



Aquatic Resource Delineation Report

Huntsville 73

Weber County, UT

Prepared for:

C.W. Land

Prepared by:

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INTRODUCTION

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Background

This delineation report describes the location and extent of aquatic resources within an agricultural property east of Huntsville, Utah in Weber County. (Figure A-1). Aquatic resources comprise potential waters of the U.S. and State of Utah, including wetlands and streams. The survey area is 73 acres in size and is located between 4,926 and 4,944 feet above mean sea level.

C.W. Land requested an aquatic resource inventory to assist with project design and planning, aquatic resource avoidance and minimization, obtaining a jurisdictional determination, and permitting, if necessary. Martin & Nicholson Environmental Consultants, LLC (M&N) conducted an aquatic resources inventory of the survey area on October 28, 2020.

Five appendices support this delineation report. Appendix A provides maps showing the pre-field and field results (Figures A-1 through A-5). Appendix B contains Natural Resources Conservation Service (NCRS) information describing the soil series recorded in the survey area (NCRS 2017a). Appendix C provides the completed data forms. Appendix D contains photographs (D-1 through D-13) of the survey area. Appendix E is the "AqResources" tab of the OMBIL Regulatory Module (ORM).

Survey Area

The 73-acre survey area is located on the east side of 7800 East in Huntsville, Utah approximately 1.5 miles southeast of Woodland, Utah in Section 17 Township 6 North, Range 2 East, and is found on the Huntsville (2017) U.S. Geological Survey 7.5-minute quadrangle (see Figure A-1). All land within the survey area is private. Access can be coordinated by contacting the applicant listed above. To access the

survey area, travel north on I-15 to SR 39. Travel east up Ogden Canyon past Pineview Reservoir until SR 39 turns north. The survey area is at the corner of 7800 East and 500 South.

Landscape Setting

The survey area is active, irrigated grazing land. It is located within the Mountain Valleys Zone (19g) sub-ecoregion of the Wasatch and Uinta Mountains Ecoregion (19). This sub-ecoregion is unforested with terraces, floodplains alluvial fans, and hills. Natural vegetation is primarily sagebrush. Valley bottom land use contrasts with undeveloped areas of adjacent mountains.

The survey area is in the middle of the valley and relatively flat but with some areas of topographic relief in the central part of the parcel. M&N identified two perennial streams that flow east two west through the parcel. In some locations, modification of these streams for agricultural purposes has caused wetlands to develop. In addition, excessive watering appears to have enhanced hydrophytic plant communities which would likely not be as extensive if solely dependent on groundwater. Except for active grazing there were no disturbed areas within the survey area. Vegetation was identifiable to at least the genus-level. In some cases, grazing had removed diagnostic plant features. The whole survey area is accessible by foot, which allowed M&N to inventory the entire survey area with emphasis on waters identified in the National Wetland Inventory (NWI) and areas with potential to support wetlands that are visible in current and historic aerial imagery.

Regulatory Setting

Waters of the U.S.

Generally speaking the Navigational Waters Protection Rule [Department of Defense 33 CFR Part 328; EPA 40 CFR Parts 110, 112, 116, 117, 120, 122, 230, 232, 300, 302, and 401] (EPA 2020) defines jurisdictional waters of the U.S. as follows:

1. Intermittent or perennial tributaries to a traditional navigable water in a typical year,
2. Lakes, pond, and impoundments of jurisdictional waters that contribute surface water flow in a typical year to a traditional navigable water, and
3. “Adjacent wetlands” that abut a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water; are inundated by flooding from a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water in a typical year.
4. The Rule clarifies that waters of the U.S. do not include the following:
 - a. Groundwater,
 - b. Ephemeral features that only flow in response to precipitation,
 - c. Ditches that are not traditional navigable waters,
 - d. Prior converted cropland,
 - e. Artificially irrigated areas that would revert to upland if artificial irrigation ceases,
 - f. Article lakes and ponds that are not jurisdictional impoundments,

- g. Water-filled depressions constructed or excavated in uplands,
- h. Stormwater control features,
- i. Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters, and
- j. Waste treatment systems.

Wetlands are a subset of jurisdictional waters of the U.S. and are jointly defined by the USACE and the EPA as “those areas that are inundated or saturated by surface or groundwater 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” (Environmental Laboratory 1987).

Under Section 404 of the Clean Water Act (CWA), dredged and fill material may not be discharged into jurisdictional waters of the U.S., including wetlands, without a permit.

Regulated activities consist of but are not limited to:

- fill for development,
- utility line projects (such as pipelines), and
- infrastructure development (such as roads).

Waters of the State

Section 73-3-29 of the Utah Code requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written authorization from the Utah Division of Water Rights’ State Engineer before beginning work. Section 73-3-29 is intended to protect the natural resource values of Utah’s streams, with special consideration of water rights and recreational opportunities. The State of Utah asserts jurisdiction over “blue-line” streams on topographic maps, those that have a common name used on maps, and/or streams supporting xeri-riparian vegetation communities. Authorization from the State Engineer is required 1) if an activity will fall within two times the width of the active channel up to a maximum of 30 feet from the water’s edge, 2) if the activity will take place within continuous riparian areas adjacent to the stream, or 3) if the activity will take place in areas of the floodplain that have been observed conducting or storing water during high-flow events or that show physical evidence of conducting or storing water during high flows.

METHODOLOGY

Pre-Field Analysis

Before the delineation fieldwork, M&N reviewed the following data sources as they pertain to the survey area:

- Aerial photographs and topographic maps to identify potential waters of the U.S. in the survey area (Google Earth 2018)
- NWI and the National Hydrography Dataset (NHD) to identify potential waters of the U.S. in the survey area (U.S. Fish and Wildlife Service [USFWS] 2018 and USGS 2018)

- NRCS Soil Survey Geographic Database (SSURGO) (NRCS 2017b) to identify potential hydric soils in the survey area
- LANDFIRE data to identify potential vegetation cover types in the survey area (U.S. Department of the Interior [USDI] and USGS 2014)

Field Survey

Wetlands

M&N conducted the aquatic resource inventory on October 28, 2020. Weather conditions recorded in Huntsville, Utah were sunny with a high temperature of 54 degrees Fahrenheit (The Weather Channel 2020). Trace amounts of precipitation was recorded during the week prior to the aquatic resource inventory. During the fieldwork, all potential wetland and upland vegetation communities observed were sampled to characterize vegetation, soil, and hydrology. M&N sampled at 20 locations to determine if wetland conditions exist in the survey area. M&N recorded all sampling points and wetland boundaries using a Trimble GeoExplorer XH global positioning system (GPS) unit with sub-meter accuracy.

The fieldwork was done in accordance with the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Western Mountains and Valleys* (USACE 2010).

Based on these manuals, jurisdictional wetlands were identified using the following three criteria:

- Hydrophytic vegetation
- Wetlands hydrology
- Hydric soil

All three criteria must be present for an area to be considered a wetland. An explanation of the three wetlands criteria follows.

Hydrophytic Vegetation

Hydrophytic plants are plants that are adapted to wet conditions. The National Wetland Plant List (USACE 2018) was used to determine the wetlands indicator status of plant species observed at the sampling points.

Most plant species were identified on-site during the aquatic resource inventory. If a plant species could not be determined in the field, M&N collected a sample for later identification in the office using a hand lens, ruler, and dichotomous plant key. Plant species were identified using *A Utah Flora* (Welsh et al. 2003).

Hydric Soils

The NRCS defines hydric soils as those soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (above 12- to 20-inch soil depth, depending on soil texture [NRCS 2018]). Soils were assessed for hydric conditions in the field using a spade to excavate a pit and Munsell soil color charts to determine soil color.

Wetlands Hydrology

Wetlands hydrology is how water behaves in wetlands. Primary hydrologic indicators can include soil saturation, surface water, hydrogen sulfide odor, and presence of reduced iron in the soil. Secondary indicators can include drainage patterns and FAC-Neutral test.

Non-Wetland Waters of the U.S.

Potential non-wetland waters of the U.S., i.e., streams and canals, are delineated based on the location and indicators of the ordinary high-water mark (OHWM), which typically occurs at the transition between the active channel and floodplain. Indicators of OHWM can be physical or vegetative and include soil structure and texture, topographic changes, accumulations of organic matter, drift lines, changes in sediment size distribution, and transitions in vegetation type and density. In general during the delineation process, M&N uses *A Guide to Ordinary High Water Mark Delineation for Non-Perennial Streams in the Western Mountains, Valley, and Coast Region of the United States* (USACE 2014) and *Delineating Playas in the Arid Southwest: A Literature Review* (Brostoff et al. 2001).

RESULTS

Pre-Field Analysis

NWI data illustrate 37.57 acres of aquatic resources classified as palustrine emergent (PEM) and riverine wetland (R4 and R5) within the survey area (Table 1, Figure A-2).

Table 1. National Wetland Inventory Data for the Survey Area

Wetland Classification Code ¹	Classification Description	Acres
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	2.10
PEM1Cd	Palustrine, Emergent, Persistent, Seasonally Flooded, Partially Drained/Ditched	34.83
R4SBC	Riverine, Intermittent, Streambed, Seasonally flooded	0.14
R5UBFx	Riverine, Unknown perennial, Unconsolidated bottom, Semi-Permanently flooded, Excavated	0.32
R5UBH	Riverine, Unknown perennial, Unconsolidated bottom, Permanently flooded	0.19
Total		37.57

Source: USFWS (2018) and Cowardin (1979)

NHD data reveal 1317 feet of Canal/Ditch and 2819 feet of Stream / River within the survey area. (Table 2, Figure A-2).

Table 2. National Hydrography Dataset Results for the Survey Area

National Hydrography Dataset Classification	Feet
Canal/Ditch	1317.24
Stream/River: Hydrographic Category = Perennial	2818.99
Total	4136.22

Source: AGRC and USGS (2018)

NRCS SSURGO soil data for the survey area list three soil series, two of which are hydric (Table 3, Figure A-3). Descriptions of the Canburn and Eastcan soil series are found in Appendix B.

Table 3. Natural Resources Conservation Service Soil Survey Geographic Results for the Survey Area

Soil Unit Name	Hydric Status (Yes or No)	Acres
Canburn silt loam	Yes	65.96
Eastcan loam, 0 to 3 percent slopes	Yes	0.55
Phoebe fine sandy loam, 0 to 3 percent slopes	No	6.90
Total		73.40

Source: NRCS (2017b)

Based on information from the LANDFIRE Dataset, natural land cover in the survey area is a mix of cropland with some grasslands, shrublands, and wetlands. M&N did not ground truth the LANDFIRE data. Topographically, the survey area slopes east to west with a high point in the north central portion of the parcel.

Table 4. LANDFIRE Vegetation Data for the Survey Area

Land Cover Types	Acres
Developed-Low Intensity	0.54
Developed-Roads	2.79
North American Arid West Emergent Marsh	3.11
Rocky Mountain Bigtooth Maple Ravine Woodland	4.65
Rocky Mountain Cliff Canyon and Massive Bedrock	0.44
Rocky Mountain Lower Montane-Foothill Riparian Woodland	5.09
Western Cool Temperate Close Grown Crop	17.80
Western Cool Temperate Developed Ruderal Grassland	21.91
Western Cool Temperate Developed Ruderal Herbaceous Wetland	0.88
Western Cool Temperate Developed Ruderal Shrub Wetland	0.44
Western Cool Temperate Developed Ruderal Shrubland	4.00

Land Cover Types	Acres
Western Cool Temperate Orchard	0.44
Western Cool Temperate Pasture and Hayland	10.39
Western Cool Temperate Urban Deciduous Forest	0.39
Western Cool Temperate Urban Herbaceous	0.57
Total	73.45

Source: U.S. Department of the Interior and USGS (2014)

Field Survey

M&N delineated 16.91 acres of palustrine emergent and 0.18 acres of riverine aquatic resources within the survey area. For a delineation results overview, see Figure A-5.

Wetlands

Using the paired sampling point method, M&N delineated 16.91 acres of palustrine emergent wetland (PEM) in the survey area. Table 5 provides a summary of three wetland areas and is followed by a detailed descriptions. The wetlands mapped within the survey area are illustrated in Figure A-5. Select photographs of the survey area and examples of wetland and upland conditions are provided in Appendix D.

Table 5. Wetland Waters of the U.S. in the Survey Area

Wetland ID	Wetland Type	Cowardin Classification Code	Acres
W1	Wet Meadow	Palustrine Emergent (PEM)	13.80
W2	Wet Meadow	Palustrine Emergent (PEM)	3.08
W3	Wet Meadow	Palustrine Emergent (PEM)	0.03
Total			16.91

Wetland 1

W01 is a wet meadow that is maintained by surface water flows entering the survey area in the southeast corner. There is no obvious bed and bank associated with this drainage swale feature. Hydrologic modification (ditching and flow restrictions) on the west side of the survey area has resulted in disperse flow and more expansive area of wetlands. Wetland-supporting hydrology also includes groundwater and irrigation. The drainage swale is dominated by a monoculture of Nodding burr-marigold (*Bidens cernua*) an obligate wetland plant. The wet meadow area of the wetland polygon is dominated by hydrophytic grasses sedges, and rushes including Fowl blue grass (*Poa palustris*), Kentucky blue grass (*Poa pratensis*), Nebraska sedge (*Carex nebrascensis*), and Baltic rush (*Juncus balticus*). Soils are very dark and color and texture are consistent with NRCS descriptions. Heavy irrigation provides additional hydrology.

Wetland 2

Wetland 02 abuts Spring Creek on the north end of the survey area and is associated with what appears to be agricultural inflow entering the property at P10. The wetland boundary is associated with

topographic changes that concentrate surface water and contain overflow from the Spring Creek channel. Vegetation in this wetland polygon is dominated by hydrophytic grasses sedges, and rushes including Fowl blue grass (*Poa palustris*), Kentucky blue grass (*Poa pratensis*), Nebraska sedge (*Carex nebrascensis*), and Baltic rush (*Juncus balticus*). Soils are very dark and color and texture are consistent with NRCS descriptions.

Wetland 3

Wetland 03 is a small, isolated wetland on the east side of the survey area that is likely the result of application of irrigation water. Vegetation in this wetland polygon is dominated by hydrophytic grasses sedges, and rushes including Common timothy (*Phleum pratense*), Kentucky blue grass (*Poa pratensis*), and White clover (*Trifolium repens*). Soils are very dark and color and texture are consistent with NRCS descriptions.

Hydrophytic Vegetation

Dominant plant species observed at upland and wetland sampling points in the survey area are listed in Table 6. All are considered hydrophytic species and as a result distinguishing between wetland and upland locations was dependent upon soils and hydrology. Data forms for each sampling point are provided in Appendix C.

Table 6. Dominant Plant Species Observed at Sampling Points in the Survey Area

Scientific Name	Common Name	National Wetlands Plant List Indicator Status*
<i>Poa palustris</i>	Fowl blue grass	FAC
<i>Poa pratensis</i>	Kentucky blue grass	FAC
<i>Phleum pratense</i>	Canadian thistle	FAC
<i>Trifolium repens</i>	White clover	FAC
<i>Carex nebrascensis</i>	Nebraska sedge	OBL
<i>Juncus balticus</i>	Baltic rush	FACW

Notes: FAC = facultative; FACW = facultative wetland; OBL = obligate wetland

* Data from USACE (2018).

Hydric Soils

The primary hydric soil indicators found in the survey area include Depleted Matrix (F3), Redox Dark Surface (F6), and Depleted Below Dark Surface (A11). Soil indicators were based on color, texture, and other visual observation. Soil data collected at the sampling points are provided in Appendix C.

Wetland Hydrology

Wetland hydrology in the survey area appears to be driven by both surface and ground water. The site appears to be heavily irrigated which has likely expanded wetland areas beyond what would normally occur. In many cases there is a Dry-Season Water table (C2) within 24 inches of the surface. This is completed by another secondary indicator, FAC-Neutral Test (D5). In areas with surface water Oxidized Rhizospheres along Living Roots (C3), a primary indicator, were present. Hydrologic data collected at the sampling points are provided in Appendix C.

Sampling Points

Nine out of twenty sampling points in the survey area meet the three-criterion test indicative of wetland conditions. Most if not all sampling points exhibited hydrophytic vegetation. Non-wetland points either lacked hydric soils and/or hydrology. Table 7 summarizes the sampling point data. Detailed delineation data forms for all sampling points are provided in Appendix C. There were no disturbed areas or problematic conditions although vegetation in some locations had been grazed, removing some diagnostic characteristics, although dominant species were still identifiable.

Table 7. Wetland and Upland Status of Sampling Points in the Survey Area

Sampling Point	Hydrophytic Vegetation Present? (Yes or No)	Hydric Soil Present? (Yes or No)	Wetland Hydrology Present? (Yes or No)	Is the Sampling Point a Wetland? (Yes or No)
P1	Y	Y	Y	Y
P2	Y	N	N	N
P3	Y	Y	Y	Y
P4	Y	N	N	N
P5	Y	Y	Y	Y
P6	Y	N	N	N
P7	Y	Y	Y	Y
P8	Y	N	N	N
P9	Y	N	N	N
P10	Y	Y	Y	Y
P11	Y	Y	Y	Y
P12	Y	N	N	N
P13	Y	Y	Y	Y
P14	Y	N	N	N
P15	Y	Y	Y	Y
P16	Y	N	N	N
P17	Y	N	N	N
P18	Y	Y	Y	Y
P19	Y	N	N	N
P20	Y	N	N	N

Notes: Shaded rows are the sampling points that meet the three-criterion test indicative of wetland conditions.

Non-Wetland Waters of the U.S.

In addition to wetlands, M&N delineated the ordinary high water mark (OHWM) of an unknown perennial stream (R5) along the north boundary of the survey area. This appears to be an excavated and channelized segment of Spring Creek, which used to cross to the north side of 100 South before being modified to run along the south side of this paved road. On average the width of the channel from OHWM to OHWM is approximately 15 feet, ranging from 10 feet to 20 feet in places. Characteristics of this feature are found in Table 8. M&N recorded indicators of an OHWM at sampling point O1. A data form for this aquatic resource is found in Appendix C.

Table 8. Non-Wetland Waters of the U.S. in the Survey Area

Wetland ID	Wetland Classification Code	Classification Description	OHWM width (feet)	Area (acre)
O1 (Spring Creek)	R5	Riverine, Unknown Perennial	20	0.18
Total				0.18

DISCUSSION

M&N sampled at 20 locations using paired sample points to establish wetland and upland points from which wetland boundaries around three wetland polygons could be drawn based on topography, soils, and hydrology. W01 and W02 abut surface water features that appear to flow into Pineview Reservoir. They would likely be considered jurisdictional under the Navigable Waters Protection Rule. W03 is an isolated wetland that has developed due to irrigation practices. It is likely not jurisdictional under the Navigable Waters Protection Rule.

INTERSTATE COMMERCE

M&N found no evidence of interstate commerce in the aquatic features mapped within the survey area.

LITERATURE CITED

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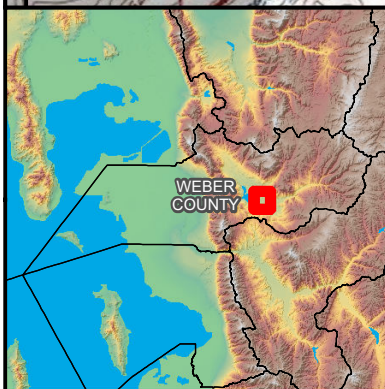
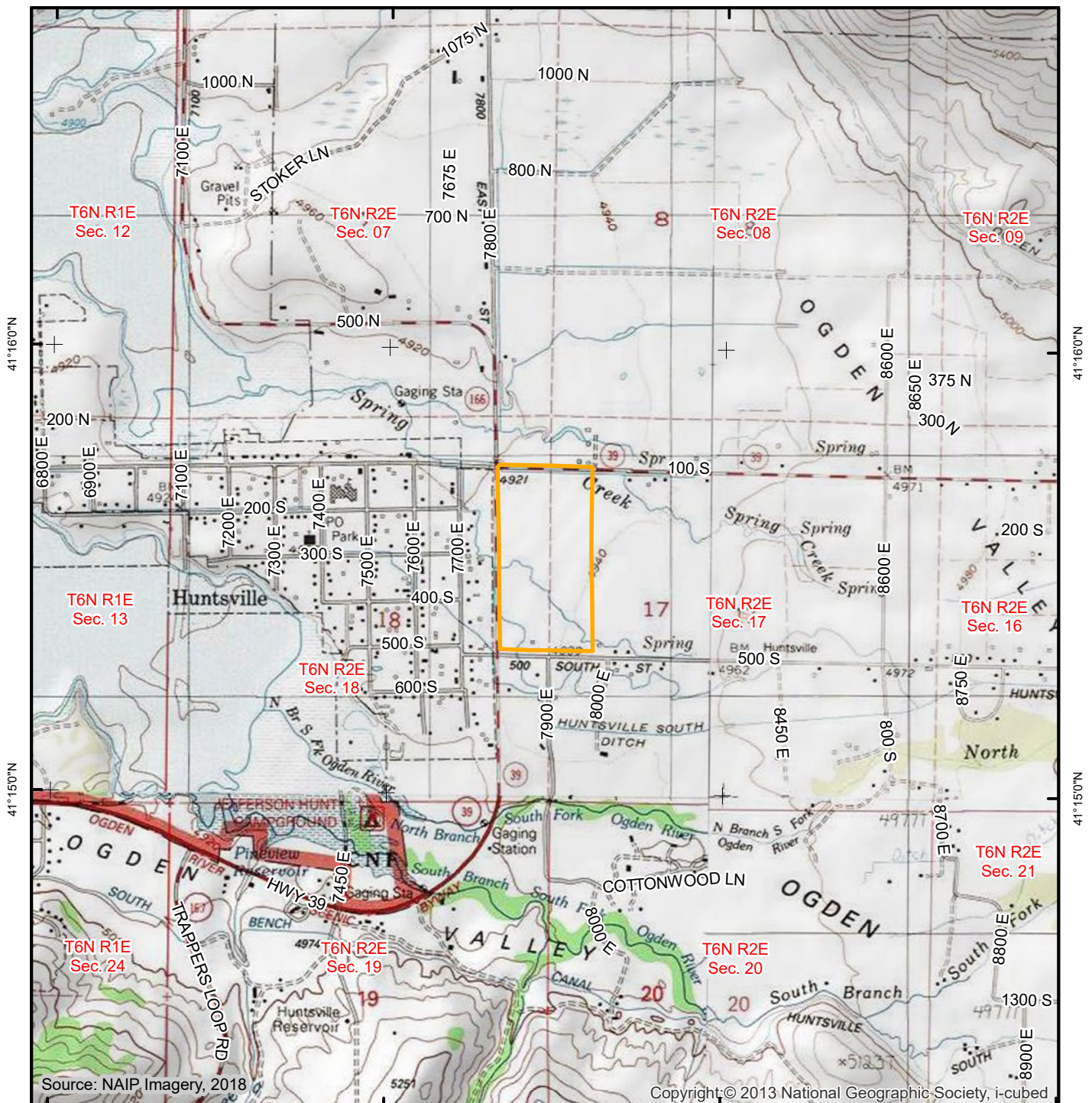
Appendix A

Maps

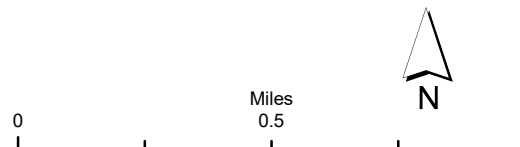
111°47'0"W

111°46'0"W

111°45'0"W



 Survey Area (73.4 acres)



Huntsville

Figure A-1

Project Location Map

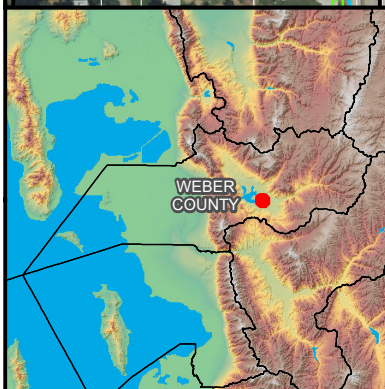
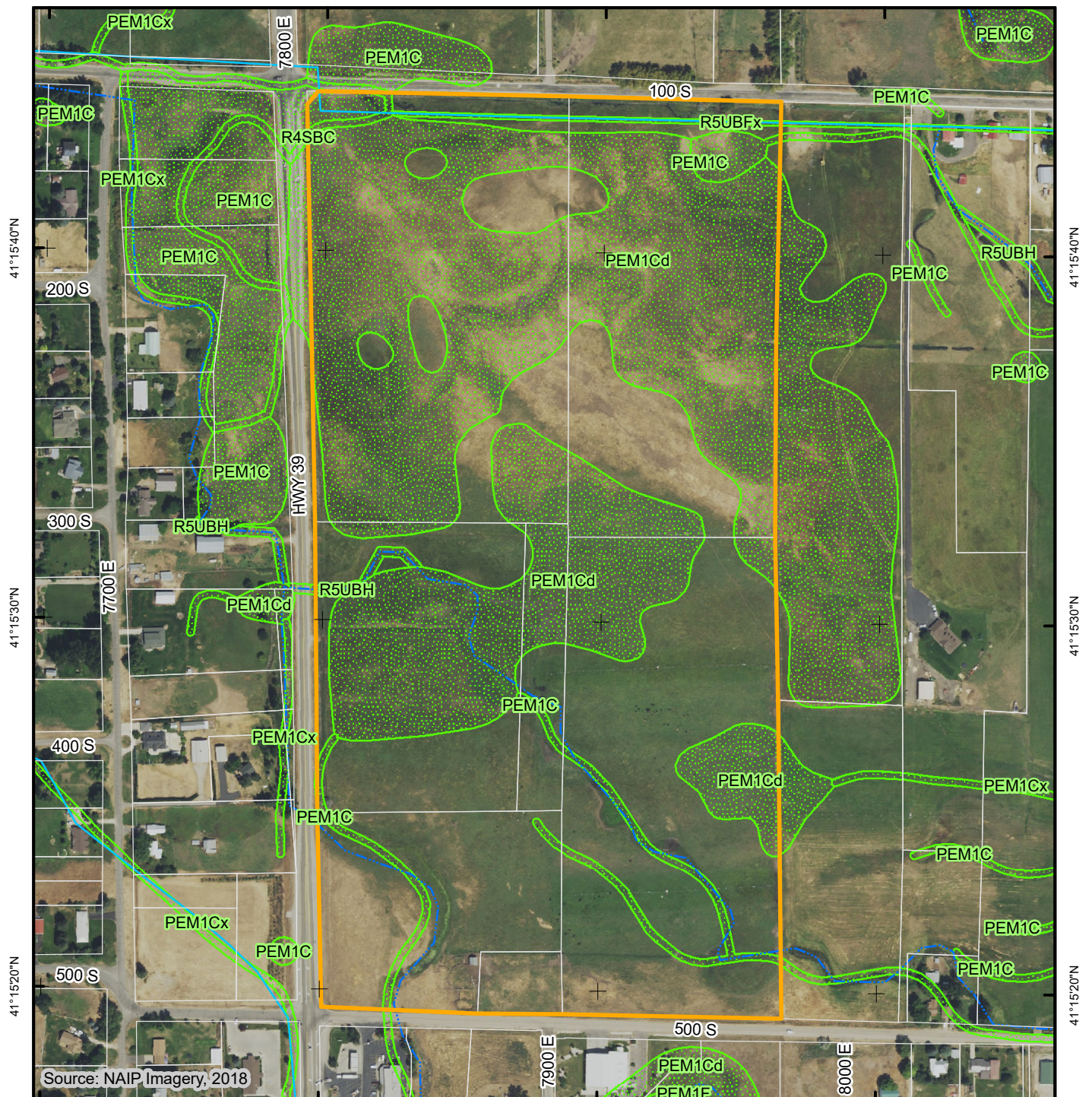

MARTIN & NICHOLSON
 ENVIRONMENTAL CONSULTANTS

111°45'50"W

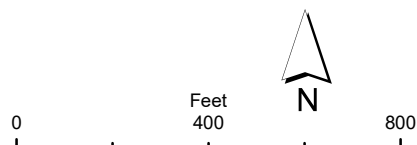
111°45'40"W

111°45'30"W

111°45'20"W



- Survey Area (73.4 acres)
- Parcel
- Canal/Ditch
- Stream/River
- National Wetlands Inventory



Huntsville
Figure A-2
National Wetlands Inventory
&
National Hydrography Dataset

MN
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ENVIRONMENTAL CONSULTANTS

111°45'50"W

111°45'40"W

111°45'30"W

111°45'20"W

41°15'40"N

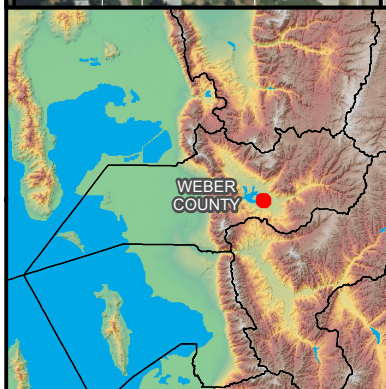
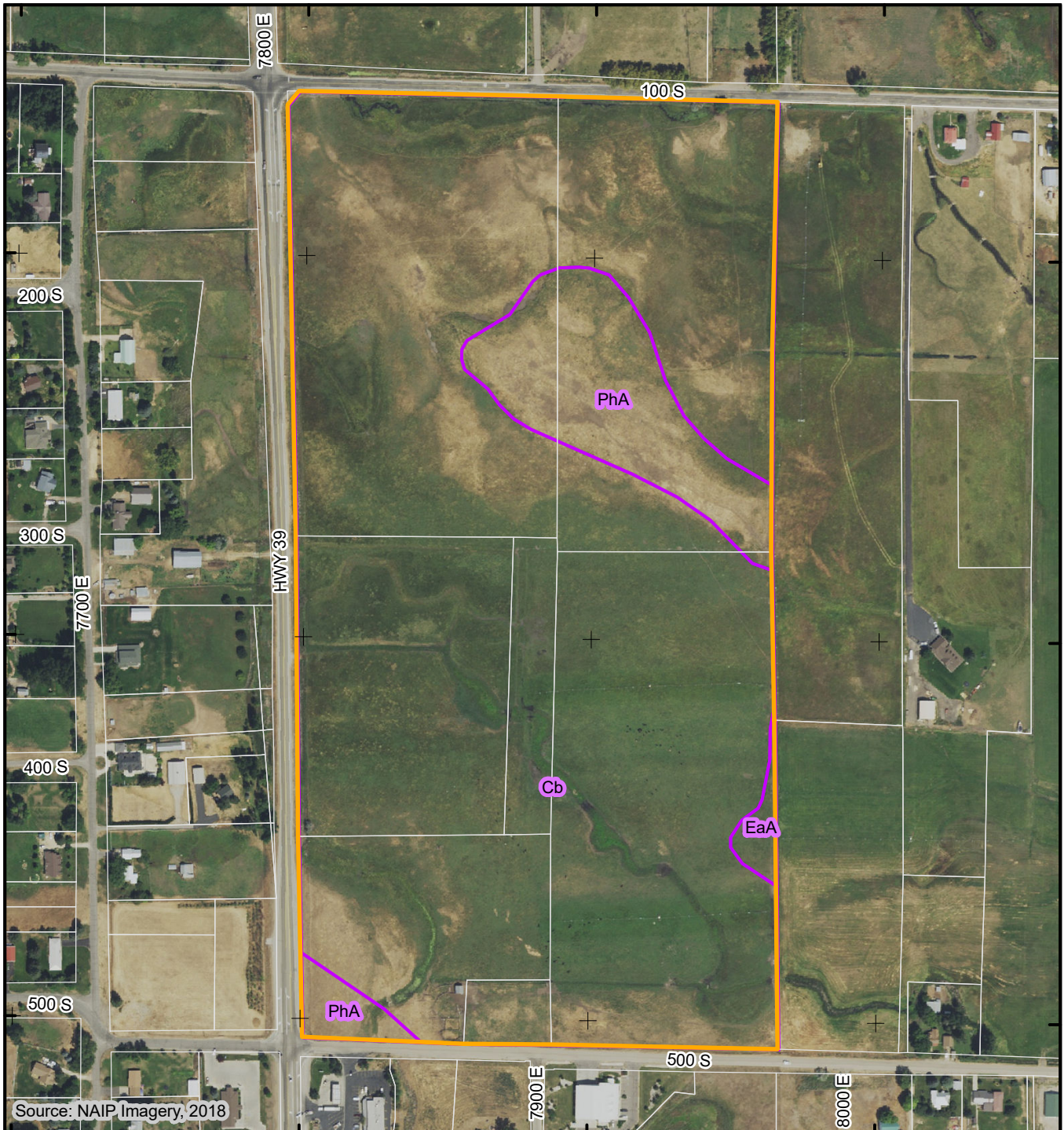
41°15'30"N

41°15'20"N

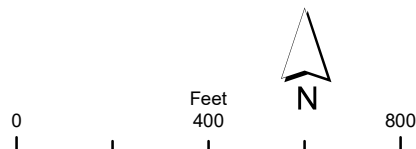
41°15'40"N

41°15'30"N

41°15'20"N



- Survey Area (73.4 acres)
- Parcel
- Cb; Canburn silt loam
- EaA; Eastcan loam, 0 to 3 percent slopes
- PhA; Phoebe fine sandy loam, 0 to 3 percent slopes



Huntsville

Figure A-3

NRCS Soils Map



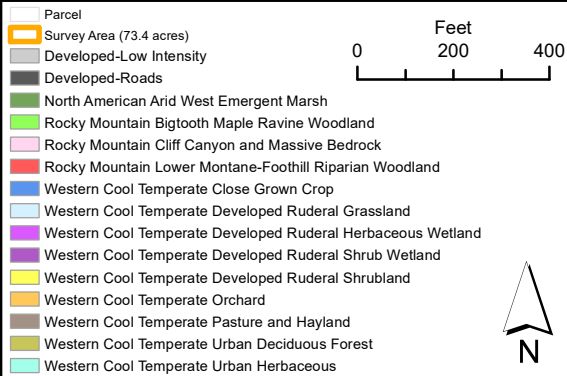
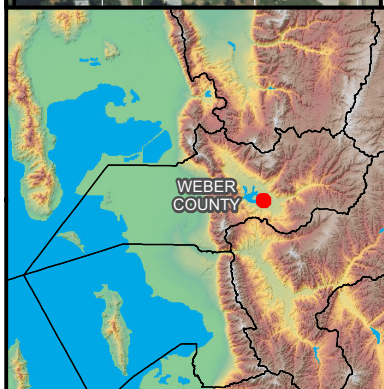
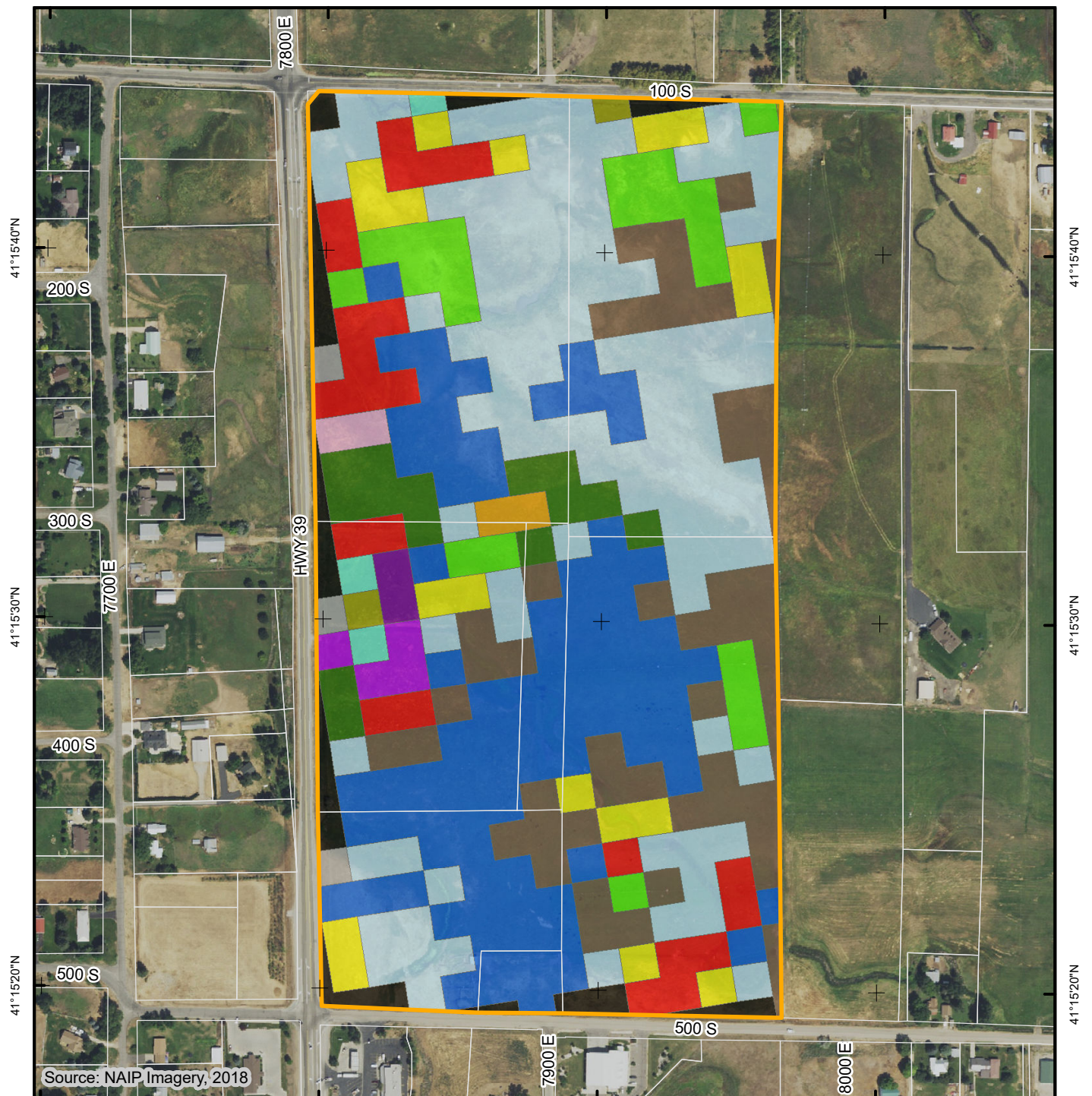
MARTIN & NICHOLSON
ENVIRONMENTAL CONSULTANTS

111°45'50"W

111°45'40"W

111°45'30"W

111°45'20"W



Huntsville

Figure A-4

LANDFIRE Map

MN

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111°45'50"W

111°45'40"W

111°45'30"W

111°45'20"W

41°15'40"N

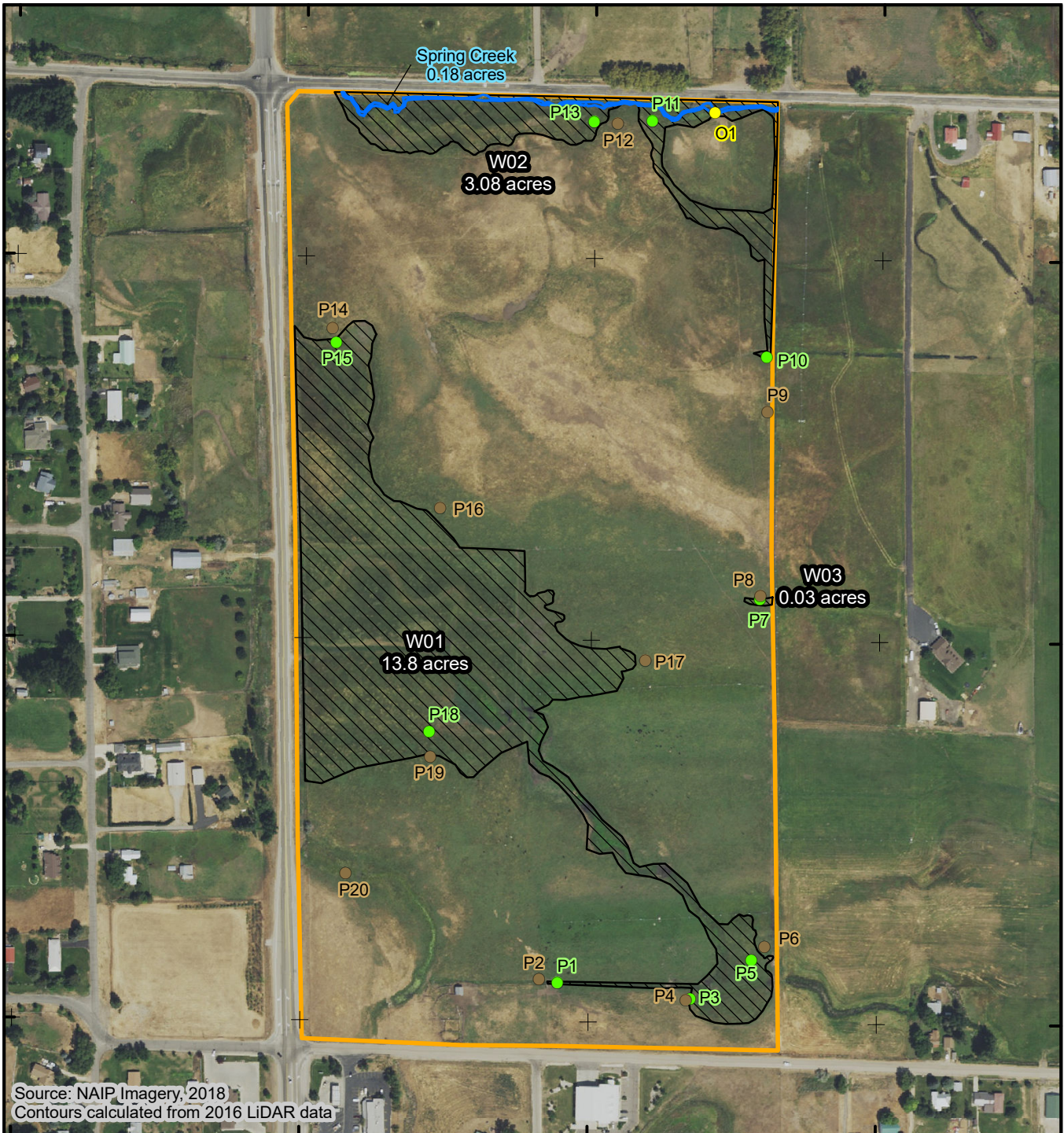
41°15'30"N

41°15'20"N

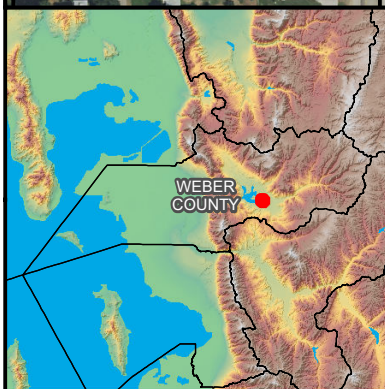
41°15'40"N

41°15'30"N

41°15'20"N



Source: NAIP Imagery, 2018
Contours calculated from 2016 LiDAR data



Survey Area (73.4 acres)

Data Point

- OHWM
- Upland
- Wetland

PEM

R5

Delineation field work
completed 10/28/2020

0 400 800
Feet



Huntsville

Figure A-5

Wetland Delineation Map



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Appendix B

Soil Series Descriptions

The text in this appendix comes directly from the NRCS website at <https://soilseries.sc.egov.usda.gov/osdname.aspx> (NRCS 2017a) and has not been edited.

CANBURN SERIES

The Canburn series consists of very deep, poorly drained soils that formed in mixed alluvium. Canburn soils are on alluvial fans, flood plains and stream terraces. Slopes range from 0 to 5 percent. The mean annual precipitation is about 16 inches (406 mm) and the mean annual temperature is about 43 degrees F (6.1 degrees C).

TAXONOMIC CLASS: Fine-loamy, mixed, superactive, calcareous, frigid Cumulic Endoaquolls

TYPICAL PEDON: Canburn silty clay loam, native pasture. (Colors are for air dry soil unless otherwise noted.)

A1--0 to 3 inches (0 to 8 cm); grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine and fine roots; few very fine pores; strongly effervescent, carbonates are finely disseminated; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 4 inches (8 to 10 cm) thick)

A2--3 to 8 inches (8 to 20 cm); grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; few medium distinct brown (7.5YR 4/4) mottles; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few fine and medium roots; few fine and medium pores; strongly effervescent, carbonates are finely disseminated; strongly alkaline (pH 8.6); clear smooth boundary. (5 to 7 inches (13 to 18 cm) thick)

A3--8 to 16 inches (20 to 41 cm); grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; common medium distinct yellowish brown (10YR 5/6) mottles; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few fine and medium roots; few fine and medium pores; strongly effervescent, carbonates are finely disseminated; strongly alkaline (pH 8.8); gradual smooth boundary. (8 to 12 inches (20 to 30 cm) thick)

A4--16 to 25 inches (41 to 64 cm); grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; common fine distinct yellowish brown (10YR 5/6) mottles; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few fine and medium roots; few fine and medium pores; strongly effervescent, carbonates are finely disseminated; strongly alkaline (pH 8.8); gradual smooth boundary. (8 to 12 inches (20 to 30 cm) thick)

C1--25 to 45 inches (64 to 114 cm); light brownish gray (10YR 6/2) clay loam, very dark grayish brown (10YR 3/2) moist; massive; hard, firm, moderately sticky and moderately plastic; few fine roots; strongly effervescent, carbonates are finely disseminated; strongly alkaline (pH 8.8); gradual smooth boundary. (15 to 25 inches (38 to 64 cm) thick)

C2--45 to 60 inches (114 to 152 cm); grayish brown (10YR 5/2) clay loam, dark brown (10YR 3/3) moist; massive; hard, firm, moderately sticky and moderately plastic; few fine roots; strongly effervescent, carbonates are finely disseminated; strongly alkaline (pH 8.8).

TYPE LOCATION: Sanpete County, Utah; about 2 km (1.25 miles) WSW of Milburn, south end of the Milburn bottoms; located about 600 feet (183 m) north and 1,700 feet (518 m) east of the SW corner of sec. 11, T. 13 S., R. 4 E.; Fairview USGS quad; lat 39 degrees 41 minutes 55 seconds N. and long. 111 degrees 26 minutes 48 seconds W., NAD83

RANGE IN CHARACTERISTICS:

Soil moisture: The soil moisture control section is usually wet from November through July, and moist from August through October; aquic soil moisture regime.

Mean annual soil temperature: 41 to 46 degrees F (5.0 to 8.0 degrees C)

Mean summer soil temperature: 60 to 68 degrees F (15.5 to 20.0 degrees C)

Depth to endosaturation: 0 to 20 inches (0 to 51 cm) from November to July; as much as 50 inches (127 cm) from August to October

Thickness of the mollic epipedon: 24 to 35 inches (61 to 89 cm) or more

Electrical conductivity: 0 to 2 dS/m

Calcium Carbonate Equivalent: 5 to 30 percent

Some pedons have a thin Oi horizon of matted roots and fibers.

Particle-size control section (weighted averages):

Clay content: 20 to 35 percent

Fine sand and coarser sand content: greater than 15 percent

A horizon:

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 0 to 2 moist, 1 to 3 dry; chroma of 2 is accompanied by distinct or prominent mottles

Reaction: slightly alkaline to strongly alkaline

C horizons:

Hue: 7.5YR, 10YR or 2.5Y, and in some pedons 5GY

Value: 4 to 6 dry, 2 to 5 moist

Chroma: 1 to 6 dry, 1 to 4 moist; high and low chroma redoximorphic features may occur in these horizons

Texture: loam, silt loam, silty clay loam or clay loam; some pedons contain horizons with clay textures; thin stratifications of sand or sandy loam occur in some pedons.

Reaction: moderately alkaline or strongly alkaline

COMPETING SERIES: These are the [Cantle](#) (WY) and [Parle](#) (MN) series.

[Cantle](#): have a mean annual soil temperature of 40 to 44 degrees F (4.4 to 6.7 degrees C) and have an electrical conductivity that exceeds 2 mmhos/cm.

[Parle](#): have sandy substrata and 2.5Y and 5Y hue in the B and C horizons.

GEOGRAPHIC SETTING:

Parent material: alluvium derived from mixed sources

Landform: mountain valley bottoms, flood plains, stream terraces and on lower slopes of alluvial fans

Slopes: 0 to 5 percent

Elevation: 4,800 to 8,200 feet (1,463 to 2,499 meters)

Mean annual air temperature: 39 to 46 degrees F (4.0 to 7.8 degrees C)

Mean annual precipitation: 12 to 20 inches (305 to 508 mm)

Precipitation pattern: Wettest months are October to May and driest months are June to September. The climate is dry subhumid or moist subhumid.

Frost-free period: 70 to 120 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the [Beek](#), [Birdow](#), [Eastcan](#), [Keigley](#), [Manila](#), [Pringle](#), [Redola](#), [Toehead](#), and [Watkins Ridge](#) soils. Beek, Birdow and Keigley soils have mean annual soil temperature warmer than 47 degrees F (8.3 degrees C). Birdow, Manila, Toehead and Watkins Ridge soils do not have redoximorphic features. Eastcan and Redola soils do not have redoximorphic features above 20 inches (51 cm). Manila soils have argillic horizons. Pringle soils have more than 35 percent rock fragments in the control section. Watkins Ridge soils have calcic horizons.

DRAINAGE AND PERMEABILITY: Poorly drained; low runoff to ponded; slow and moderately slow permeability; Ksat is moderately high or moderately low; depth to water table ranges from 0 to 50 inches (0 to 127 cm) at different times of the year.

USE AND VEGETATION: These soils are used for grass pasture and for native grass hay. Principal plants are sedge (carex), wiregrass, cinquefoil, dandelion, redtop grass, and foxtail.

DISTRIBUTION AND EXTENT: Central and northern Utah and northeastern Arizona, northwestern New Mexico, Montana and Wyoming. The series is moderately extensive. MLRA 28A, 34, 39A, 47, 49, and 58A.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Bozeman, Montana

SERIES ESTABLISHED: Sanpete Soil Survey Area, Utah, 1971.

REMARKS: Diagnostic horizons and features in this pedon include:

Mollic epipedon: The zone from 0 to 25 inches (0 to 64 cm) (A1, A2, A3 and A4 horizons).

Cumulic feature: The mollic epipedon is greater than 24 inches (60 cm) thick.

The classification was changed in 1992 from Cumulic Haplaquolls to Cumulic Endoaquolls.

Taxonomic Version: Eleventh Edition, 2010.

EASTCAN SERIES

The Eastcan series consists of very deep, well drained soils that formed in alluvium from sandstone, quartzite and limestone. These soils are on flood plains, stream terraces, and valley bottoms. The mean annual precipitation is about 20 inches and the mean annual temperature is about 46 degrees F.

TAXONOMIC CLASS: Fine-loamy, mixed, superactive, mesic Cumulic Haploxerolls

TYPICAL PEDON: Eastcan loam, irrigated cropland. (Colors are for moist soil unless otherwise noted.)

A1p--0 to 9 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure that parts to weak fine granular; slightly hard, friable, slightly sticky and plastic; common very fine and few fine roots; moderately calcareous; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 10 inches thick)

A12--9 to 13 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and plastic; common very fine and few fine roots; few fine pores; moderately calcareous; mildly alkaline (pH 7.8); clear smooth boundary. (4 to 11 inches thick)

A13--13 to 28 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and plastic; many very fine and fine, and few medium and coarse roots; few fine pores; moderately calcareous; mildly alkaline (pH 7.8); clear smooth boundary. (0 to 15 inches thick)

C1--28 to 39 inches; dark brown (10YR 3/4) silt loam, yellowish brown (10YR 5/4) dry; few fine faint brown (7.5YR 5/4) mottles; massive; slightly hard, friable, slightly sticky and plastic; many very fine and fine, few medium and coarse roots; few fine pores; strongly calcareous; moderately alkaline (pH 8.0); clear smooth boundary. (5 to 12 inches thick)

C2--39 to 60 inches; dark brown (7.5YR 4/2) silt loam, yellowish brown (10YR 5/4) moist; few fine faint brown (7.5YR 5/4) mottles; slightly hard, friable, slightly sticky and plastic; few very fine roots; few fine pores; strongly calcareous; moderately alkaline (pH 8.2).

TYPE LOCATION: Morgan County, Utah; about 2 miles south of Morgan Courthouse; about 400 feet east and 1,700 feet north of SW corner of section 12, T.3N., R.2E.

RANGE IN CHARACTERISTICS: The mollic epipedon is 21 to 33 inches thick. Organic matter content decreases irregularly with increasing depth or remains above 0.5 percent to a depth of 50 inches or more. The control section ranges from silt loam to loam or clay loam and has strata of fine sandy loam to silty clay loam. The mean annual soil temperature at depth of 20 inches ranges from 47 to 49 degrees F., and the mean summer temperature ranges from 68 to 70 degrees F. The soils are usually moist when the soil temperature is more than 41 degrees F, but are dry for 60 to 85 consecutive days during the late summer. Mottles are few fine to common, medium, faint through prominent with hue of 10YR, 7.5YR or 5YR, value of 4 or 5 dry and chroma of 4 through 8 moist. Depth to mottles ranges from 24 to 40 inches.

The A1 horizon has hue of 10YR or 7.5YR, value of 3 through 5 dry, 2 or 3 moist, and chroma of 2 through 4 dry and 2 or 3 moist. It ranges from loam or silt loam, to clay loam or to very fine sandy loam. This horizon ranges from neutral through strongly alkaline and is slightly or moderately calcareous. It is 21 to 33 inches thick.

The C horizon has hue of 10YR, 7.5YR or 5YR, value of 4 through 7 dry, and 3 through 5 moist, and chroma of 2 through 6 dry and moist. It ranges from loam or silt loam to light clay loam with strata of fine sandy loam, gravelly

loam, very fine sandy loam, or silty clay loam. This horizon ranges from mildly to strongly alkaline and from slightly through strongly calcareous.

COMPETING SERIES: These are the [Birdow](#), [Blackrock](#), [Coit](#), [Dagor](#), [Drax](#), [Eld](#), [Goose Creek](#), [Lakeview](#), [Packard](#), and [Willowdale](#) series. Birdow, Blackrock, Dagor and Willowdale soils lack mottles. Blackrock soils have A1 horizons with chroma of 1.5 or less, and have horizons of carbonate accumulation. Coit soils have mottles at depth of 18 inches, are poorly drained and have an aridic moisture regime. Drax soils have A1 horizons less than 20 inches thick. Eld soils are noncalcareous and are medium to slightly acid. Goose Creek soils are mainly noncalcareous but are slightly calcareous below a depth of 36 inches in some pedons. Lakeview soils have chroma of 1.5 or less in the A horizon and are noncalcareous to depth of about 32 inches. Packard soils have medium acid B2 horizons.

GEOGRAPHIC SETTING: Eastcan soils are at elevations of 3,000 to 5,200 feet. They occur on flood plains, stream terraces and valley bottoms. Slopes range from 0 to 10 percent. These soils formed in mixed alluvium from sandstone, quartzite and limestone. The climate is moist subhumid, with an average annual precipitation ranging from 10 to 22 inches. The mean annual temperature is 45 to 51 degrees F., and the mean summer temperature is 65 to 67 degrees F. The frost free season ranges from 100 to 140 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the [Canburn](#), [Crooked Creek](#), Nebaker, [Redola](#) and [Sunset](#) soils. Canburn and Crooked Creek soils have mottles with chroma less than 2 above a depth of 20 inches. Crooked Creek soils have silty clay or heavy clay loam control sections. Nebaker soils have argillic horizons. Redola soils lack mottles and average less than 18 percent clay and more than 15 percent sand coarser than very fine sand in the control section. Sunset soils average less than 18 percent clay in the control section.

DRAINAGE AND PERMEABILITY: Moderately well drained; slow runoff; moderate permeability. Seasonal high water table ranges from 25 to 40 inches but water table is below 40 inches most of the time.

USE AND VEGETATION: These soils are used for irrigated cropland. Alfalfa, small grains, and corn for silage are the principal crops.

DISTRIBUTION AND EXTENT: Northern Utah and Southern Idaho. The series is inextensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Bozeman, Montana

SERIES ESTABLISHED: Morgan Area, Morgan County, Utah, 1974.

REMARKS:

The superactive cation exchange activity class was added in 03/2003 to the taxonomic classification by the National Soil Survey Center on request of the Reno MLRA office, without review of the soil series property data. The remainder of this document has not been updated.

Appendix C

Data Forms

Project: Huntsville 73 **Date:** 10/28/2020
Location: Huntsville, Utah O1 **Investigator(s):** Brian Nicholson, Susan Martin

Project Description:

M&N conducted this delineation of the Spring Creek OHWM as part of a regulatory and development planning process. Spring Creek runs east to west along the side of SR 39 (100 South) until it crosses under the road at approximately SR 166 (7800 East). It flows into Pineview Reservoir. Spring Creek is located at the north end of the survey area.

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

Spring Creek was flowing during the site visit. It has some small natural meanders but is confined on the north side by SR 39 (100 South). There are areas of low bench / emergent vegetation. In addition to channelization in some places, Spring Creek is affected by culverts and surrounding agricultural land uses.

Off-site Information

Remotely sensed image(s) acquired? ☒ **Yes** ☐ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

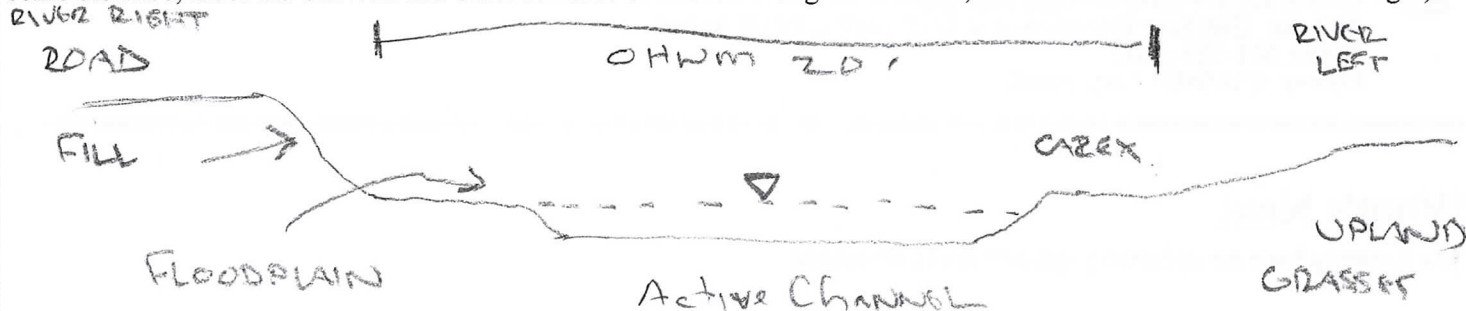
Hydrologic/hydraulic information acquired? ☐ **Yes** ☒ **No** [If yes, attach information to datasheet(s) and describe below.] Description:

List and describe any other supporting information received/acquired:

None

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp ($> 60^\circ$) | ☒ Moderate ($30-60^\circ$) | ☐ Gentle ($< 30^\circ$) | ☐ None

Notes/Description:

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	80	10	10			Y
Below OHWM	10	10	40	40		N

Notes/Description:

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM			90	10
Below OHWM			50	50

Notes/Description:

The is a mix of herbaceous wetland and upland vegetation about the OHWM. There is submerged aquatic vegetation below the OHWM.

