 3 areas within the site. These included:

- Wetland 1, wetland along a large drainage swale that drains to Dry Creek (Data points W1, U1, W2, U2)(wetland area 419,784 Square feet (9.6 acres)). Note: the entire drainage is vegetated, there is no discernable ordinary high water mark.
- Wetland 2, wetland along swale (Data Points W3, U3)(wetland 2,361 square feet in size (0.054 acres)).

A total of 422,145 square feet (9.69 acres) of wetlands were delineated on site.

Map 2 shows wetland boundaries.

Wetland Description:

Wetland 1 occurs along a large wide drainage/swale that drains to Dry Creek (wetland area 419,784 Square feet (9.6 acres)). There is no discernable channel or ordinary high water mark. Note: only the western wetland boundary was delineated, the eastern boundary is approximate based on aerial photo interpretation. Dominant species in the wetland included: reed canarygrass (*Phalaris arundinaceae*), cattail (*Typha latifolia*), field sedge (*Carex praegacilis*), curley dock (*Rumex crispus*) and other species. There are few stands of Russian olive (*Eleagnus elegans*) trees in and adjacent to the wetland. Wetland hydrology is present including standing water and saturated soils. Wetland soils are present, including evidence of a depleted soil matrix. Data point W1, U1, W2, U2.

Wetland 2 (2,361 square feet in size (0.054 acres)) occurs along a swale that historically was part of Alford Lakes (lakes were filled around 2000). The wetland connects to a swale/ditch that drains to the east but ends prior to connection to Wetland 1. The wetland is dominated by coyote willow (*Salix exigua*) with a fringe of meadow fescue (*Schedonorus* pratensis). Wetland hydrology is present including saturated soils. Wetland soils are present including evidence of a depleted soil matrix. Data points W3 and U3.

Upland species adjacent to these wetlands included: smooth brome (*Bromus inermis*), quackgrass (*Elymus repens*), yellow sweetclover (*Melitotus officinalis*), Canada thistle (*Cirsium arvense*), kochia, (*Kochia scoparia*), common milkweed (*Asclpepius speciosa*) and a few other grasses and forbs.

Map 1 shows the wetland areas that were delineated. Attachment A, Site Photos show details of site wetlands.

4.0 Conclusions

Wetlands were delineated in 3 areas within the site. These included:

- Wetland 1, wetland along a large drainage swale that drains to Dry Creek (Data points W1, U1, W2, U2)(wetland area 419,784 Square feet (9.6 acres)). Note: the entire drainage is vegetated, there is no discernable ordinary high water mark.
- Wetland 2, wetland along swale (Data Points W3, U3)(wetland 2,361 square feet in size (0.054 acres)).

A total of 422,145 square feet (9.69 acres) of wetlands were delineated on site.

Attachment A includes Site Photos, and Wetland Delineation Data Forms.

5.0 References

Kollmorgen Instruments Corporation. 1994. Munsell soil color chart. 1994 ed. Munsell Color Co. Baltimore, MD.

Soil Conservation Service (SCS) 1980. Soil Survey of Larimer County.

U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetland Delineation Manual

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region.

U.S. Fish and Wildlife Service. 1988. National List of Plants That Occur in Wetlands: Central Plains (Region 5).

ATTACHMENT A
Wetland Photos

Wetland Delineation Data Forms

Photo 1. View to the north of wetland sample plot W1 (shovel on right) and upland sample plot U1 (yellow clipboard on left).

Photo 2. View to the south of wetland sample plot W2 (shovel on left) and upland sample plot U2 (yellow clipboard on right).

Photo 3. View to the south of wetland sample plot W3 (yellow clipboard) and upland sample plot U3 (shovel).

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: W 1

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): LRR - G Lat: 40.44757 Long: -105.08879 Datum: NAD 83

Soil Map Unit Name: Fort Collins loam 3-5 percent slopes NWI classification: PEM1A

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	**Is the Sampled Area within a Wetland?** **Yes X No**

Remarks: Sample plot is located at the toe of slope

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIUS)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Phalaris arundinacea	80	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum 0	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)

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

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

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 =

Hydrophytic Vegetation Indicators:

_X_ Rapid test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes X No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	100						
7-16	10YR 4/2	70	10YR 5/8	30	C	M	clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches):

Water Table Present? Yes ___ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 22

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: U 1

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%):

Subregion (LRR): LRR-G Lat: 40.44759 Long: -105.08875 Datum: NAD 83

Soil Map Unit Name: Fort Collins loam 3-5 percent slopes NWI classification: PEM1A

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No Soil No, or Hydrology No 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 X Hydric Soil Present? Yes ____ No X Wetland Hydrology Present? Yes ____ No X	**Is the Sampled Area within a Wetland? Yes ____ No X**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIUS)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Bromus inermis	30	Y	UPL
2. Cirsium arvense	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
% Bare Ground in Herb Stratum 0	____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): ____ (A)

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

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

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 =

Hydrophytic Vegetation Indicators:

___ Rapid test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: U1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100					clay loam	
4-12	10YR 5/3	100					clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 X Depth (inches):

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches):