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

M&N defined the OHWM primarily based on topographic slope breaks and changes in vegetation. At some locations the top of the bank exhibits upland conditions making the OHWM easy to delineation. In other location the OHWM extends above low, narrow emergent benches. Most Spring Creek in the survey area has about wetlands above the OHWM.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P1
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2558436 Long: -111.7586429 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology 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 <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or 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. <u> </u>						
2. <u> </u>						
3. <u> </u>						
4. <u> </u>						
			= Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)						
1. <u> </u>						
2. <u> </u>						
3. <u> </u>						
4. <u> </u>						
5. <u> </u>						
			= Total Cover			
Herb Stratum (Plot size: <u> </u>)						Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cirsium arvense</u>			5	No	FAC	
2. <u>Carex nebrascensis</u>			50	Yes	OBL	
3. <u>Phleum pratense</u>			5	No	FAC	
4. <u>Anthemis cotula</u>			5	No	FACU	
5. <u>Trifolium repens</u>			10	No	FAC	
6. <u>Eleocharis palustris</u>			25	Yes	OBL	
7. <u> </u>						
8. <u> </u>						
9. <u> </u>						
10. <u> </u>						
11. <u> </u>						
			100	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)						
1. <u> </u>						
2. <u> </u>						
			= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>						
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>						

Remarks:

SOIL

Sampling Point: P1

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		
0-9	10YR 2/1	100					Silt clay loam	
9-16	10YR 5/2	95	5YR 5/6	5	C	M PL	Silt 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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☒ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks) ³ Indicators 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)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☒ No ☐
---	---

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

Remarks: This location appears to receive backwater from the nearby surface water.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P2
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D Lat: 41.2558676 Long: -111.7588214 Datum: WGS84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.					
2.	<i>Poa pratensis</i>	40	Yes	FAC	
3.	<i>Phleum pratense</i>	30	Yes	FAC	
4.	<i>Anthemis cotula</i>	15	No	FACU	
5.	<i>Trifolium repens</i>	15	No	FAC	
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum		<u>0</u>			
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P2

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		
0-16	10YR 2/2	100					Clay loam	
16-20	10YR 3/2	100					Silt 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.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1) ☐ Sandy Redox (S5) ☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6) ☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)	☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks) ³ Indicators 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 ☒
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Remarks: Does not appear to meet the mucky soil modifier or contain sufficient organic soil material for representative hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one 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) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	
	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)	

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
--	---

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

Remarks: This location is topographically above P1 that is in the bottom of an irrigation ditch.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020

Applicant/Owner: CW Land State: UT Sampling Point: P3

Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17

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

Subregion (LRR): D Lat: 41.2557338 Long: -111.7573634 Datum: WGS 84

Soil Map Unit Name: Canburn NWI classification: PEM

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

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<u>Carex nebrascensis</u>	50	Yes	OBL
2.	<u>Juncus balticus</u>	10	No	FACW
3.	<u>Phleum pratense</u>	40	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ Y 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants¹
- ☐ 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: P3

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		
0-4	10YR 2/2	100						Mat of roots
4-16	10YR 2/1	100					Silt Clay Loam	
16-20	10YR 4/2	97	7.5YR 5/4	3	C	M PL	Silt 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.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☒ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)	☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)

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)		Secondary Indicators (2 or more required)	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☒ Dry-Season Water Table (C2) ☒ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)	

Field Observations:			
Surface Water Present?	Yes ☐ No ☐	Depth (inches):	_____
Water Table Present?	Yes ☐ No ☐	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	20

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Hit saturation at 20" after digging through dry soil above. Assume that the water table is near this level.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P4
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR): D Lat: 41.2557267 Long: -111.7574013 Datum: WGS84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 15 x 1 = 15 FACW species 90 x 2 = 180 FAC species 5 x 3 = 15 FACU species 110 x 4 = 440 UPL species 320 x 5 = 1600 Column Totals: 110 (A) 320 (B) Prevalence Index = B/A = 2.90
Sapling/Shrub Stratum (Plot size:)					
1.					
2.					
3.					
4.					
5.					
		= Total Cover			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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size:)					
1.	<i>Cirsium arvense</i>	15	No	FAC	
2.	<i>Juncus balticus</i>	15	No	FACW	
3.	<i>Anthemis cotula</i>	5	No	FACU	
4.	<i>Trifolium repens</i>	15	No	FAC	
5.	<i>Poa pratensis</i>	60	Yes	FAC	
6.					
7.					
8.					
9.					
10.					
11.					
		110 = Total Cover			Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size:)					
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum					

Remarks:

SOIL

Sampling Point: P4

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		
0-20	10YR 3/1	100						

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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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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: Soils did not have a textural mucky or organic component that might indicate hydric conditions for this soil color.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrologic indicators other than secondary indicators based on plants.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P5
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D Lat: 41.2560181 Long: -111.756774 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<i>Triglochin maritima</i>	5	No	OBL
2.	<i>Juncus balticus</i>	20	Yes	FACW
3.	<i>Poa pratensis</i>	65	Yes	FAC
4.	<i>Trifolium repens</i>	10	No	FAC
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ Y 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants¹

☐ 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: P5

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		
0-4	10YR 3/2	100					Clay Loam	
4-10	10YR 3/1	100					Silt Clay Loam	
10-16	10YR 2/1	100					Silt Clay Loam	
16-20	Gley 1 2.5N	95	7.5YR 4/4	5	C	M PL	Silt 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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☒ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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: Gley soil layer continues beyond 20 inches.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☒ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☒ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 16	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P6
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR): D Lat: 41.2561167 Long: -111.7566491 Datum: WGS 84
 Soil Map Unit Name: Carburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<i>Poa pratensis</i>	40	Yes	FAC
2.	<i>Phleum pratense</i>	20	Yes	FAC
3.	<i>Trifolium repens</i>	40	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ Y 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants¹
- ☐ 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: P6

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 3/2	100					Silt Clay Loam	
6-16	10YR 2/1	100					Silt Clay Loam	
16-20	10YR 3/1	100					Silt Clay Loam	
20-24	10YR 3/1	95	10YR 4/3	5	C	M	Silt 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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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

Restrictive Layer (if present):	Hydric Soil Present?	Yes	No	X
Type: _____ Depth (inches): _____				

Remarks:

Very dry soil all the way to 24 inches. Did not have the same moist or gleyed conditions as in P5. Possible that ground water comes within 20 inches of the soil at some time to create redox features but not within 12" to make soil hydric.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)
☐ Inundation Visible on Aerial Imagery (B7)		
☐ Sparsely Vegetated Concave Surface (B8)		

Field Observations:		Wetland Hydrology Present?	Yes	No	X
Surface Water Present?	Yes ☐ No ☐				
Water Table Present?	Yes ☐ No ☐				
Saturation Present?	Yes ☐ No ☐				
(includes capillary fringe)	Yes ☐ No ☐				
Depth (inches): _____					
Depth (inches): _____					
Depth (inches): _____					

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

Remarks: No hydric soil indicators other than FAC-Neutral test

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P7
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2586442 Long: -111.7567224 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa pratensis</i>	50	Yes	FAC	
2.	<i>Phleum pratense</i>	20	Yes	FAC	
3.	<i>Trifolium repens</i>	25	Yes	FAC	
4.	<i>Rumex stenophyllus</i>	5	No	FACW	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P7

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		
0-9	10YR 3/1	100					Silt Clay Loam	
9-16	10YR 6/2	95	7.5YR 5/6	5	C	M	Silt 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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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 ☐
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)					
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Salt Crust (B11)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	☐ Drainage Patterns (B10)	
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Hydrogen Sulfide Odor (C1)	☒ Dry-Season Water Table (C2)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☒ Geomorphic Position (D2)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)	☒ FAC-Neutral Test (D5)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (Explain in Remarks)		☐ Frost-Heave Hummocks (D7)		
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 16	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil becomes moist as one reaches 16" Pit would likely fill with water over time.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P8
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): None Slope (%):
 Subregion (LRR): D Lat: 41.258671 Long: -111.7567194 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology 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 <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1.					
2.					
3.					
4.					
		= Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum	(Plot size: <u> </u>)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size: <u> </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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Poa pratensis</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Phleum pratense</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>Trifolium repens</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size: <u> </u>)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>					

Remarks:

SOIL

Sampling Point: P8

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 3/2	100						
6-16	10YR 2/1	100						
16-20	10YR 3/1	100						
20-24	10YR 3/1	95	10YR 4/3	5			S	

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.)		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)	
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)	
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)	
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)		
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)		
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)		

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

Restrictive Layer (if present):	Hydric Soil Present?	Yes	No	X
Type: _____				
Depth (inches): _____				

Remarks:

Very dry soil all the way to 24 inches. Does not have the gley component at depth to support hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)			
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes ☐ No ☐	Yes	No ☒
Water Table Present?	Yes ☐ No ☐		
Saturation Present?	Yes ☐ No ☐		
(includes capillary fringe)	Yes ☐ No ☐		

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

Remarks: No wetland hydrology indicators except FAC-Neutral test.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P9
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2600110 Long: -111.7566661 Datum: WGS 84
 Soil Map Unit Name: Canbrun NWI classification: UPL

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

SUMMARY OF FINDINGS – Attach site map showing sampling 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:

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa pratensis</i>	20	Yes	FAC	
2.	<i>Phleum pratense</i>	10	No	FAC	
3.	<i>Trifolium repens</i>	10	No	FAC	
4.	<i>Cirsium arvense</i>	10	No	FAC	
5.	<i>Carex nebrascensis</i>	50	Yes	OBL	
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum 0					
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P9

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 3/1	100						
3-16	10YR 4/3	100					S	

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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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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 ☒
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Remarks:
No hydric soils

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
In a ditch but not sufficient concentration of surface water or depth to groundwater to have hydrology indicators with exception of FAC-Neutral test

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P10
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2604092 Long: -111.7566769 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology 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 <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: Surface water entering survey from offsite via ditch.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1.					
2.					
3.					
4.					
		= Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum	(Plot size: <u> </u>)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa pratensis</i>	35	Yes	FAC	
2.	<i>Phleum pratense</i>	20	Yes	FAC	
3.	<i>Juncus balticus</i>	15	No	FACW	
4.	<i>Cirsium arvense</i>	5	No	FAC	
5.	<i>Carex nebrascensis</i>	25	Yes	OBL	
6.					
7.					
8.					
9.					
10.					
11.					
		100	= Total Cover		
Woody Vine Stratum	(Plot size: <u> </u>)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>					

Remarks:

SOIL

Sampling Point: P10

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		
0-4	10YR 2/1	100					Silt Clay Loam	
4-12	10YR 5/2	95	7.5YR 5/6	5	C	M PL	Silt 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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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 ☐
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres along Living Roots (C3)	☒ Geomorphic Position (D2)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)
☐ Inundation Visible on Aerial Imagery (B7)		
☐ Sparsely Vegetated Concave Surface (B8)		

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In a ditch near a pipe

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P11
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D Lat: 41.2621223 Long: -111.7578011 Datum: WGS84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<i>Poa pratensis</i>	30	Yes	FAC
2.	<i>Poa palustris</i>	20	Yes	FAC
3.	<i>Juncus balticus</i>	20	Yes	FACW
4.	<i>Carex nebrascensis</i>	30	Yes	OBL
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ Y 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants¹
- ☐ 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: P11

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		
0-9	10YR 3/1	100					Silt Clay Loam	greasy
9-16	10YR 2/1	80	5YR 3/4	20			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) ☐ Histic Epipedon (A2) ☒ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
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Remarks: Top layer has a greasy feel indicating muck or organic material. No organic-carbon content test was performed. Hydrology, proximity to Spring Creek, topography, and vegetation support this being a wetland point.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☒ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 12	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P12
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D Lat: 41.2621014 Long: -111.7581346 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa pratensis</i>	50	Yes	FAC	
2.	<i>Trifolium repens</i>	30	Yes	FAC	
3.	<i>Juncus balticus</i>	20	Yes	FACW	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P12

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		
0-16	10YR 3/1	100					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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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 ☒
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Remarks:

Hit cobble at 16 inches; Soil dry to this depth. No muck or organics in noticeable concentrations.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)
☐ Inundation Visible on Aerial Imagery (B7)		
☐ Sparsely Vegetated Concave Surface (B8)		

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology except for FAC-Neutral test

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P13
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.262112 Long: -111.7583607 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa pratensis</i>	40	Yes	FAC	
2.	<i>Poa paustris</i>	30	Yes	FAC	
3.	<i>Carex nebrascensis</i>	30	Yes	FACW	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P13

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 3/2	100						Dense root mass
3-16	10YR 2/1	90	5YR 4/3	10	C	M PL	Silt Clay Loam	greasy

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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☒ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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 ☐
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Remarks:
 Layer has a greasy feel indicating muck or organic material. No organic-carbon content test was performed. Hydrology, proximity to Spring Creek, topography, and vegetation support this being a wetland point.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P14
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D Lat: 41.2605947 Long: -111.7608667 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:		

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____					
2. _____					
3. _____					
4. _____					
_____ = 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: _____)					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
_____ = Total Cover					
Herb Stratum (Plot size: _____)					
1. <u>Poa pratensis</u>		<u>60</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Poa palustris</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Juncus balticus</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
_____ = Total Cover					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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)					
1. _____					
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum _____					Hydrophytic Vegetation Present? Yes ☒ No ☐
Remarks:					

SOIL

Sampling Point: P14

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		
0-20	10YR 2/2	100					Silt Clay Loam	worms

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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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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 ☒
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Remarks: No muck or organic feel to this dry soil that would indicate hydric conditions.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P15
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2604918 Long: -111.7608295 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<u>Carex nebrascensis</u>	30	Yes	OBL
2.	<u>Poa palustris</u>	30	Yes	FAC
3.	<u>Juncus balticus</u>	40	Yes	FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ Y 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants¹

☐ 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: P15

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		
0-16	10YR 2/1	100					Clay Loam	greasy

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) ☐ Histic Epipedon (A2) ☒ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ 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 ☐
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Remarks:

Hit cobble at 16 inches. Top layer has a greasy feel indicating muck or organic material. No organic-carbon content test was performed. Hydrology, , concave topography, and vegetation support this being a wetland point.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)			

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P16
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): Valley slope Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D Lat: 41.2592948 Long: -111.7598115 Datum:
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology 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 <u>X</u>	No <u></u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>X</u>
Hydric Soil Present?	Yes <u></u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u></u>	No <u>X</u>	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u></u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size: <u></u>)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size: <u></u>)			
1.	<u>Carex nebrascensis</u>	10	No	OBL
2.	<u>Poa palustris</u>	10	No	FAC
3.	<u>Juncus balticus</u>	10	No	FACW
4.	<u>Poa pratensis</u>	50	Yes	FAC
5.	<u>Carduus nutans</u>	20	Yes	NI
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size: <u></u>)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	10	x 1 = 10
FACW species	10	x 2 = 20
FAC species	60	x 3 = 180
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	80 (A)	210 (B)

Prevalence Index = B/A = 2.63

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)
- ☐ 5 - Wetland Non-Vascular Plants¹
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes Y No

Remarks:

SOIL

Sampling Point: P16

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 3/2	100						Root mass
3-20	10YR 3/1	100					Silt 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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☐ No ☒
--	---

Remarks:
Soils are not greasy, nor do they have an organic texture about them.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators. Point is the upslope (topography) transition above wetland area to the wests.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P17
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 17
 Landform (hillslope, terrace, etc.): Valley slope Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D Lat: 41.2581973 Long: -111.7578217 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Carex nebrascensis</u>	5	No	OBL	
2.	<u>Trifolium repens</u>	5	No	FAC	
3.	<u>Juncus balticus</u>	30	Yes	FACW	
4.	<u>Poa pratensis</u>	60	Yes	FAC	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					
Hydrophytic Vegetation Present? Yes ☒ No ☐					

Remarks:

SOIL

Sampling Point: P17

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 3/2	100						Root mass
3-16	10YR 3/1	100						

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) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☐ No ☒
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Remarks:
Soil not greasy, muck, or organic that might indicate hydric conditions given soil color. Soils dry very difficult to dig past 16 inches. Appears to be the upslope (topographic) transition from wetland to the west.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators except FAC-Neutral test. Site complicated by extensive and ongoing sprinkler irrigation in this area.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P18
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2576646 Long: -111.7599005 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
= Total Cover				
Sapling/Shrub Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
= Total Cover				
Herb Stratum	(Plot size:)			
1.	<i>Poa palustris</i>	25	Yes	FAC
2.	<i>Trifolium repens</i>	10	No	FAC
3.	<i>Juncus balticus</i>	25	Yes	FACW
4.	<i>Poa pratensis</i>	40	Yes	FAC
5.				
6.				
7.				
8.				
9.				
10.				
11.				
100 = Total Cover				
Woody Vine Stratum	(Plot size:)			
1.				
2.				
= Total Cover				
% Bare Ground in Herb Stratum		<u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ Y 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants¹
- ☐ 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: P18

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		
0-20	10YR 2/1	100					Silt Clay Loam	greasy

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) ☐ Histic Epipedon (A2) ☒ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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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 ☐
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Remarks:
 Top layer has a greasy feel indicating muck or organic material. No organic-carbon content test was performed. Hydrology, concave topography, and vegetation support this being a wetland point.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☒ Dry-Season Water Table (C2) ☒ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 20	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P19
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): Valley slope Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D Lat: 41.2574808 Long: -111.7598896 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				

Sapling/Shrub Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				

Herb Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Poa palustris</u>		45	Yes	FAC
2. <u>Trifolium repens</u>		5	No	FAC
3. <u>Juncus balticus</u>		15	No	FACW
4. <u>Poa pratensis</u>		30	Yes	FAC
5. <u>Taraxacum officinale</u>		5	No	FACU
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
100 = Total Cover				

Woody Vine Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____				
2. _____				
_____ = Total Cover				

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or 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)

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:

☐	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)
☐	5 - Wetland Non-Vascular Plants ¹
☐	Problematic Hydrophytic Vegetation ¹ (Explain)

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

Hydrophytic Vegetation Present?

Yes	☒	No	☐
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Remarks: Marginal vegetation compared to other sampling points.

SOIL

Sampling Point: P19

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 3/2	100						Root mass
3-20	10YR 3/1	100						

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.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)	☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)

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 ☒
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Remarks:
Not greasy or mucky. Upslope transition zone topographically higher than wetland area to north.

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one 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) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (Explain in Remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)			

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Huntsville 73 City/County: Weber County Sampling Date: 10/28/2020
 Applicant/Owner: CW Land State: UT Sampling Point: P20
 Investigator(s): B. Nicholson and S. Martin Section, Township, Range: T6N R2E Section 18
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 41.2566302 Long: -111.760694 Datum: WGS 84
 Soil Map Unit Name: Canburn NWI classification: UPL

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

SUMMARY OF FINDINGS – Attach site map showing sampling 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1.					
2.					
3.					
4.					
		= 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:)				
1.					
2.					
3.					
4.					
5.					
		= Total Cover			
Herb Stratum	(Plot size:)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ Y 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) ☐ 5 - Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Poa palustris</i>	30	Yes	FAC	
2.	<i>Trifolium repens</i>	10	No	FAC	
3.	<i>Carex nebrascensis</i>	10	No	OBL	
4.	<i>Poa pratensis</i>	40	Yes	FAC	
5.	<i>Phleum pratense</i>	10	No	FAC	
6.					
7.					
8.					
9.					
10.					
11.					
		100 = Total Cover			
Woody Vine Stratum	(Plot size:)				
1.					
2.					
		= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

A few small, carex-dominated areas in the vicinity of this point. Closed depression appears to concentrate enough surface water to establish hydrophytic veg but not to create hydric soils or maintain adequate wetland hydrology.

SOIL

Sampling Point: P20

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		
0-16	10YR 3/2	100					Clay Loam	
16-20	10YR 5/4	100					Silt 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.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

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 ☒
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)
☐ Surface Soil Cracks (B6)	☐ Other (Explain in Remarks)	☐ Frost-Heave Hummocks (D7)
☐ Inundation Visible on Aerial Imagery (B7)		
☐ Sparsely Vegetated Concave Surface (B8)		

Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): _____ Water Table Present? Yes ☐ No ☐ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____	Wetland Hydrology Present? Yes ☐ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry ditch or historic drainage swale. Surface water hydrology appears to have been severed and no longer enters the survey area from the south

Appendix D

Photographs



Figure D-1. P1, looking east along wetland swale



Figure D-2. P4, looking east



Figure D-3. Vicinity of P6, looking northwest along wetland swale



Figure D-4. P9, looking north toward P10 and agricultural inflow



Figure D-5. P10, looking north toward northeast corner of survey area



Figure D-6. P11, looking east toward O1 and Spring Creek inflow



Figure D-7. P11, looking west



Figure D-8. P13, looking west



Figure D-9. P13 looking north



Figure D-10. Vicinity of P16 looking north along wetland boundary with uplands



Figure D-11. Vicinity of P19 looking north across wet meadow (W01)



Figure D-12. P20, looking west



Figure D13. Vicinity of P20, looking south at a non-wetland swale

Appendix E. ORM Upload Sheet - AqResources

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type ¹	Latitude	Longitude	Local Waterway
W01	UTAH	PEM	SLOPE	Area	13.8	ACRE	TBD	41.2576646	-111.7599005	Spring Creek
W02	UTAH	PEM	SLOPE	Area	3.08	ACRE	TBD	41.262112	-111.7583607	Spring Creek
W03	UTAH	PEM	SLOPE	Area	0.03	ACRE	TBD	41.2586442	-111.7567224	Isolated depression
Spring Creek	UTAH	R5	RIVERINE	Area	0.18	ACRE	TBD	41.2621223	-111.7578011	Pineview Reservoir
¹ Waters_Type to be determined by USACE										