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: W2

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): broad channel Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR - G Lat: 40.45001 Long: -105.08922 Datum: NAD 83

Soil Map Unit Name: Longmont clay loam 0-3 percent slopes NWI classification: none

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	**Is the Sampled Area within a Wetland? Yes X No**

Remarks: Sample plot is located along an unnamed tributary to Dry Creek.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1. Elaeagnus angustifolia	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIUS)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Carex praegacilis	30	Y	FACW
2. Suaeda calceoformis	10	N	FACW
3. Spergularia minor	10	N	FACU
4. Iva axilaris	5	N	FAC
5. Atriplex heterosperma	5	N	NI
6. Symphyotrichum ericoides	5	N	FACU
7.			
8.			
9.			
10.			
	65 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
% Bare Ground in Herb Stratum 30	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)

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

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

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 =

Hydrophytic Vegetation Indicators:

_X__ Rapid test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					clay loam	
8-16	10YR 3/2	90					clay loam	
	10YR 8/1	10					clay loam	gypsum nodules

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks: Deflocculated soil surface due to high sodium content in soil. Saline/sodic soils results in redoxymorphic soils features being poorly developed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X 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)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ____ No X____ Depth (inches):

Water Table Present? Yes ____ No X____ Depth (inches):

Saturation Present? (includes capillary fringe) Yes X____ No ____ Depth (inches): 16

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: U2

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR - G Lat: 40.45002 Long: -105.08926 Datum: NAD 83

Soil Map Unit Name: Longmont clay loam 0-3 percent slopes NWI classification: none

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No Soil No, or Hydrology No 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 X Hydric Soil Present? Yes _____ No X Wetland Hydrology Present? Yes _____ No X	**Is the Sampled Area within a Wetland? Yes _____ No X**

Remarks: Sample plot is located along an unnamed tributary to Dry Creek.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1. Elaeagnus angustifolia	5	Y	FACU
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIUS)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Elymus lanceolatus	10	Y	FACU
2. Polygonum douglasii	5	N	FACU
3. Atriplex heterosperma	5	N	NI
4. Unknow composite	5	N	UPL
5.			
6.			
7.			
8.			
9.			
10.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum 0	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)

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

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

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 =

Hydrophytic Vegetation Indicators:

___ Rapid test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes _____ No x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: U2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					clay loam	
6-12	10YR 3/2	90					clay loam	
	10YR 8/1	10						gypsum nodule

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 14

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: W3

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): convex Slope (%): 0

Subregion (LRR): LRR - G Lat: 40.44772 Long: -105.09483 Datum: NAD 83

Soil Map Unit Name: water (see Remarks below) NWI classification: none

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	**Is the Sampled Area within a Wetland?** **Yes X No**

Remarks: Area was once on e of the Alford Lakes, which have now been filled in and developed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIUS)			
1. Salix exigua	40	Y	FACW
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Schedonorus pratensis	2	Y	FACU
2. Cirsium arvense	2	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
% Bare Ground in Herb Stratum 0	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 40	x 2 =	80
FAC species	x 3 =	
FACU species 4	x 4 =	16
UPL species	x 5 =	
Column Totals: 44 (A)		96 (B)

Prevalence Index = B/A = 2.18

Hydrophytic Vegetation Indicators:

___ Rapid test for Hydrophytic Vegetation

__ Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

__ 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.

Hydrophytic Vegetation Present? **Yes X No**

Remarks: (Include photo numbers here or on a separate sheet.)

Sample plot is located in a stand of willows just south of parking lot.

SOIL

Sampling Point: W3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 5/3	100						
7- 15	10YR 4/2	80	10YR 5/8	20	C	M	clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 X Depth (inches):

Water Table Present? Yes ____ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 10

Wetland Hydrology Present? Yes X No

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

Remarks: Water from parking lot enters swale area along the western edge of willows through a curb opening

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Crossroads Church City/County: Loveland/Larimer Sampling Date: 11/1/2022

Applicant/Owner: State: CO Sampling Point: U3

Investigator(s): C. Severn Section, Township, Range: Sec. 35, T6N , R69W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR): LRR - G Lat: 40.44773 Long: -105.09484 Datum: NAD 83

Soil Map Unit Name: water (see Remarks below) NWI classification: none

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

Are Vegetation No Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No Soil No, or Hydrology No 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 X Hydric Soil Present? Yes ____ No X Wetland Hydrology Present? Yes ____ No X	**Is the Sampled Area within a Wetland? Yes ____ No X**

Remarks: Area was once on e of the Alford Lakes, which have now been filled in and developed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M RADIUS)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 M RADIIUS)			
1. Salix exigua	20	Y	FACU
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1 M RADIUS)			
1. Schedonorus prantensis	40	Y	FACU
2. Bromus inermis	20	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	____ = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
% Bare Ground in Herb Stratum ____	____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): ____ (A)

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

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

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 =

Hydrophytic Vegetation Indicators:

___ Rapid test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

OIL

Sampling Point: U3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100						

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 X Depth (inches):

Water Table Present? Yes ____ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches):

Wetland Hydrology Present? Yes ____ No X

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

Remarks: