



Aquatic Resources Delineation Report

Nebo Regional Water Project EA

April 20, 2026



U.S. Department of the Interior – CUPCA Office
Bureau of Reclamation
Utah Reclamation Mitigation and Conservation Commission
Central Utah Water Conservancy District

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Abbreviations

Abbreviation	Definition
District	Central Utah Water Conservancy District
EA	environmental assessment
°F	degrees Fahrenheit
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
GIS	geographic information systems
GPS	global positioning system
I-15	Interstate 15
ID	identifier
Interior	U.S. Department of the Interior – Central Utah Project Completion Act Office
NEPA	National Environmental Policy Act
NWPL	National Wetland Plant List
NRCS	Natural Resources Conservation Service
OBL	obligate wetland
OHWM	ordinary high water mark
PEM	emergent, palustrine
Proposed Project	Nebo Regional Water Project
PSS	scrub-shrub, palustrine
PUB	unconsolidated bottom, palustrine
R2UB	riverine, lower perennial, unconsolidated bottom
R4	riverine, intermittent
R5	unknown perennial, riverine
R6	a wetland, spring, stream, river, pond, or lake that only exists for a short period
Reclamation	U.S. Bureau of Reclamation
ssp.	subspecies
TNW	traditional navigable water
UP	Union Pacific
UPL	upland plants

Abbreviation	Definition
U.S.	United States
US-6	U.S. Highway 6
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture

1.0 Introduction

The Central Utah Water Conservancy District (District) is a regional wholesale provider that serves seven counties (all of Utah, Salt Lake, Wasatch, Duchesne, and Uintah Counties, as well as part of Juab and Summit Counties) in central Utah and collaborates with other agencies to serve its constituents. The District's primary responsibility is to deliver a safe and secure water supply to its customers by managing the federal Central Utah Project and the District's network of non-federal water facilities. The District is a water wholesaler to various cities and irrigation districts. The Central Utah Project Completion Act (Public Law 102-575, Section 205) required that the District enter into an agreement with the U.S. Department of the Interior to act as a federal agency for compliance with environmental laws, including the National Environmental Policy Act (NEPA).

As Joint Lead Agencies, the District, the U.S. Bureau of Reclamation (Reclamation), the U.S. Department of the Interior – Central Utah Project Completion Act Office (Interior), and the Utah Reclamation Mitigation and Conservation Commission are preparing an environmental assessment (EA) in accordance with NEPA, 42 *United States Code* Section 4321 and subsequent sections, and applicable regulations for the proposed Nebo Regional Water Project (Proposed Project).

The Proposed Project would develop an integrated raw (or untreated) water and finished (or treated) water delivery system that is reliable, resilient, and able to serve current and future municipal and industrial and agricultural water demands in southern Utah County and eastern Juab County.

1.1 Aquatic Resources Delineation Survey Area

The Proposed Project survey area encompasses approximately 1,184 acres. It includes a single polygon at the mouth of Diamond Fork Canyon and a primary polygon that begins near Spanish Fork and continues southwest, generally following the alignment of the Strawberry High Line Canal through Salem, Payson, Spring Lake, and Santaquin and Genola. From Santaquin and Genola, the survey area turns south and generally follows several county roads and the Union Pacific Railroad (UP) tracks until it reaches the town of Rocky Ridge, at which point it follows Old Highway 91 through Mona, ending in Nephi. The survey area traverses about 46 miles within Utah and Juab Counties, and its elevation ranges between about 4,600 feet and 5,000 feet (see Attachment A, *Project Overview Map*). As defined by the Public Land Survey System, the survey area is located in Sections 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,

22, 26, 27, 28, 29, 31, 32, 33, 34, 35, and 36; Townships 8, 9, 10, 11, and 12; and Ranges 1, 2, 3, and 4. The survey area comprises both publicly and privately owned land.

To reach the survey area from the U.S. Army Corps of Engineers (USACE) field office in Layton, Utah, drive south on Interstate 15 (I-15) for about 74 miles toward Spanish Fork, then take exit 257 for U.S. Highway 6 (US-6) eastbound toward Price. Continue east on US-6 for about 8 miles, then turn left (north) onto Diamond Fork Road (Forest Road 010), which marks the western access point of the survey area polygon at the mouth of Diamond Fork Canyon.

1.2 Contact Information

1.2.1 Project Applicant and Owner

Central Utah Water Conservancy District, Utah County Office
4801 S Highway 89
Mapleton, UT 84664

Attention: Sarah Sutherland
(801) 226-7147
sarah@cuwcd.gov

1.2.2 Land Ownership

Land in the survey area is owned by public and private entities. Contact and access information for landowners can be coordinated as necessary.

1.2.3 Contact Information for the Delineation Consultant

The delineation was performed by HDR.

HDR, Inc.
2825 E. Cottonwood Parkway, Suite 200
Salt Lake City, Utah 84121

Delineation Lead:
Michael Perkins
(801) 913-8314
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Field Biologists:
Evan Blanford and Kate Wollman

2.0 Delineation Methodology

The survey team conducted delineation fieldwork to map aquatic resources during the fall season of 2025. All areas within the approximately 1,161-acre survey area were included in the delineation. Attachment B, *Aquatic Resources Delineation Map Series*, provides maps of the aquatic resources that were delineated in the survey area.

2.1 Preliminary Data Gathering

Before conducting delineation fieldwork, the delineation team reviewed information from several sources, including the following:

- Aerial images of the survey area
- Topography and surface water maps from the U.S. Geological Survey
- National Hydric Soils List for Utah (USDA NRCS 2026a)
- The U.S. Fish and Wildlife Service’s National Wetland Inventory maps in geographic information systems (GIS) format
- The U.S. Department of Agriculture, Natural Resources Conservation Service’s (USDA NRCS) Web Soil Survey (USDA NRCS 2026b)
- USACE delineation manuals and delineation reference guides (described in Section 2.2, *Delineation Procedures*)

2.2 Delineation Procedures

The delineation was conducted in accordance with the following delineation manuals and delineation reference guides:

- *Corps of Engineers Wetlands Delineation Manual* (USACE 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coasts Region (Version 2.0)* (USACE 2010a)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2010b)
- *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (USACE 2025)

- USACE regulatory guidance letters and joint agency regulations, policies, references, and guidance

The delineation team assessed the entire survey area to determine the presence or absence of aquatic features. The routine method was applied by selecting sampling point locations in the field. These sampling points were placed at locations where landform, vegetative, or hydrologic characteristics indicated the potential for wetlands. A minimum of one set of paired sampling points (one in a wetland and one just outside the wetland boundary) was established to help delineate each wetland or wetland complex. Additional sampling points were located as needed to help determine wetland boundaries.

The delineation team recorded detailed information about vegetative, soil, and hydrologic characteristics for each sampling point and used this information to determine whether an area qualifies as a wetland and to help identify the wetland boundaries. All datasheets and representative photographs are included in Attachment C, *Delineation Data*.

Based on the information gathered from sampling points and observable changes in elevation and plant communities, the delineation team mapped aquatic resource boundaries in the survey area through a combination of global positioning system (GPS)–based field mapping (using ArcGIS Field Maps, a sub-meter GPS receiver, and a tablet or mobile phone) and desktop digitization by exporting collected field data into GIS software and reviewing aerial images. Aquatic resources delineation maps for the survey area were produced in GIS software.

2.2.1 Wetlands

A determination of the occurrence of wetlands is based on the presence or absence of hydrophytic (wetland) vegetation, hydric (wetland) soils, and wetland hydrology. The presence of all three criteria is necessary for an area to be designated as a wetland unless problematic conditions or significant disturbance is identified and evaluated in accordance with delineation procedures. Wetland boundaries are considered to be a line across which the vegetation, soils, and hydrologic characteristics begin or cease to meet wetland criteria.

Vegetation

Hydrophytic vegetation refers to the plant life that grows in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (USACE 1987). Hydrophytic vegetation indicators include:

1. A prevalence of hydrophytic vegetation—that is, a majority of dominant plant species are facultative (FAC), facultative wetland (FACW), or obligate wetland (OBL) plants as listed in the National Wetland Plant List (NWPL; USACE 2023)
2. Morphological or physiological adaptations to saturated soil conditions

Table 2-1 lists the most recent NWPL indicator statuses assigned to plant species for the purpose of delineating wetlands (Lichvar and others 2012). A list of plant species observed in the survey area, including their indicator status, is provided in Attachment D, *Plant Species Observed*.

**Table 2-1.
Wetland Indicator Status System**

Indicator Status	Indicator Symbol	Definition
Obligate wetland	OBL	Plants that almost always occur in wetlands.
Facultative wetland	FACW	Plants that usually occur in wetlands but could occur in non-wetlands.
Facultative	FAC	Plants that occur in wetlands and non-wetlands.
Facultative upland	FACU	Plants that usually occur in non-wetlands but could occur in wetlands.
Upland plants	UPL	Plants that almost never occur in wetlands.
Not listed	NL	Plants that are not listed on the NWPL and therefore are assumed to be upland.

Source: Lichvar and others 2012

The delineation team documented vegetation in a sample plot surrounding each sampling point. Each polygon area was visually inspected, plant species were identified, and procedures for hydrophytic vegetation indicators were applied. Vegetation was considered hydrophytic when over 50% of the dominant species had an indicator status of FAC, FACW, or OBL or, in cases where the dominance was less than or equal to 50%, when the Prevalence Index was less than 3.0.

Soils

Hydric soils are saturated, flooded, or ponded for long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile. Anaerobic conditions favor the growth and regeneration of hydrophytic vegetation. Hydric soil indicators are formed

predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. The delineation team used a standard Munsell soil color chart to determine the soil matrix and mottle colors (Munsell Color 2009). In accordance with USACE methodology, soil profiles were investigated at sampling points in the survey area and were examined for indicators of hydric conditions.

Hydrology

The term *wetland hydrology* encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Wetland hydrology indicators include obvious characteristics, such as surface water, soil saturation, and water table depth. Other indicators include soil cracking, a salt crust, drainage patterns, water-stained leaves, and the presence of oxidized rhizospheres. The delineation team evaluated hydrology at each sampling point in the survey area.

2.2.2 Other (Non-wetland) Aquatic Resources

The delineation team also evaluated the presence of aquatic resources other than wetlands potentially subject to USACE's jurisdiction. In nontidal areas, USACE maintains jurisdiction over areas below the ordinary high water mark (OHWM) in water features such as navigable streams, rivers, and lakes, and tributaries to navigable waters.

The delineation team delineated non-wetland aquatic features based on the presence of an OHWM (USACE 2005, 2025). Potentially jurisdictional non-wetland features were delineated along the OHWM. If a feature did not exhibit an OHWM and did not show distinct vegetation changes, it was not further evaluated as a potential aquatic resource or considered to be a potentially jurisdictional water. Additionally, if a feature existed in a culvert or pipe, it was not further evaluated as a potential aquatic resource.

3.0 Existing Conditions

The survey area for the Proposed Project consists primarily of existing roadways, canal systems, developed and undeveloped upland areas, a gravel pit, agriculture fields, the UP tracks, wetland areas, and riparian corridors.

The section of the survey area within Spanish Fork Canyon is part of the Semiarid Foothills subregion of the Wasatch and Uinta Mountains ecoregion (Woods and others 2001). Livestock grazing is a common land use in the Semiarid Foothills subregion, and pinyon-juniper woodlands are widely spaced and interspersed with sagebrush and grasslands. The section of the survey area between Spanish Fork and the town of Rocky Ridge is part of the Moist Wasatch Front Foothills subregion of the Central Basin and Range ecoregion (Woods and others 2001). This subregion supports most of Utah's population and commercial activity and is fed by perennial streams and aqueducts that originate in the Wasatch Range. The section of the survey area between Rocky Ridge and Nephi is part of the Sagebrush Basins and Slopes subregion of the Central Basin and Range ecoregion (Woods and others 2001). The Sagebrush Basins and Slopes subregion is semiarid and dominated by Wyoming big sagebrush. Major land uses in this subregion include grazing, feedlots, dairy operations, and irrigated cropland.

The average annual precipitation in the survey area ranges from 20.19 inches near Spanish Fork and 18.35 near Santaquin to 13.74 near Nephi (U.S. Climate Data 2026). Sections of the survey area in Utah County, Utah, experienced abnormally dry to moderate drought conditions during winter and spring 2025 and moderate drought to severe drought during summer and fall 2025. Sections of the survey area in Juab County, Utah, experienced abnormally dry, moderate drought, and severe drought conditions during winter, spring, and summer 2025, and moderate drought, severe drought, or extreme drought during fall 2025 (National Integrated Drought Information System 2026).

The delineation fieldwork was conducted during September and October 2025. During field surveys in September, temperatures near Spanish Fork ranged from 51 to 81 degrees Fahrenheit (°F), and temperatures near Santaquin ranged from 51°F to 78°F. During field surveys in October, temperatures near Spanish Fork ranged from 40°F to 67°F, and temperatures near Santaquin ranged from 38°F to 64°F (U.S. Climate Data 2026).

3.1 General Hydrology

The eastern section of the survey area from Spanish Fork Canyon to Santaquin is located in the Spanish Fork watershed, Hydrologic Unit Code 16020202 (USGS 2025a). The surface waters in

this section of the survey area include four named streams (the Spanish Fork River, Diamond Fork Creek, Peteetneet Creek, and Dry Creek), two unnamed streams, four named canals (the Strawberry High Line Canal, Power Canal, East Bench Canal, and Salem Canal), three unnamed canals, nineteen open-water ponds, and one unnamed ditch.

Diamond Fork Creek originates northeast of the survey area, in Diamond Fork Canyon. In addition to conveying natural drainage, the creek serves as a conduit for water transported from Strawberry Reservoir to the Wasatch Front. The reservoir water is conveyed through the Sixth Water Aqueduct into the Diamond Fork Pipeline and then released from the pipeline via an overflow outlet into Diamond Fork Creek, which drains into the Spanish Fork River at the mouth of Diamond Fork Canyon (USDI 2026). The Spanish Fork River flows for 20 miles from the confluence of Soldier and Thistle Creeks through Spanish Fork and Lake Shore before it drains into Utah Lake, a traditional navigable water (TNW; RouteYou 2026). The river serves agricultural, municipal, and recreational purposes. Starting at the mouth of the canyon, each of the four canals (the East Bench Canal, Power Canal, Strawberry High Line Canal, and Main Canal) divert water from the Spanish Fork River for use in farmland and residential areas before eventually entering the Utah Lake watershed through natural drainage (USBR 2026; USGS 2025b).

Peteetneet Creek originates in the mountains south of Payson and flows northwest through Payson Canyon. At the mouth of the canyon, the creek splits depending on flow levels: low flows during the irrigation season remain in the modified channel known locally as City Ditch, while higher flows during the nonirrigation season are diverted to an overflow channel called West Ditch. Water that remains in City Ditch is used for irrigation and municipal purposes before eventually reentering the watershed through localized drainage systems. Overflow conveyed through West Ditch continues out of the survey area, where it joins Spring Creek in west Payson (UDWR 2026). Dry Creek diverges from Peteetneet Creek via a box culvert just south of the intersection of Nebo Loop Road and E Canyon Road near the mouth of Payson Canyon. From there, Dry Creek flows through southern Payson, where surface water is frequently diverted for irrigation and municipal use. Remaining flows continue west out of the survey area before ultimately joining Spring Creek. This creek then flows north, where it eventually discharges into Utah Lake, a TNW (UDWR 2026).

3.2 General Soil Conditions

Seventy-seven soil types were identified in the survey area. Three of the seventy-seven soil types are listed as hydric in the National Hydric Soils List for Utah (USDA NRCS 2026a):

- Fluvaquents
- Xerofluvents and fluvaquents
- Cobbly alluvial land

Additionally, three of the soil types identified in the survey area—Benjamin silty clay loam, fluvaquents, and cobbly alluvial land—contained minor components that are listed as hydric in the National Hydric Soils List for Utah (USDA NRCS 2026a):

- Benjamin silty clay loam—Roshe Springs component
- Fluvaquents—ponded soils component
- Cobbly alluvial land—depressional soils component

Soil map unit boundaries for the survey area are provided in Attachment E, *USDA NRCS Custom Soil Resource Report* (USDA NRCS 2026b).

3.3 General Plant Community Types

The survey area for the Proposed Project consists primarily of existing roadways, canal systems, developed and undeveloped upland areas, a gravel pit, agriculture fields, the UP Railroad, wetland areas, and riparian corridors.

The section of the survey area located within Spanish Fork Canyon is composed primarily of riparian corridors along the Spanish Fork River and Diamond Fork Creek and wetland areas near Diamond Fork Creek. Dominant plant species observed in the wetland areas include mountain rush (*Juncus arcticus* ssp. *littoralis*), reed canarygrass (*Phalaris arundinacea*), narrowleaf willow (*Salix exigua*), shining willow (*Salix lucida*), peachleaf willow (*Salix amygdaloides*), narrowleaf cattail (*Typha angustifolia*), and broadleaf cattail (*Typha latifolia*), as well as *Carex* species including water sedge (*Carex aquatilis*), Nebraska sedge (*Carex nebrascensis*), and clustered field sedge (*Carex praegracilis*). Dominant plant species observed along the riparian corridors for the Spanish Fork River and Diamond Fork Creek include box elder (*Acer negundo*), narrowleaf cottonwood (*Populus angustifolia*), and reed canarygrass, as well as willow species including narrowleaf willow, shining willow, and peachleaf willow.

The section of the survey area between Spanish Fork and Rocky Ridge is composed of developed and undeveloped uplands, a wetland just southeast of Genola, and riparian corridors along the Spanish Fork River and portions of three canals (the East Bench Canal, Strawberry

High Line Canal, and Salem Canal) and other streams in the survey area. The wetland plant community is dominated by narrowleaf willow, common reed, and broadleaf cattail. Dominant plant species observed along the riparian corridors of this section of the survey area include box elder, Fremont cottonwood (*Populus fremontii*), Siberian elm (*Ulmus pumila*), Russian olive (*Elaeagnus angustifolia*), and narrowleaf willow.

The section of the survey area between Rocky Ridge and Nephi is composed of developed and undeveloped uplands consisting of sagebrush grassland and mountain shrub communities. Dominant plant species observed in uplands throughout the survey area include smooth brome (*Bromus inermis*), big sagebrush (*Artemisia tridentata*), crested wheatgrass (*Agropyron cristatum*), sweetclover (*Melilotus officinalis*), rubber rabbitbrush (*Ericameria nauseosa*), and western aster (*Symphyotrichum ascendens*). Additional upland species observed throughout the survey area consist of Canada wildrye (*Elymus canadensis*), basin wildrye (*Leymus cinereus*), intermediate wheatgrass (*Thinopyrum intermedium*), meadow fescue (*Schedonorus pretensis*), common sunflower (*helianthus annuus*), western goldentop (*Euthamia occidentalis*), golden currant (*Ribes aureum*), Gambel oak (*Quercus gambelii*), rough cocklebur (*Xanthium strumarium*), antelope bitterbrush (*Purshia tridentata*), Canada thistle (*Cirsium arvense*), and broom snakeweed (*Gutierrezia sarothrae*), as well as other herbaceous species.

4.0 Results

Section 4.0 describes the results of the aquatic resources delineation. The maps in Attachment B, *Aquatic Resources Delineation Map Series*, show the extent of aquatic resources in the survey area and the locations of wetland delineation sampling points. To help delineate potential wetlands in the survey area, the delineation team completed 37 wetland determination data forms. Attachment C-1, *Wetland Determination Sampling Points Summary*, summarizes the wetland delineation sampling points collected by the delineation team; Attachment C-2, *Wetland Determination Data Forms*, provides the wetland determination data forms; and Attachment C-3, *Wetland Delineation Photographs*, provides representative photographs at sampling point locations. Attachment C-4, *OHWM Delineation Data Summary*, summarizes the OHWM delineation data collected by the delineation team at representative transect locations; Attachment C-5, *OHWM Delineation Data Forms*, provides OHWM delineation data forms; and Attachment C-6, *OHWM Delineation Photographs*, provides photographs at representative transect locations.

The entire delineation survey area is about 1,184 acres and contains a total of 78.36 acres of aquatic resources. These resources consist of 14.67 acres of palustrine wetlands, 2.89 acres (2,968 linear feet) of perennial streams, 0.07 acre (324 linear feet) of intermittent streams, 0.02 acre (25 linear feet) of ephemeral streams, 40.42 acres (90,230 linear feet) of canals, 20.26 acres of open-water ponds, and 0.03 acre (239 linear feet) of ditches. The following subsections describe the delineated features by each aquatic resource type.

4.1 Wetlands

Wetlands were delineated in the survey area as 12 separate polygons totaling 14.67 acres. Three of these polygons totaling 3.90 acres were identified as palustrine emergent wetlands, and nine polygons totaling 10.77 acres were identified as palustrine scrub-shrub wetlands. Attachment B, *Aquatic Resources Delineation Map Series*, includes maps of delineated wetlands and associated wetland delineation sampling point locations. Photo 4-1, Photo 4-2, and Photo 4-3 provide representative photos of wetlands in the survey area.

Wetlands in the survey area perform physical, chemical, and biological functions. Physical functions include surface and subsurface water storage for most wetlands in the survey area, and wetlands located along surface waters also provide particulate retention and energy dissipation. Nutrient cycling and organic carbon export are chemical functions provided by all wetlands in the survey area. Biological functions performed by wetlands in the survey area consist of supporting wetland vegetation communities and animal communities that use wetland

environments to complete life cycle requirements. The extent to which each wetland provides these functions varies depending on characteristics such as condition, plant community composition, hydrogeomorphology, size, and land use.

Characteristics of delineated wetlands are summarized in Table 4-1, which provides descriptions for each wetland or a similarly situated complex of wetlands. Table 4-1 also provides size, classification, and location for each wetland.

Photo 4-1. Palustrine Emergent Wetland in the Survey Area (Diamond Fork Area)



Photo of wetland PEM-1 (location shown in Attachment B, page 1).

Photo 4-2. Palustrine Emergent Wetland in the Survey Area (East of Genola)



Photo of wetland PEM-3 (location shown in Attachment B, page 27).

Photo 4-3. Palustrine Scrub-Shrub Wetland in the Survey Area (Diamond Fork Area)



Photo of wetland PSS-8 (location shown in Attachment B, page 1).

**Table 4-1.
Wetlands in the Survey Area**

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
Palustrine Emergent Wetlands						
PEM-1	PEM	1.01	40.030634	-111.499324	1	Wetland PEM-1 is located in Diamond Fork Canyon, east of Diamond Fork Road and immediately north of the Childs property access road. The wetland is characterized by sampling point SP-11. Observations at this sampling point included hydrophytic vegetation with the dominance of reed canarygrass, the presence of hydric soil indicators A11 (depleted below dark surface) and F3 (depleted matrix), and saturation as a primary hydrology indicator. Wetland PEM-1 directly borders wetland PSS-3, which continues northeast out of the survey area, where it directly abuts perennial stream segment P-1 (Diamond Fork Creek). Accordingly, wetland PEM-1 has a continuous surface connection with Diamond Fork Creek.
PEM-2	PEM	2.85	40.029605	-111.501997	1	Wetland PEM-2 is located in Diamond Fork Canyon, immediately east of Diamond Fork Road and north of US-6. The wetland is characterized by sampling points SP-23 and SP-27. Observations at these sampling points included hydrophytic vegetation with the dominance of narrowleaf willow, reed canarygrass, and narrowleaf cattail; the

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						presence of hydric soil indicator F3 (depleted matrix); and oxidized rhizospheres on living roots as a primary hydrology indicator. Wetland PEM-2 does not have a continuous surface connection to a downstream jurisdictional water and might not be considered a jurisdictional wetland.
PEM-3	PEM	0.04	40.004128	-111.811166	27	Wetland PEM-3 is located south of Mountain Road and immediately north of canal C-2 (the Strawberry High Line Canal) in Genola, Utah. The wetland is characterized by sampling point SP-36. Observations at this sampling point included hydrophytic vegetation with the dominance of common reed and narrowleaf cattail, the presence of hydric soil indicator F3 (depleted matrix), and saturation as a primary hydrology indicator. Wetland PEM-3 does not have a continuous surface connection to a downstream jurisdictional water and might not be considered a jurisdictional wetland.
Palustrine Scrub-Shrub Wetlands						
PSS-1	PSS	0.01	40.030737	-111.498068	1	Wetland PSS-1 is located in Diamond Fork Canyon between the east bank of perennial stream segment P-1 and the Childs property access road. The wetland is characterized by sampling point SP-1. Observations at this sampling point included hydrophytic vegetation with the dominance of redtop

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						<p>(<i>Agrostis gigantea</i>), shining willow, clustered field sedge, meadow fescue, and white clover (<i>Trifolium repens</i>); the presence of hydric soil indicator F3 (depleted matrix); and saturation and high water table as primary hydrology indicators. Wetland PSS-1 directly abuts perennial stream segment P-1 (Diamond Fork Creek) in the survey area. Accordingly, this wetland has a continuous surface connection with perennial stream P-1.</p>
PSS-2	PSS	0.01	40.030758	-111.498221	1	<p>Wetland PSS-2 is located in Diamond Fork Canyon, east of Diamond Fork Road, on the western fringe of P-1 (Diamond Fork Creek) and just west of the Childs property access road. The wetland is characterized by sampling point SP-3. Observations at this sampling point included hydrophytic vegetation with the dominance of scouringrush horsetail (<i>Equisetum hyemale</i>), shining willow, clustered field sedge, and foxtail barley (<i>Hordeum jubatum</i>); the presence of hydric soil indicator F3 (depleted matrix); and saturation and high water table as primary hydrology indicators. Wetland PSS-2 directly abuts perennial stream segment P-1 (Diamond Fork Creek) in the survey area. Accordingly, this wetland has a continuous surface connection with perennial stream P-1.</p>

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
PSS-3	PSS	0.96	40.030545	-111.498863	1	Wetland PSS-3 is located in Diamond Fork Canyon, positioned west of stream segment P-1 (Diamond Fork Creek) and adjacent to the Childs property access road. The wetland is characterized by sampling point SP-5. Observations at this sampling point included hydrophytic vegetation with the dominance of mountain rush, narrowleaf willow, and shining willow; the presence of hydric soil indicator F3 (depleted matrix); and saturation as a primary hydrology indicator and geomorphic position and FAC-Neutral Test as secondary hydrology indicators. Wetland PSS-3 continues northeast out of the survey area, where it directly abuts perennial stream segment P-1 (Diamond Fork Creek). Accordingly, this wetland has a continuous surface connection with perennial stream P-1.
PSS-4	PSS	0.28	40.030172	-111.498496	1	Wetland PSS-4 is located in Diamond Fork Canyon on the east bank of perennial stream segment P-1 (Diamond Fork Creek) and extends eastward. The wetland is characterized by sampling point SP-6. Observations at this sampling point include hydrophytic vegetation with the dominance of peachleaf willow, slender wheatgrass (<i>Elymus trachycaulus</i>), and water sedge; the presence of hydric soil indicator F3 (depleted matrix); and geomorphic position and FAC-Neutral Test as secondary

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						hydrology indicators. Wetland PSS-4 directly abuts perennial stream segment P-1 (Diamond Fork Creek) in the survey area. Accordingly, this wetland has a continuous surface connection with perennial stream P-1.
PSS-5	PSS	2.07	40.030819	-111.500268	1	Wetland PSS-5 is located in Diamond Fork Canyon, positioned just east of Diamond Fork Road and adjacent to the Childs property access road. The wetland is characterized by sampling points SP-9, SP-15, and SP-17. Observations at these sampling points include hydrophytic vegetation with the dominance of mountain rush and reed canarygrass, the presence of hydric soil indicator F3 (depleted matrix), saturation as a primary hydrology indicator, and geomorphic position and FAC-Neutral Test as secondary hydrology indicators. Additionally, willows are common throughout the wetland. Wetland PSS-5 continues north out of the survey area, where it directly borders wetlands PEM-1 and PSS-3. PSS-3 directly abuts perennial stream segment P-1 north of the survey area. Accordingly, wetland PSS-5 has a continuous surface connection with Diamond Fork Creek.
PSS-6	PSS	0.59	40.029001	-111.500204	1	Wetland PSS-6 is located in Diamond Fork Canyon on the western bank of perennial stream segment P-1 (Diamond Fork Creek),

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						<p>immediately south of the Childs property access road. The wetland is characterized by sampling points SP-21 and SP-33. Observations at these sampling points include hydrophytic vegetation with the dominance of mountain rush, common reed, narrowleaf willow, shining willow, and narrowleaf cattail; the presence of hydric soil indicators A11 (depleted below dark surface) and F3 (depleted matrix); saturation as a primary hydrology indicator; and geomorphic position and FAC-Neutral Test as secondary hydrology indicators. Wetland PSS-6 directly abuts perennial stream segment P-1 (Diamond Fork Creek) in the survey area. Accordingly, this wetland has a continuous surface connection with perennial stream P-1.</p>
PSS-7	PSS	0.12	40.028643	-111.500387	1	<p>Wetland PSS-7 is located in Diamond Fork Canyon along the southeastern fringe of perennial stream segment P-1 (Diamond Fork Creek). The wetland is characterized by sampling points SP-34. Observations at this sampling point include hydrophytic vegetation with the dominance of narrowleaf willow and common reed, the presence of hydric soil indicator F3 (depleted matrix), saturation as a primary hydrology indicator, and geomorphic position and FAC-Neutral Test as secondary hydrology indicators. Wetland PSS-7 directly abuts perennial stream segment P-1 (Diamond</p>

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						Fork Creek) in the survey area. Accordingly, this wetland has a continuous surface connection with perennial stream P-1.
PSS-8	PSS	6.64	40.029561	-111.501164	1	Wetland PSS-8 is located in Diamond Fork Canyon, positioned south of the Childs property access road and encompassing open-water feature OW-1. The wetland is characterized by sampling points SP-13, SP-19, SP-22, SP-25, SP-29, and SP-31. Observations at these sampling points include hydrophytic vegetation with the dominance of narrowleaf willow, shining willow, common reed, reed canarygrass, narrowleaf cottonwood, and mountain rush; the presence of hydric soil indicators A11 (depleted below dark surface) and F3 (depleted matrix); saturation as a primary hydrology indicator; and geomorphic position and FAC-Neutral Test as secondary hydrology indicators. Wetland PSS-8 does not have a continuous surface connection to a downstream jurisdictional water and might not be considered a jurisdictional wetland.
PSS-9	PSS	0.09	40.030259	-111.501222	1	Wetland PSS-9 is located in Diamond Fork Canyon, positioned just east of Diamond Fork Road along the east shoulder of the Childs property access road. This wetland is situated within wetland PEM-2 and appears to share similar characteristics with wetland PEM-2,

Wetland ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						except wetland PSS-9 includes narrowleaf willow and shining willow. Wetland PSS-9 does not have a continuous surface connection to a downstream jurisdictional water and might not be considered a jurisdictional wetland.

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979): **PEM** (emergent, palustrine) and **PSS** (scrub-shrub, palustrine).

^b Displayed values are rounded to two decimal places, so the totals might not match the sum of the reported values exactly.

^c Coordinates for the center point of each feature are listed.

^d See Attachment B, *Aquatic Resources Delineation Map Series*.

4.2 Other (Non-wetland) Aquatic Resources

Other (non-wetland) aquatic resources identified in the survey area consist of streams, open-water ponds, canals, and a ditch.

4.2.1 Streams

A total of 2.89 acres (2,968 linear feet) of perennial streams, 0.07 acre (324 linear feet) of intermittent streams, and 0.02 acre (25 linear feet) of ephemeral streams were delineated in the survey area. These resources consist of two named perennial streams (Diamond Fork Creek [P-1] and Spanish Fork River [P-2]); two named intermittent streams (Peteetneet Creek [I-1] and Dry Creek [I-2]); one unnamed intermittent stream (I-3); and one unnamed ephemeral stream (E-1). All of these features have a defined bed and bank and an OHWM. A break in the bank, change in vegetation cover, and change in vegetation species were the most frequent indicators observed; these indicators were used to identify the OHWM for streams in the survey area.

Attachment C-4, *OHWM Delineation Data Summary*, summarizes the OHWM delineation data collected by the delineation team at representative transect locations, and Attachment C-5, *OHWM Delineation Data Forms*, provides OHWM delineation data forms. Attachment B, *Aquatic Resources Delineation Map Series*, includes maps of delineated streams.

As described in Section 3.1, *General Hydrology*, stream P-1 (Diamond Fork Creek) originates in Diamond Fork Canyon before draining into stream P-2 (the Spanish Fork River). Diamond Fork Creek supports adjacent low terrace wetlands and includes woody riparian vegetation. Two representative transects were established to delineate the segments of Diamond Fork Creek, and the delineated width to the OHWM varies from 24 to 46 feet. The Spanish Fork River consists of five segments in the survey area that total 1.95 acres (1,552 linear feet). The Spanish Fork River's headwaters begin southeast of the survey area at the confluence of Soldier Creek and Thistle Creek before flowing 20 miles west and draining into Utah Lake, a TNW. The Spanish Fork River does not support wetlands within the survey area, but it does include woody riparian vegetation. Several representative transects were established to help delineate the segments of the Spanish Fork River. The delineated width to the OHWM for the Spanish Fork River varies from 15 to 104 feet.

Intermittent streams I-1 (Peteetneet Creek) and I-2 (Dry Creek) both originate south of Payson, with Peteetneet Creek flowing north and Dry Creek flowing west, providing municipal and irrigation water to Payson. Overflow from both creeks ultimately enters Spring Creek west of Payson, where flows continue north before discharging into Utah Lake, a TNW.

The delineated width to the OHWM for Peteetneet Creek is 10 feet, while the delineated width of Dry Creek is 11 feet. Intermittent stream I-3 and ephemeral stream E-1 are both smaller streams that originate west of Santaquin. The delineated width to the OHWM for I-3 is 8 feet, while the

delineated width to the OHWM for E-1 is 18 feet. None of these streams support wetlands within the survey area. Peteetneet Creek and Dry Creek both include riparian woody vegetation.

The primary functions of streams in the survey area are supporting riparian and wetland habitats, providing aquatic habitat, slowing runoff, storing flood water, and transporting water for agricultural and municipal purposes. Photo 4-4 through Photo 4-8 provide representative photos of streams in the survey area. Table 4-2 provides a description and size, classification, and location information for each stream segment delineated in the survey area.

Photo 4-4. Perennial Stream in the Survey Area (Diamond Fork Creek)



Photo of perennial stream segment P-1 (location shown in Attachment B, page 1).

Photo 4-5. Perennial Stream in the Survey Area (Spanish Fork River)



Photo of perennial stream segment P-2c (location shown in Attachment B, page 5).

Photo 4-6. Intermittent Stream in the Survey Area (Peteetneet Creek)



Photo of intermittent stream segment I-1a (location shown in Attachment B, page 17).

Photo 4-7. Intermittent Stream in the Survey Area (Dry Creek)



Photo of intermittent stream segment I-2b (location shown in Attachment B, page 17).

Photo 4-8. Ephemeral Stream in the Survey Area



Photo of ephemeral stream segment E-1 (location shown in Attachment B, page 30).

**Table 4-2.
Streams in the Survey Area**

Stream ID (name)	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
Perennial Streams							
P-1 (Diamond Fork Creek)	R2UB	0.94	1,416	40.029416	-111.499666	1	Perennial stream P-1 (Diamond Fork Creek) is located in Diamond Fork Canyon just north of US-6. Perennial stream P-1 consists of one segment in the survey area that is 0.94 acre (1,416 linear feet). Diamond Fork Creek originates northeast of the survey area in Diamond Fork Canyon. In addition to conveying natural drainage, the creek serves as a conduit for water transported from Strawberry Reservoir to the Wasatch Front. The reservoir water is conveyed through the Sixth Water Aqueduct into the Diamond Fork Pipeline, then released from the pipeline via an overflow outlet into Diamond Fork Creek. Perennial stream P-1 supports low terrace adjacent wetlands and includes woody riparian vegetation. The delineated width to the OHWM varies from 24 to 46 feet. Diamond Fork Creek drains into the Spanish Fork River.
P-2a (Spanish Fork River)	R2UB	1.20	708	40.056355	-111.562291	2	Perennial stream P-2 (the Spanish Fork River) consists of five segments (P-2a

Stream ID (name)	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
P-2b (Spanish Fork River)	R2UB	0.08	185	40.073941	-111.588608	4	through P-2e) in the survey area that total 1.95 acres (1,552 linear feet). Segments P-2d and P-2e are separated by a diversion dam that releases water outside the survey area into the Mill Race Canal; other segments are separated by the stream leaving and reentering the survey area. The Spanish Fork River begins east of the survey area at the confluence of Thistle and Soldier Creeks. Perennial stream P-2 does not support adjacent wetlands in the survey area, but all segments include woody riparian vegetation. The delineated width to the OHWM ranges from 15 to 104 feet. The Spanish Fork River drains into Utah Lake, a TNW.
P-2c (Spanish Fork River)	R2UB	0.28	349	40.084526	-111.596509	5	
P-2d (Spanish Fork River)	R2UB	0.35	245	40.080722	-111.605954	5	
P-2e (Spanish Fork River)	R2UB	0.04	66	40.080441	-111.606215	5	
Intermittent Streams							
I-1a (Peteetneet Creek)	R4	0.01	89	40.026804	-111.723727	17	Intermittent stream I-1 (Peteetneet Creek) consists of two segments (I-1a and I-1b) in the survey area south of Payson, totaling 0.02 acre (114 linear feet). Segments I-1a and I-1b are separated by a culvert that crosses under Strawberry Canal Road. The stream's headwaters begin south of the survey area in Payson Canyon, at the confluence of Shram Creek and an
I-1b (Peteetneet Creek)	R4	<0.01	25	40.026975	-111.723910	17	

Stream ID (name)	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
							unnamed creek. Intermittent stream I-1 does not support adjacent wetlands in the survey area, but it does include woody riparian vegetation. The delineated width to the OHWM is 10 feet. Water that remains in the main channel of the creek is distributed across the valley for irrigation purposes. Overflow water from Peteetneet Creek drains into Spring Creek, which drains into Utah Lake, a TNW.
I-2a (Dry Creek)	R4	0.02	43	40.024949	-111.728248	17	Intermittent stream I-2 (Dry Creek) consists of two segments (I-2a and I-2b) in the survey area located south of Payson, totaling 0.02 acre (58 linear feet). Segments I-2a and I-2b are separated by a culvert that crosses under the Strawberry Canal Road. The stream's headwater begins south of the survey area near the mouth of Payson Canyon. I-2 does not support adjacent wetlands in the survey area, but it does include riparian vegetation. The delineated width to the OHWM is 11 feet. Water that remains in the main channel of the creek is distributed across the valley for irrigation purposes. Overflow water from Dry Creek drains
I-2b (Dry Creek)	R4	0.01	15	40.024835	-111.727893	17	

Stream ID (name)	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
							into Spring Creek, which drains into Utah Lake, a TNW.
I-3	R4	0.03	152	39.970298	-111.815593	31	Intermittent stream I-3 is an unnamed stream located northwest of Cedar Hollow Reservoir near Santaquin, Utah. Intermittent stream I-3 consists of one segment in the survey area that is 0.03 acre (152 linear feet). The upper reach of this stream is ephemeral stream E-1, and it originates on hillslopes northwest of the survey area. I-3 does not support adjacent wetlands in the survey area, but it does include riparian vegetation. The delineated width to the OHWM is 8 feet. I-3 drains into Cedar Hollow Reservoir. Cedar Hollow Reservoir lacks a surface water outlet, so intermittent stream I-3 may not be considered jurisdictional.
Ephemeral Streams							
E-1	R6	0.02	25	39.980227	-111.81117	30	Ephemeral stream E-1 is an unnamed stream located west of Santaquin, where it crosses under Summit Ridge Parkway just south of US-6. Ephemeral stream E-1 consists of one segment in the survey area that is 0.03 acre (152 linear feet). This stream originates on hillslopes northwest of the survey area.

Stream ID (name)	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
							E-1 does not support adjacent wetlands or a riparian vegetation community in the survey area. The delineated width to the OHWM is 18 feet. E-1 runs south to southwest until it drains into intermittent stream I-3. Ephemeral streams do not meet the Relative Permanent Standard because they only flow in response to precipitation events. Accordingly, ephemeral stream E-1 is considered non-jurisdictional.

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979): **R2UB** (riverine, lower perennial, unconsolidated bottom), **R4** (riverine, intermittent), and **R6** (a wetland, spring, stream, river, pond, or lake that only exists for a short period).

^b Displayed values are rounded to two decimal places, so the totals might not match the sum of the reported values exactly.

^c Displayed values are rounded to the nearest whole linear foot, so the totals might not match the sum of the reported values exactly.

^d Coordinates for the center point of each feature are listed.

^e See Attachment B, *Aquatic Resources Delineation Map Series*.

4.2.2 Open-water Ponds

Nineteen open-water ponds were delineated within the survey area, totaling 20.26 acres. Of these, 18 ponds totaling 17.02 acres are constructed ponds that either have water-stained concrete linings or are bordered by herbaceous vegetation near the apparent OHWM. The surrounding landscape is primarily agricultural, residential, or disturbed upland associated with access roads for the Strawberry High Line Canal or Spanish Fork Wind Park. The remaining pond, totaling 3.24 acres, is a seasonally inundated basin supported by natural drainage in Diamond Fork Canyon and is bordered by both herbaceous and woody vegetation near the OHWM. Photo 4-9 through Photo 4-12 provide representative photos of open-water ponds in the survey area.

Attachment B, *Aquatic Resources Delineation Map Series*, includes maps of delineated open-water ponds. Table 4-3 summarizes the open-water ponds delineated in the survey area.

Photo 4-9. Open-water Pond in the Survey Area (Diamond Fork Area)



Photo of open-water pond OW-1 (location shown in Attachment B, page 1).

Photo 4-10. Open-water Pond in the Survey Area (Spanish Fork Wind Park Area)



Photo of open-water pond OW-2 (location shown in Attachment B, page 3).

Photo 4-11. Open-water Pond in the Survey Area (OW-6)



Photo of open-water pond OW-6 (location shown in Attachment B, page 11).

Photo 4-12. Open-water Pond in the Survey Area (OW-18)



Photo of open-water pond OW-18 (location shown in Attachment B, page 26).

**Table 4-3.
Open-water Ponds in the Survey Area**

Open-Water ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
OW-1	PUB	3.24	40.029515	-111.502651	1	Open-water pond OW-1 is located at the mouth of Diamond Fork Canyon, just northeast of US-6. This pond is a seasonally inundated basin from natural drainage in Diamond Fork Canyon and is surrounded by palustrine wetlands. During the latter portion of the dry season, OW-1 is dominated by curly dock (<i>Rumex crispus</i>). During the wet season, the edges of the pond are vegetated with shrubs and herbaceous vegetation, and the OHWM was identified by the change in vegetation density and species. This pond does not carry a relatively permanent flow of water to a downstream jurisdictional water and might not be considered jurisdictional.
OW-2	PUB	9.15	40.068545	-111.578709	3	Open-water ponds OW-2 and OW-3 are located west of US-6 in Spanish Fork Wind Park. Both ponds function to detain sediments and to discharge water through a culvert into the Power Canal. The edges of these ponds are vegetated with herbaceous vegetation near the apparent OHWM. The surrounding areas are heavily disturbed uplands void of vegetation and associated with access roads. The OHWM for both of these ponds was identified by the break in the bank slope, change in vegetation density, and change in vegetation species. OW-2 and OW-3 carry a relatively permanent flow of water and maintain a downstream
OW-3	PUB	2.29	40.078662	-111.597166	5	

Open-Water ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						connection via culverts to the Spanish Fork River, which eventually drains into Utah Lake, a TNW.
OW-4	PUB	0.26	40.070861	-111.617214	8	Open-water ponds OW-4 and OW-5 are located along the Strawberry High Line Canal access road in the foothills of Lone Pine Ridge northeast of Salem, Utah. Both ponds function as irrigation ponds and receive water via culvert from the Strawberry High Line Canal. The edges of these ponds are vegetated with herbaceous vegetation near the apparent OHWM. The surrounding areas consist of undeveloped uplands and disturbed uplands associated with the canal access road. The OHWM for OW-4 was identified by the change in vegetation density and species. These ponds do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-5	PUB	0.12	40.070199	-111.617699	8	
OW-6	PUB	1.08	40.040002	-111.657719	11	Open-water ponds OW-6 and OW-7 are located along the Strawberry High Line Canal access road west of Woodland Hills Drive in southern Salem, Utah. Both of these concrete-lined ponds function to detain sediments and to provide irrigation water and receive water via culvert from the Strawberry High Line Canal. The surrounding area consists of residential areas or disturbed uplands associated with the canal access road. The OHWM for both of these ponds was identified by water staining on the concrete lining. These ponds do not have a continuous surface
OW-7	PUB	0.94	40.033073	-111.677288	13, 14	

Open-Water ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-8	PUB	0.19	40.026990	-111.696149	15	Open-water ponds OW-8 and OW-9 are located along the Strawberry High Line Canal access road west of Loafer Mountain Parkway, southeast of Payson, Utah. Both ponds function as irrigation ponds and receive water via culvert from the Strawberry High Line Canal. The surrounding areas consist of agricultural land and disturbed uplands associated with the canal access road. These ponds do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-9	PUB	0.31	40.025084	-111.706329	15	
OW-10	PUB	1.85	40.026463	-111.725628	17	Open-water pond OW-10 is located along the Strawberry High Line Canal access road west of Nebo Loop Road in southern Payson, Utah. This concrete-lined pond functions to detain sediments and to provide irrigation water and receives water via culvert from the Strawberry High Line Canal. The surrounding area consists of residential areas or disturbed uplands associated with the canal access road. The OHWM for this pond was identified by water staining on the concrete lining. This pond does not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-11	PUB	0.19	39.991028	-111.756656	23	Open-water ponds OW-11 and OW-12 are located along the Strawberry High Line Canal access road just east of I-15 in Santaquin, Utah. Both ponds function as irrigation ponds and receive water via culvert from the
OW-12	PUB	0.12	39.990470	-111.757240	23	

Open-Water ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
						Strawberry High Line Canal. The edges of these ponds are vegetated with herbaceous vegetation near the apparent OHWM. The surrounding areas consist of agricultural areas, residential areas, and disturbed uplands associated with the canal access road. The OHWM for OW-11 and OW-12 were identified by the break in the bank slope, change in vegetation density, and change in vegetation species. These ponds do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-13	PUB	0.02	39.988171	-111.767684	24	Open-water ponds OW-13, OW-14, and OW-15 are located along the Strawberry High Line Canal access road just west of I-15 in Santaquin, Utah. These ponds function as irrigation ponds and receive water via culvert from the Strawberry High Line Canal. The edges of these ponds are vegetated with herbaceous vegetation near the apparent OHWM. The surrounding areas consist of agricultural areas and disturbed uplands associated with the canal access road. The OHWM for OW-13, OW-14, and OW-15 were identified by the break in the bank slope, change in vegetation density, and change in vegetation species. These ponds do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-14	PUB	0.12	39.990471	-111.770573	24	
OW-15	PUB	0.11	39.994110	-111.777786	25	
OW-16	PUB	0.10	39.995677	-111.784806	25	Open-water ponds OW-16, OW-17, OW-18, and OW-19 are located along the Strawberry High Line Canal
OW-17	PUB	0.02	39.995407	-111.785260	25	

Open-Water ID	Cowardin Code ^a	Size (acres) ^b	Latitude ^c	Longitude ^c	Map Page Number(s) ^d	Description
OW-18	PUB	0.04	39.996399	-111.791188	26	access road northwest of the UP Railroad just north of Santaquin, Utah. Each of these ponds function as irrigation ponds and receive water via culvert from the Strawberry High Line Canal. The edges of these ponds are vegetated with herbaceous vegetation near the apparent OHWM. The surrounding areas consist of agricultural areas and disturbed uplands associated with the canal access road. The OHWM for OW-16 and OW-18 were identified by the break in the bank slope, change in vegetation density, and change in vegetation species, while the OHWM for OW-19 was identified by the change in vegetation density and species. These ponds do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
OW-19	PUB	0.08	39.995032	-111.800816	26	

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979): **PUB** (unconsolidated bottom, palustrine).

^b Displayed values are rounded to two decimal places, so the totals might not match the sum of the reported values exactly.

^c Coordinates for the center point of each feature are listed.

^d See Attachment B, *Aquatic Resources Delineation Map Series*.

4.2.3 Canals

A total of 40.42 acres (90,230 linear feet) of canals were mapped in the survey area. These resources consist of four named features (the Strawberry High Line Canal, Power Canal, East Bench Canal, and Salem Canal) and three unnamed canals. All of these features are entirely human-made and are intended for irrigation and municipal use. Vegetation for all of these features varies from absent to disturbed upland. Additionally, some of these canals contain hydrophytic vegetation along the banks, and portions of canals C-2 (the Strawberry High Line Canal), C-3 (the East Bench Canal), C-4, and C-5 (the Salem Canal) include riparian vegetation. Photo 4-13 through Photo 4-15 provide representative photos of canals in the survey area. Table 4-4 summarizes the canals delineated in the survey area.

Photo 4-13. Strawberry High Line Canal



Photo of canal C-2j (location shown in Attachment B, page 10).

Photo 4-14. C-4 Canal



Photo of canal C-4a (location shown in Attachment B, page 5).

Photo 4-15. Salem Canal



Photo of canal C-5a (location shown in Attachment B, page 5).

**Table 4-4.
Canals in the Survey Area**

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
C-1a (Power Canal)	R5	0.02	68	40.066831	-111.576356	3	Canal C-1 (the Power Canal) consists of five segments in the survey area totaling 0.53 acre (1,006 linear feet). C-1 begins southeast of Spanish Fork Wind Park, near the mouth of Spanish Fork Canyon, and continues northwest before emptying into an irrigation pond (OW-3) that connects to the Strawberry High Line Canal. Observations at this canal include slow-flowing water, water staining, and a lack of vegetation due to the concrete-lined channels. The average mapped width to the OHWM is 22 feet. The Power Canal carries a relatively permanent flow of water and has a downstream connection to P-2 (the Spanish Fork River), which eventually drains into Utah Lake, a TNW.
C-1b (Power Canal)	R5	0.02	28	40.073166	-111.589864	3, 4	
C-1c (Power Canal)	R5	0.02	41	40.077151	-111.594592	5, 6	
C-1d (Power Canal)	R5	0.05	89	0.053937	-40.078441	5	
C-1e (Power Canal)	R5	0.41	780	0.414543	-40.079246	5	
C-2c (Strawberry High Line Canal)	R5	0.84	1,485	40.077446	-111.606902	5, 6, 7	Canal C-2 (the Strawberry High Line Canal) consists of 40 segments in the survey area totaling 38.80 acres (86,639 linear feet). The Strawberry High Line Canal begins at the mouth of Spanish Fork Canyon, where it receives water from C-1 (the Power Canal). From there, it continues flowing southwest through
C-2d (Strawberry High Line Canal)	R5	3.22	5,506	40.070915	-111.615576	8	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
C-2e (Strawberry High Line Canal)	R5	0.02	96	40.063774	-111.624132	9	Utah Valley, passing through Spanish Fork, Salem, Payson, and Santaquin before eventually turning north and exiting the survey area. Observations at this canal include flowing water, a mix of compacted dirt and concrete-lined channels, and herbaceous vegetation along some of the banks. The average mapped width to the OHWL is 21 feet. Each segment of the Strawberry High Line Canal carries a relatively permanent flow of water. Segments C-2a and C-2b have a downstream connection via C-4 to P-2 (the Spanish Fork River), which eventually drains into Utah Lake, a TNW. The remaining segments (C-2c through C-2ao) distribute water across the Utah Valley for irrigation purposes. Unused water from these segments returns to the watershed through infiltration, so these segments do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
C-2f (Strawberry High Line Canal)	R5	0.08	427	40.062689	-111.625605	9	
C-2g (Strawberry High Line Canal)	R5	0.74	1,805	40.059748	-111.627900	9	
C-2h (Strawberry High Line Canal)	R5	0.10	205	40.056716	-111.629526	9	
C-2i (Strawberry High Line Canal)	R5	3.01	5,650	40.051730	-111.635536	9, 10	
C-2j (Strawberry High Line Canal)	R5	2.51	5,454	40.044138	-111.646918	11, 12	
C-2k (Strawberry High Line Canal)	R5	0.76	1,524	40.040672	-111.656006	11	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
High Line Canal)							
C-2l (Strawberry High Line Canal)	R5	0.65	1,351	40.039740	-111.661178	12	
C-2m (Strawberry High Line Canal)	R5	1.82	3,933	40.036155	-111.668255	12, 13	
C-2n (Strawberry High Line Canal)	R5	2.71	5,868	40.031082	-111.682247	13, 14	
C-2o (Strawberry High Line Canal)	R5	1.80	4,051	40.026151	-111.698710	14, 15	
C-2p (Strawberry High Line Canal)	R5	0.69	1,328	40.025540	-111.707713	15	
C-2q (Strawberry High Line Canal)	R5	1.54	5,224	40.031849	-111.715229	15, 16	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
C-2r (Strawberry High Line Canal)	R5	0.87	3,404	40.031521	-111.721385	16, 17	
C-2s (Strawberry High Line Canal)	R5	0.01	10	40.027335	-111.723037	17	
C-2t (Strawberry High Line Canal)	R5	0.27	754	40.026297	-111.725201	17	
C-2u (Strawberry High Line Canal)	R5	0.39	1,101	40.024855	-111.727941	17	
C-2v (Strawberry High Line Canal)	R5	0.59	1,824	40.021304	-111.730464	17, 18, 19	
C-2w (Strawberry High Line Canal)	R5	0.74	2,443	40.015462	-111.732628	18, 19	
C-2x (Strawberry High Line Canal)	R5	0.49	1,794	40.009628	-111.733447	19, 20	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
High Line Canal)							
C-2y (Strawberry High Line Canal)	R5	0.05	173	40.006166	-111.734014	20	
C-2z (Strawberry High Line Canal)	R5	0.35	1,130	40.004179	-111.735436	20	
C-2aa (Strawberry High Line Canal)	R5	0.35	1,123	40.000729	-111.738113	20, 21	
C-2ab (Strawberry High Line Canal)	R5	1.55	4,879	39.996418	-111.747200	21, 22	
C-2ac (Strawberry High Line Canal)	R5	1.76	3,759	39.989385	-111.759547	22, 23	
C-2ad (Strawberry High Line Canal)	R5	0.34	651	39.987374	-111.766418	23	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
C-2ae (Strawberry High Line Canal)	R5	1.65	3,448	39.990954	-111.772103	24, 25	
C-2af (Strawberry High Line Canal)	R5	0.53	1,056	39.994282	-111.778927	25	
C-2ag (Strawberry High Line Canal)	R5	0.39	788	39.995102	-111.782183	25	
C-2ah (Strawberry High Line Canal)	R5	0.46	665	39.995571	-111.785131	25, 26	
C-2ai (Strawberry High Line Canal)	R5	1.61	2,060	39.996012	-111.790251	26	
C-2aj (Strawberry High Line Canal)	R5	0.66	807	39.995638	-111.795619	26	
C-2ak (Strawberry High Line Canal)	R5	1.34	1,550	39.994968	-111.800046	26	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
High Line Canal)							
C-2al (Strawberry High Line Canal)	R5	2.78	3,906	39.997831	-111.804678	26, 27, 29	
C-2am (Strawberry High Line Canal)	R5	0.50	2,267	40.004172	-111.808759	27	
C-2an (Strawberry High Line Canal)	R5	0.05	336	40.004625	-111.812778	27	
C-2ao (Strawberry High Line Canal)	R5	0.56	2,699	40.008558	-111.814447	27	
C-2ap (Strawberry High Line Canal)	R5	0.02	106	40.011853	-111.815252	28	
C-3 (East Bench Canal)	R5	0.10	291	40.084578	-111.594349	5	Canal C-3 (the East Bench Canal) consists of one segment in the survey area totaling 0.10 acre (291 linear feet). This canal is located near the mouth of Spanish Fork Canyon between US-6 and

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
							the Oaks at Spanish Fork golf course. Canal C-3 diverts water from P-2 (the Spanish Fork River) in the southeast section of Spanish Fork Wind Park before continuing northwest through the foothills toward Springville, Utah. Water from this canal is distributed across the valley for irrigation purposes and does not connect to a downstream waterway.
C-4a	R5	0.08	138	40.080514	-111.604250	5	Canal C-4 is an unnamed canal that branches off from the Power Canal and is used to generate electricity. C-4 consists of three segments (C-4a through C-4c) in the survey area totaling 0.34 acre (625 linear feet). C-4 segments the area located just west of the Oaks at Spanish Fork golf course on both sides of Powerhouse Road. Observations at this canal include slow-flowing water and concrete staining. The average mapped width to the OHWM is 25 feet. C-4 carries a relatively permanent flow of water and drains into the Spanish Fork River, which eventually drains into Utah Lake, a TNW.
C-4b	R5	0.04	245	40.080955	-111.604650	5	
C-4c	R5	0.21	242	40.081058	-111.605278	5	
C-5a (Salem Canal)	R5	0.07	202	40.080445	-111.604728	5	Canal C-5 (the Salem Canal) consists of three segments in the survey area (C-5a through C-5c) totaling 0.52 acre (1,246

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
C-5b (Salem Canal)	R5	0.01	45	40.080173	-111.605240	5	linear feet). It is located parallel to the north side of Powerhouse Road. Observations at this canal include slow-flowing water, water staining, and a lack of vegetation due to the concrete-lined channels. The average mapped width to the OHWM is 18 feet. Each segment of the Salem Canal carries a relatively permanent flow of water. Segment C-5a has a continuous downstream connection via culvert to P-2 (the Spanish Fork River), which eventually drains into Utah Lake, a TNW. The remaining segments (C-5b and C-5c) distribute water across the Utah Valley for irrigation purposes. Unused water from these segments returns to the watershed through infiltration, so these segments do not have a continuous surface connection to a downstream jurisdictional water and might not be considered jurisdictional.
C-5c (Salem Canal)	R5	0.52	1,246	40.073063	-111.618486	8	
C-6	R5	0.03	115	40.003539	-111.805630	27	

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
							channel, and a lack of vegetation due to disturbance. The average mapped width to the OHWM is 13 feet. C-6 carries a relatively permanent flow of water, but it does not connect to a downstream jurisdictional water. Accordingly, Canal C-6 is not considered a jurisdictional water.
C-7a	R5	<0.01	2	40.011588	-111.815192	28	Canal C-7 consists of two segments (C-7a through C-7b) in the survey area totaling 0.01 acre (62 linear feet). This canal is located along the west side of 800 North in Genola, Utah, just west of Keigley Quarry. Observations at this canal include slow-flowing water, sediment deposits, water staining on the concrete-lined channel, and a lack of vegetation due to disturbance. The average mapped width to the OHWM is 9 feet. C-7 carries a relatively permanent flow of water and maintains a continuous surface connection to downstream wetlands, which maintain a continuous surface connection to Utah Lake, a TNW.
C-7b	R5	0.01	60	40.011593	-111.815372	28	

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979): **R5** (unknown perennial, riverine).

^b Displayed values are rounded to two decimal places, so the totals might not match the sum of the reported values exactly.

^c Displayed values are rounded to the nearest whole linear foot, so the totals might not match the sum of the reported values exactly.

Canal ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
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^d Coordinates for the center point of each feature are listed.

^e See Attachment B, *Aquatic Resources Delineation Map Series*.

4.2.4 Ditches

Within the survey area, 0.03 acre (239 linear feet) of ditch was delineated. The resource comprises a single unnamed, human-made drainage feature. The canal segment is concrete-lined and characterized by a hydrophytic herbaceous vegetation community along the lower banks, transitioning to a woody riparian community above.

Photo 4-16 provides a representative photo of the ditch in the survey area. Table 4-5 summarizes the ditch that was delineated in the survey area.

Photo 4-16. Ditch in the Survey Area



Photo of ditch D-1 (location shown in Attachment B, page 17).

**Table 4-5.
Ditches in the survey area**

Ditch ID	Cowardin Code ^a	Size (acres) ^b	Length (feet) ^c	Latitude ^d	Longitude ^d	Map Page Number(s) ^e	Description
D-1	R6	0.03	239	40.027156	-111.723523	17	Ditch D-1 consists of one segment in the survey area that is 0.03 acre (239 linear feet). It is located north of Strawberry High Line Canal Road between 600 East and Peteetneet Creek in Payson, Utah. This ditch flows southwest into a culvert that empties into Peteetneet Creek. Observations at this ditch include a concrete-lined channel with minimal, slow-flowing water. The average mapped width to the OHWM is 6 feet. Ditch D-1 does not carry a relatively permanent flow of water. Accordingly, ditch D-1 is not considered a jurisdictional water.

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979):

R6 (a wetland, spring, stream, river, pond, or lake that only exists for a short period).

^b Displayed values are rounded to two decimal places, so the totals might not match the sum of the reported values exactly.

^c Displayed values are rounded to the nearest whole linear foot, so the totals might not match the sum of the reported values exactly.

^d Coordinates for the center point of each feature are listed.

^e See Attachment B, *Aquatic Resources Delineation Map Series*.

5.0 Delineation Summary

All areas in the delineation survey area were assessed to determine the presence or absence of aquatic resources, including wetlands and other waters, in accordance with the procedures and guidelines established by USACE. There is a total of 78.36 acres of aquatic resources. These resources consist of 14.67 acres of palustrine wetlands, 2.89 acres (2,968 linear feet) of perennial streams, 0.07 acre (324 linear feet) of intermittent streams, 0.02 acre (25 linear feet) of ephemeral streams, 40.42 acres (90,230 linear feet) of canals, 20.26 acres of open-water ponds, and 0.03 acre (239 linear feet) of ditches. All features recorded and mapped are included in Attachment B, *Aquatic Resources Delineation Map Series*.

5.1 Jurisdictional Status of Delineated Aquatic Resources

Aquatic resources in the survey area do not have an identifiable connection to interstate or foreign commerce, and they do not include any interstate waters or TNWs. Relatively permanent waters in the survey area consists of four named streams, two open-water ponds, three named canals, and two unnamed canal, which drain into Utah Lake, a TNW. Additionally, there is also one canal with a relatively permanent flow that disperses across the valley for irrigation purposes.. Descriptions included in Table 4-1 through Table 4-5 above provide information USACE could use to help determine the jurisdictional status of each delineated aquatic resource feature.

Typically, an applicant is required to submit an approved jurisdictional determination request with a delineation report in order for USACE to determine the jurisdictional status of delineated aquatic resources. As a delineation report, this document does not provide information regarding the expected impacts of a proposed action. The permit applicant would calculate expected impacts to aquatic resources before constructing the proposed action to determine permitting requirements under Section 404 of the Clean Water Act.

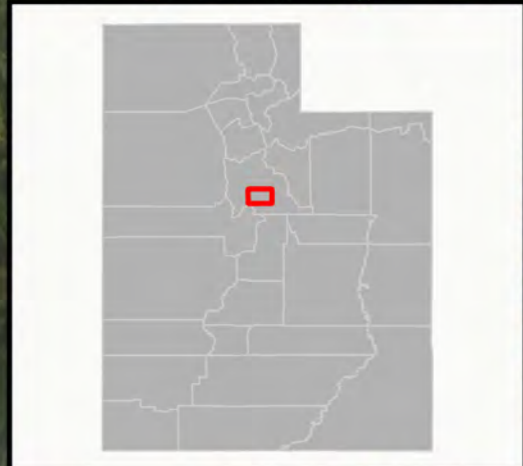
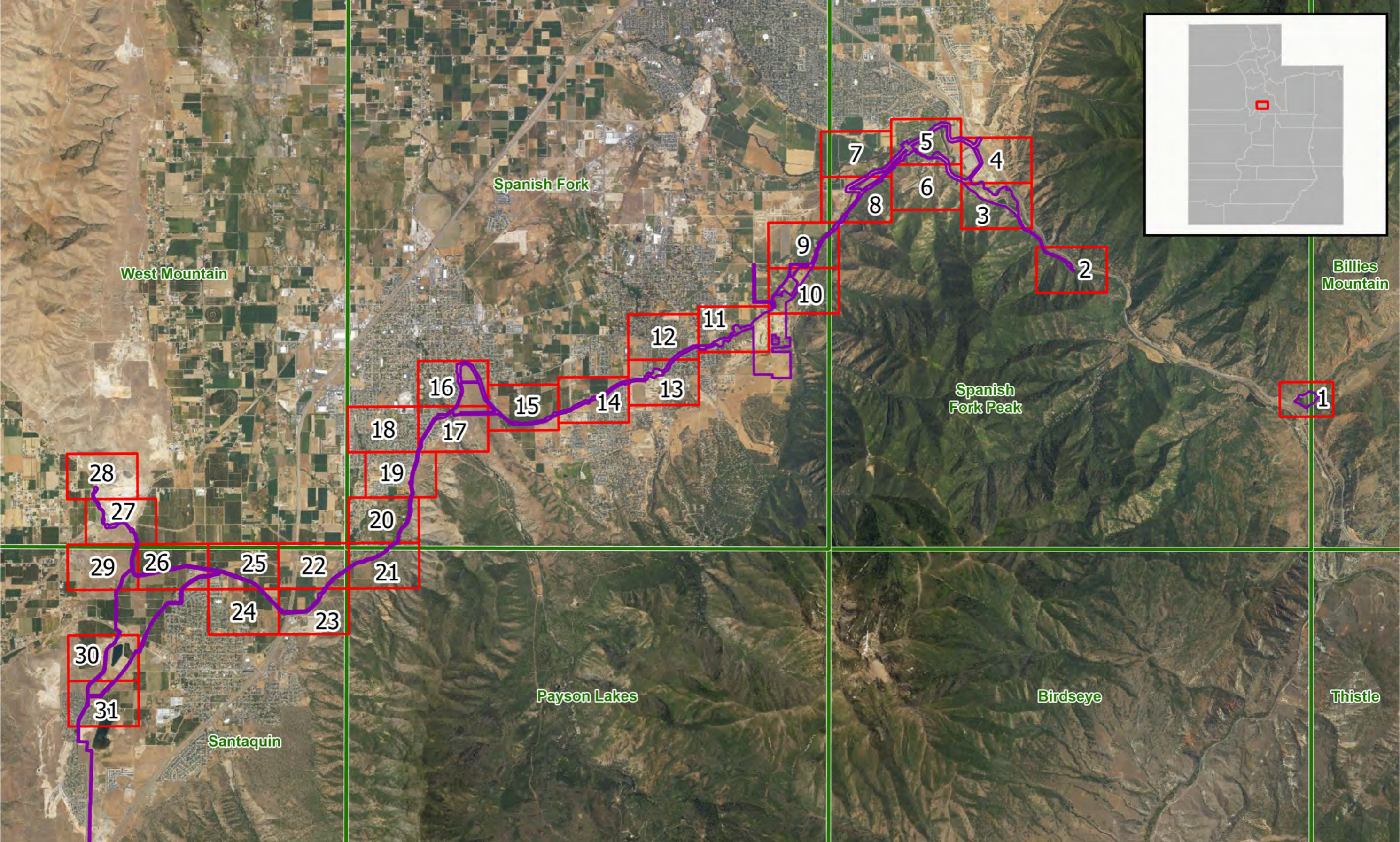
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Attachment A. Project Overview Map

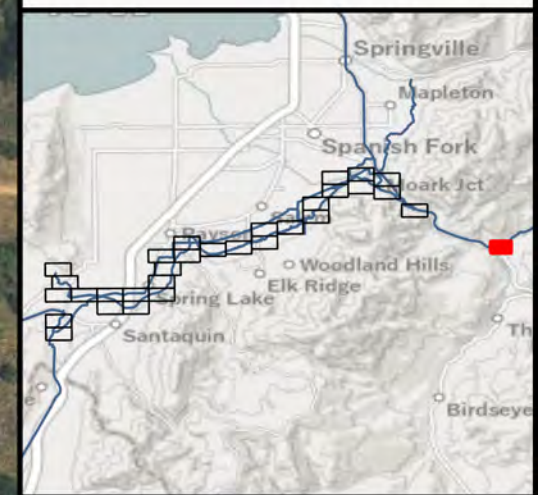
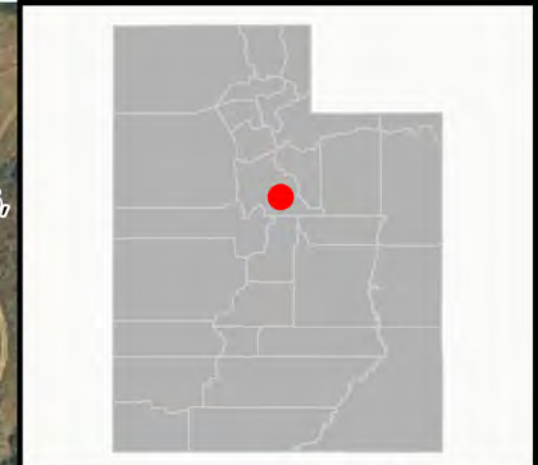
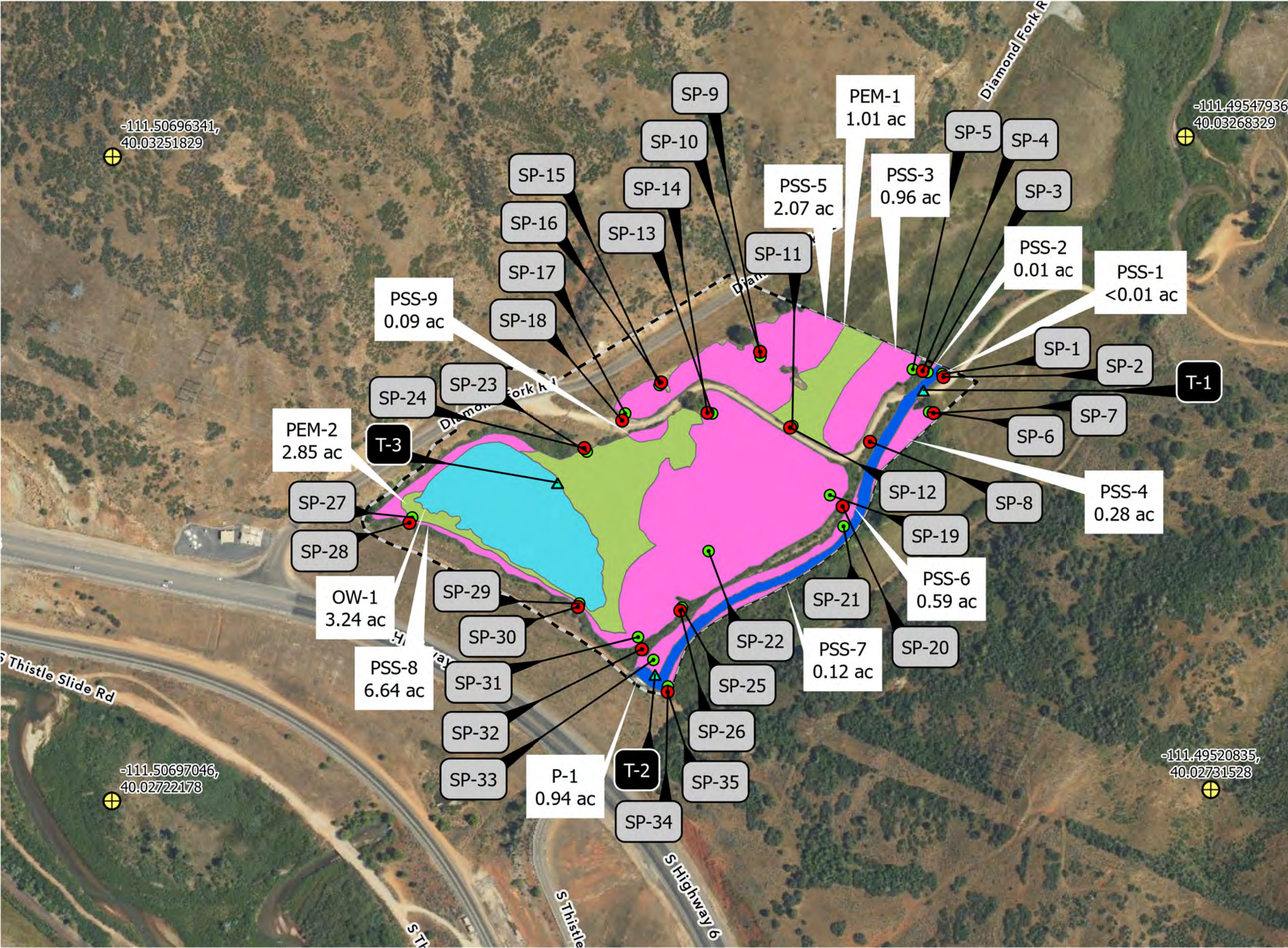


 Survey Boundary
 Map Series Pages
 USGS 7.5 Minute Quad Boundaries

AQUATIC RESOURCE DELINEATION OVERVIEW

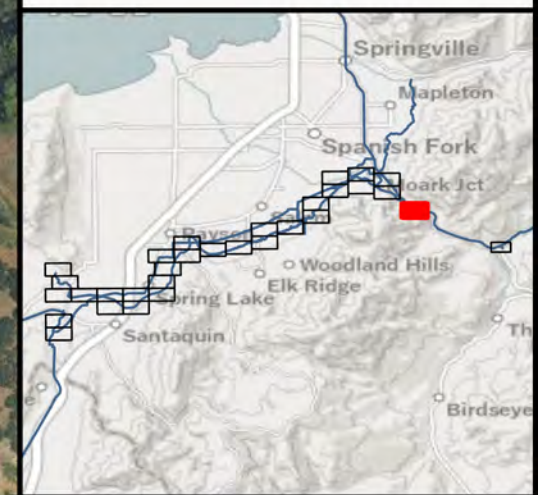
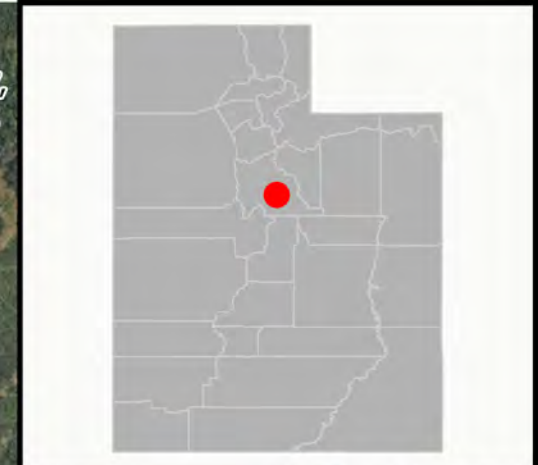
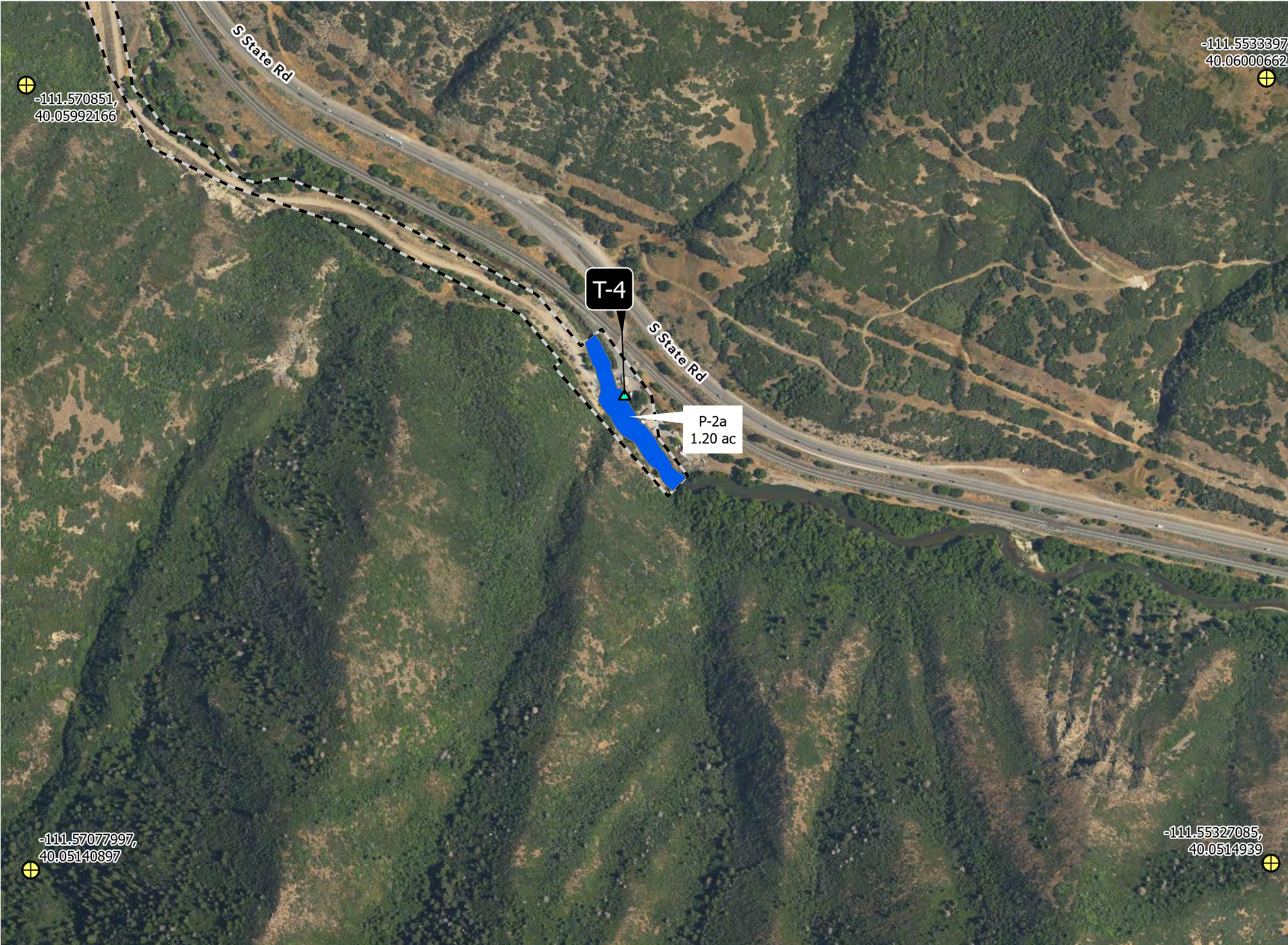


Attachment B. Aquatic Resources Delineation Map Series

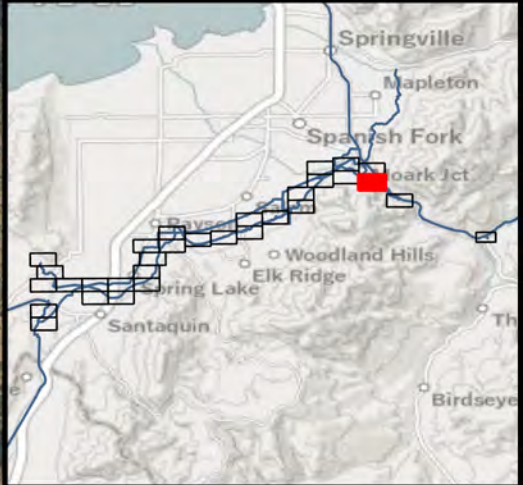


LEGEND

- Geographic Control Points
- Survey Boundary
- OHWM Transect Location
- Sampling Site**
- In Point Wetland
- Out Point NonWetland
- Aquatic Resource Type**
- Open Water Pond
- Palustrine Emergent Wetland
- Palustrine Scrub-Shrub Wetland
- Perennial Stream



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - OHWM Transect Location
- Aquatic Resource Type**
- Perennial Stream



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Open Water Pond

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OW-2
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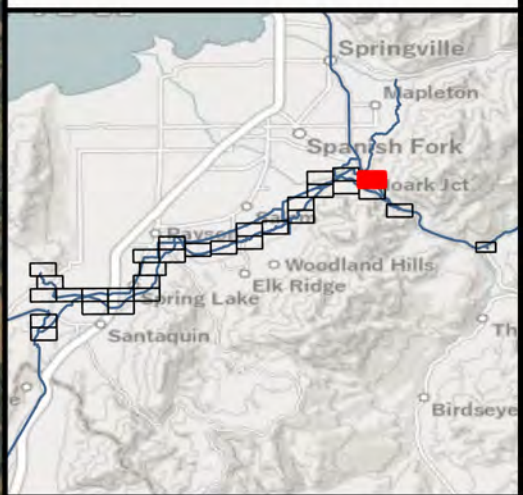
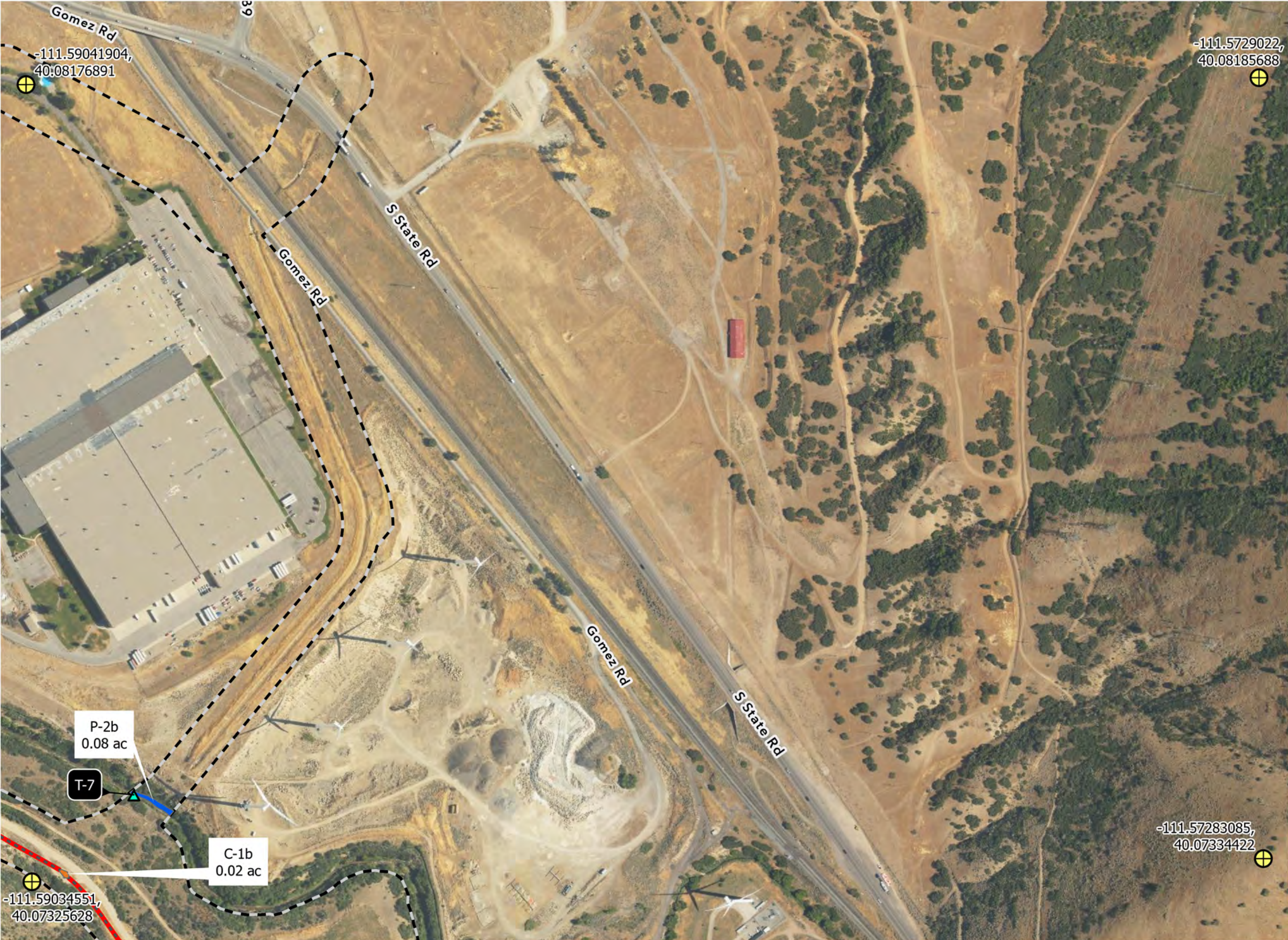
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T-5

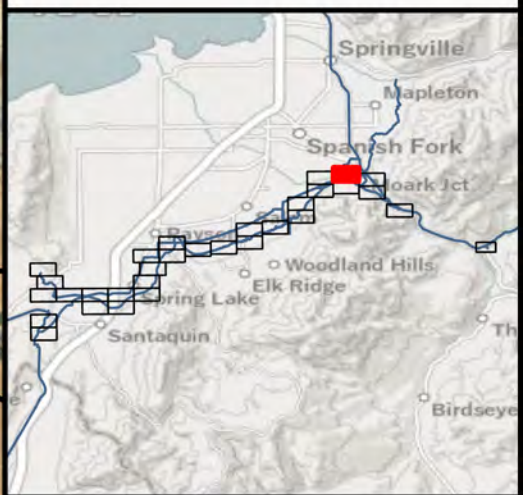
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- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Perennial Stream

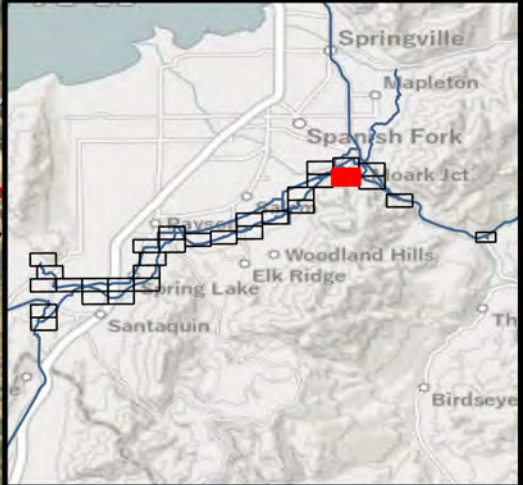
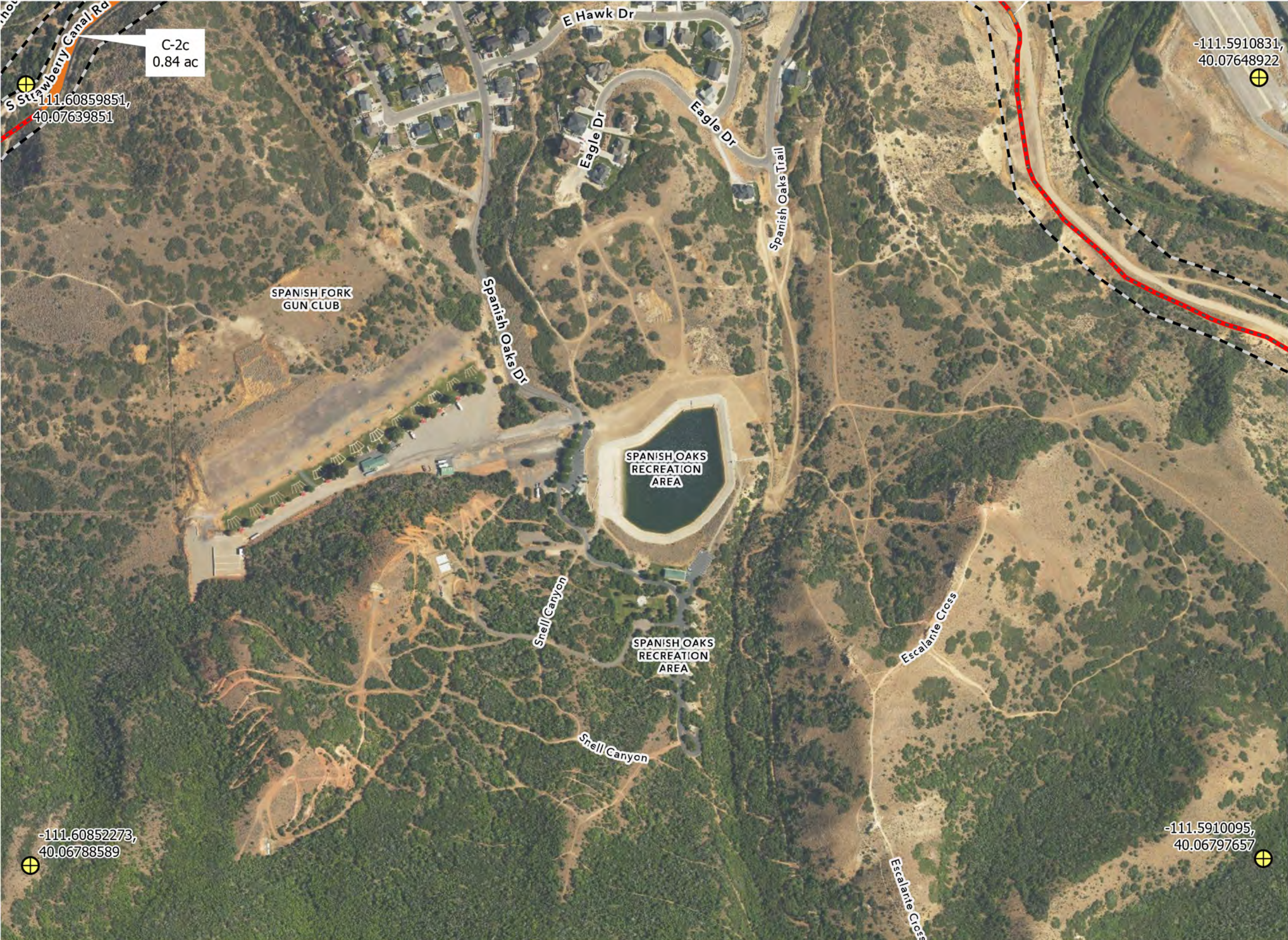


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Open Water Pond
- Perennial Stream



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - Aquatic Resource Type**
 - Canal

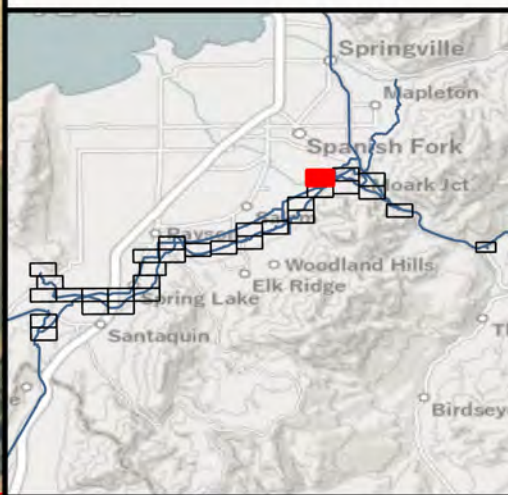
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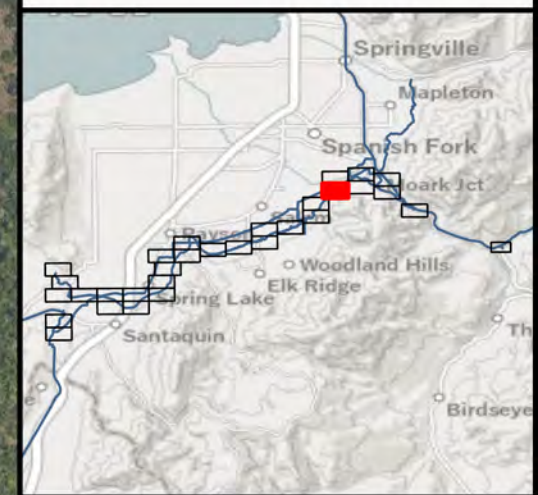
-111.5910831,
40.07648922

-111.60852273,
40.06788589

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- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - Aquatic Resource Type**
 - Canal

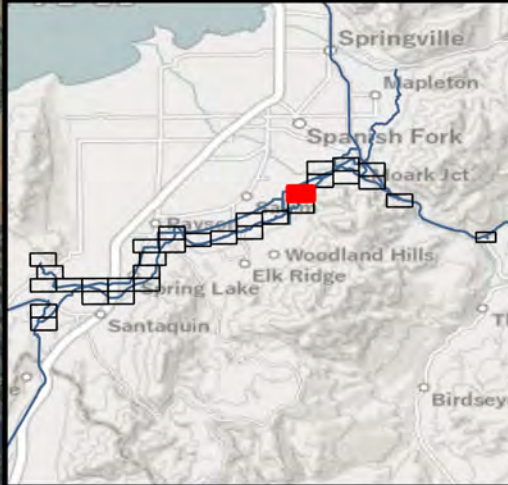


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

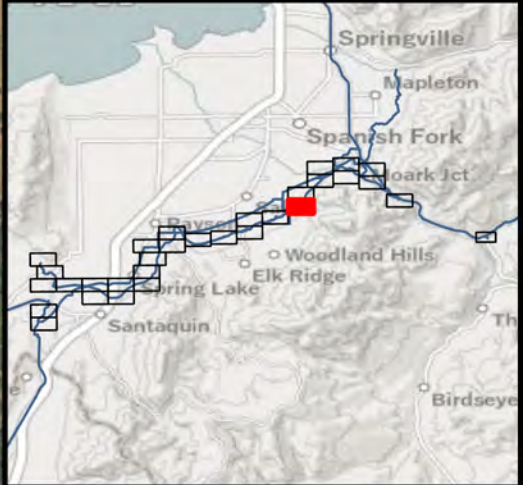
Aquatic Resource Type

- Canal
- Open Water Pond

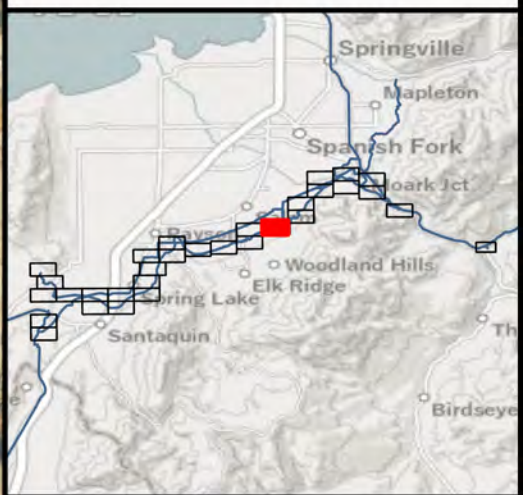


LEGEND

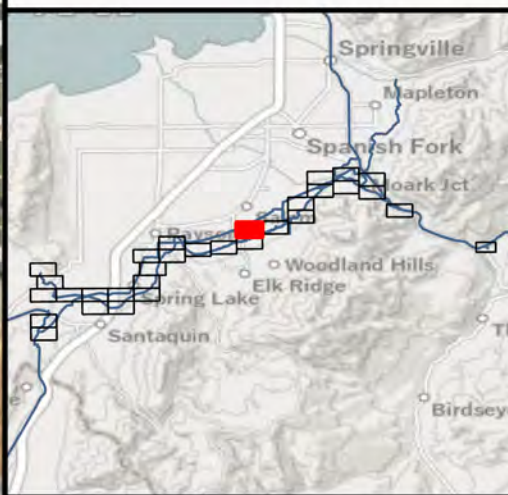
- Geographic Control Points
- Survey Boundary
- Culvert
- Aquatic Resource Type**
- Canal



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal

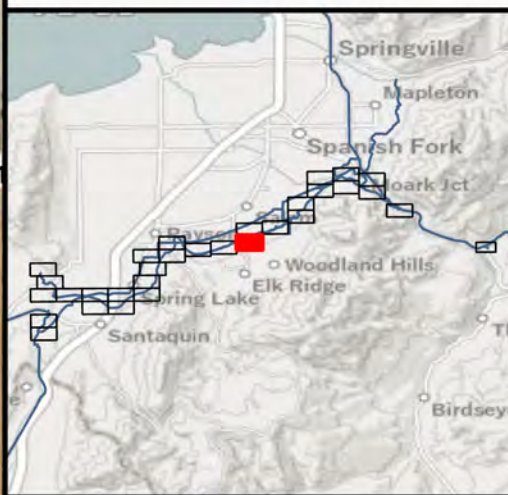


- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Open Water Pond



LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- Aquatic Resource Type**
- Canal

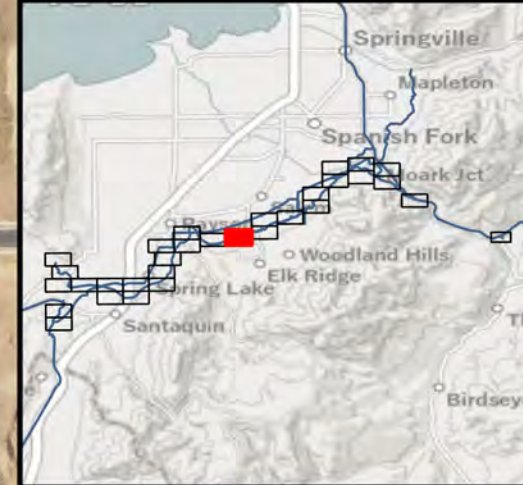


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Open Water Pond



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Open Water Pond

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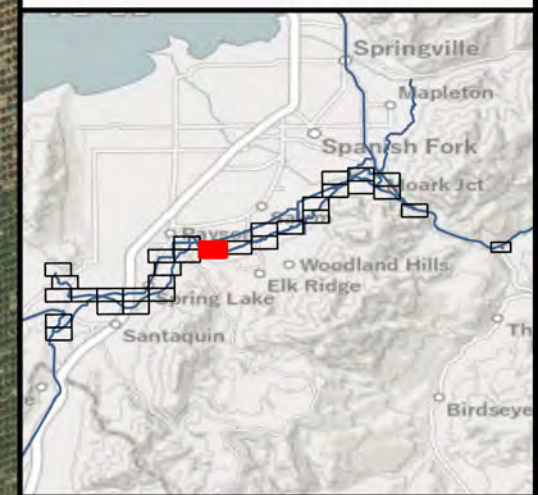
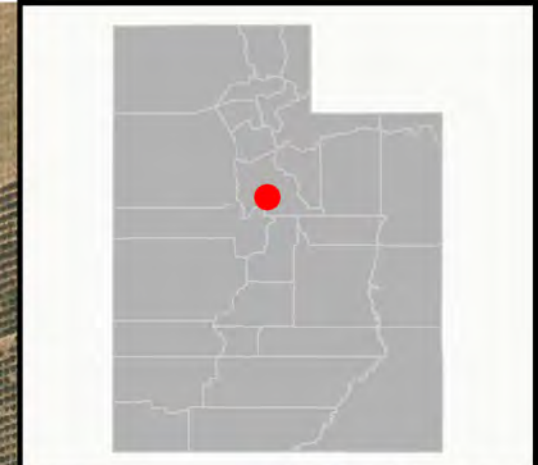
OW-7
0.94 ac

C-2n
2.71 ac

C-2o
1.80 ac

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40.02545013

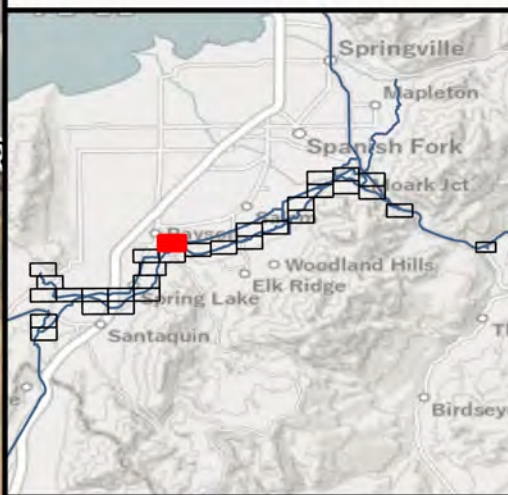


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Open Water Pond

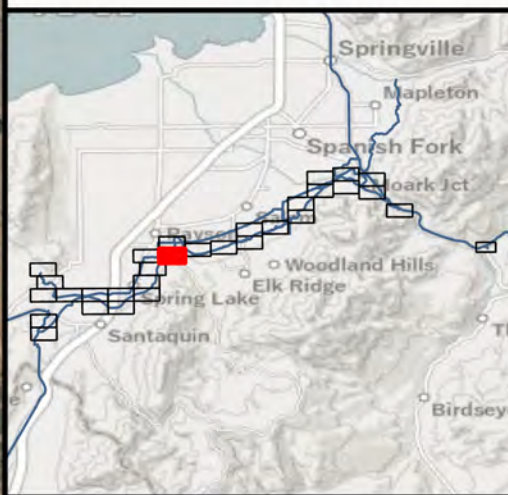
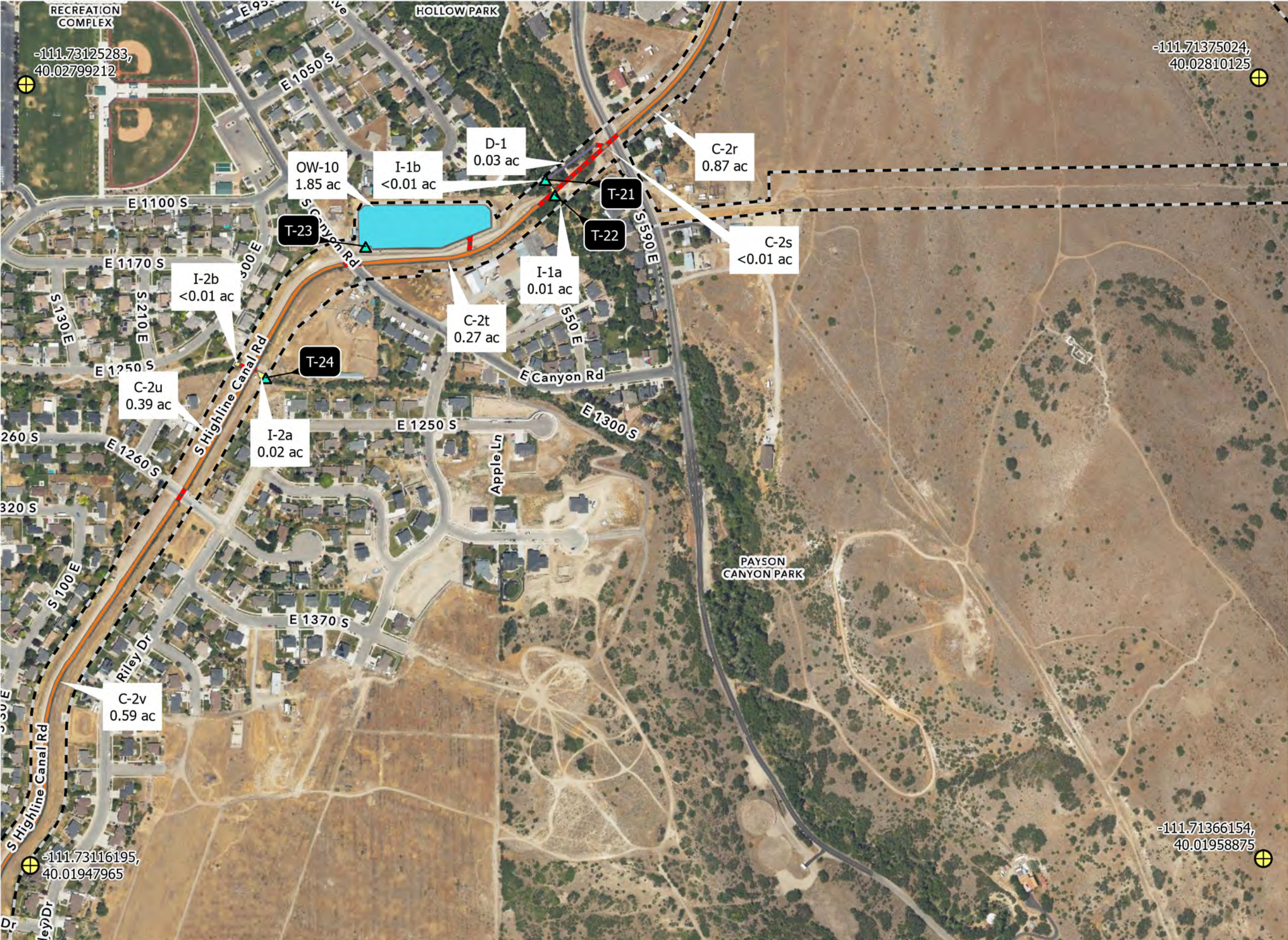


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert

Aquatic Resource Type

- Canal

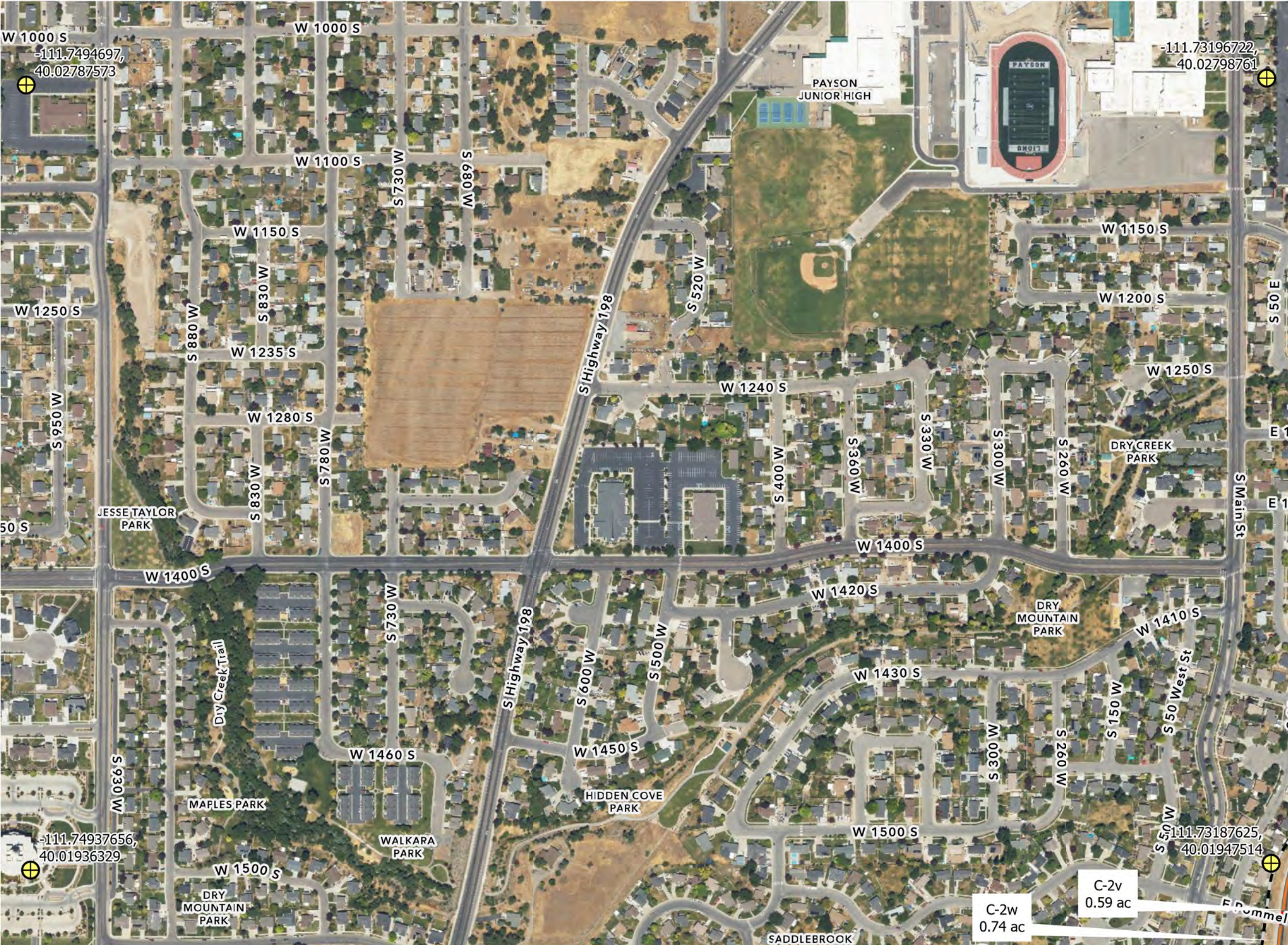


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Ditch
- Intermittent Stream
- Open Water Pond



LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert

Aquatic Resource Type

- Canal

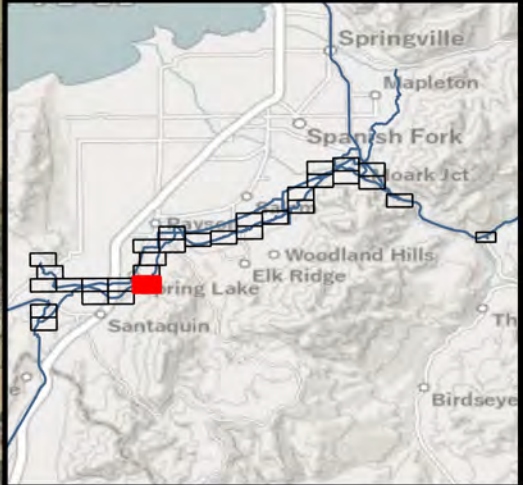
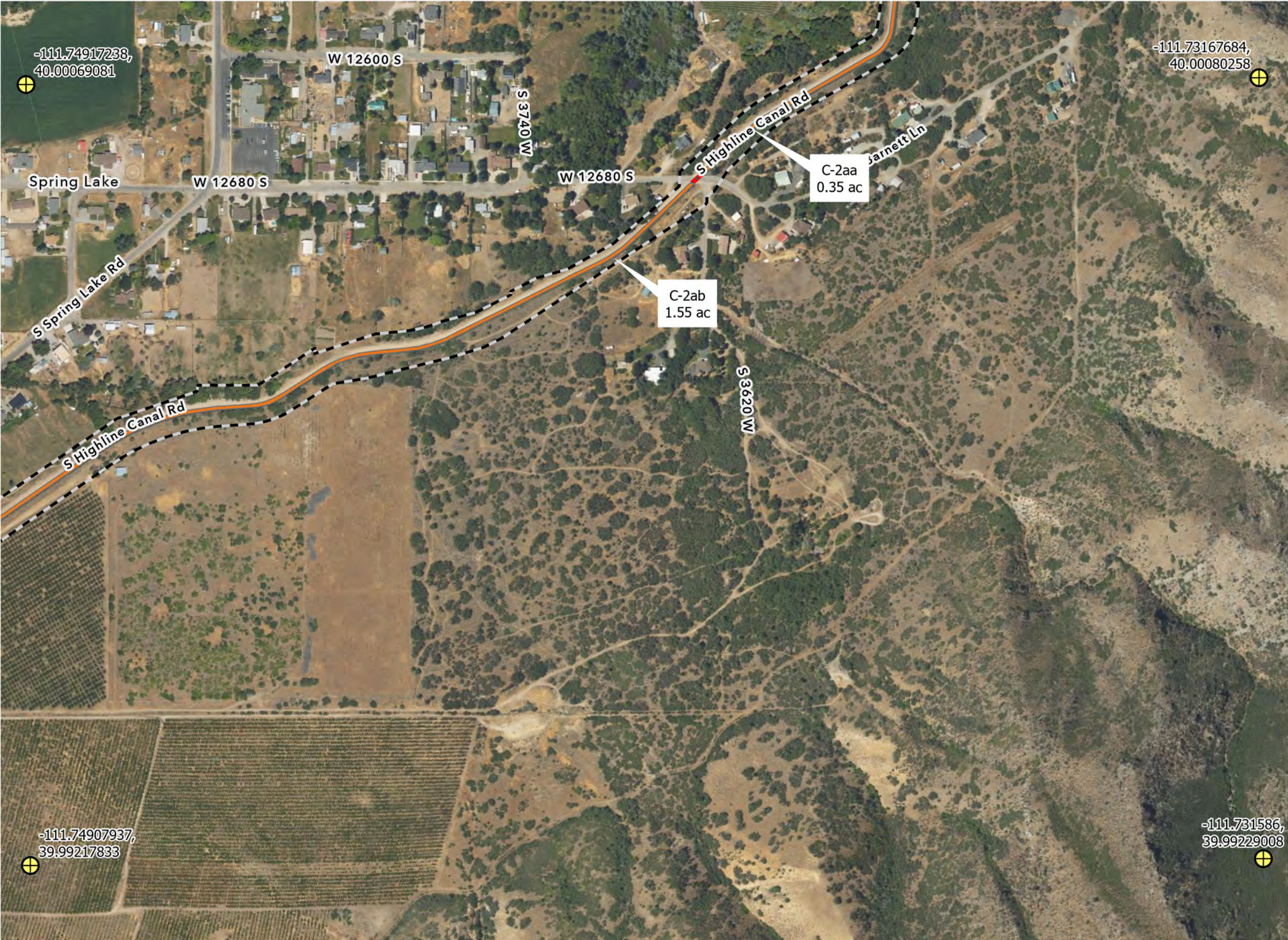


LEGEND

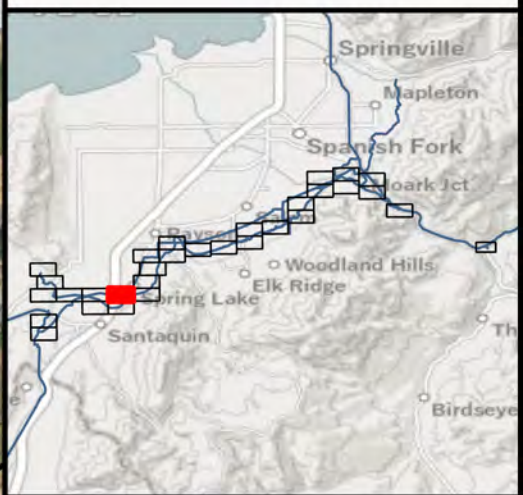
- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

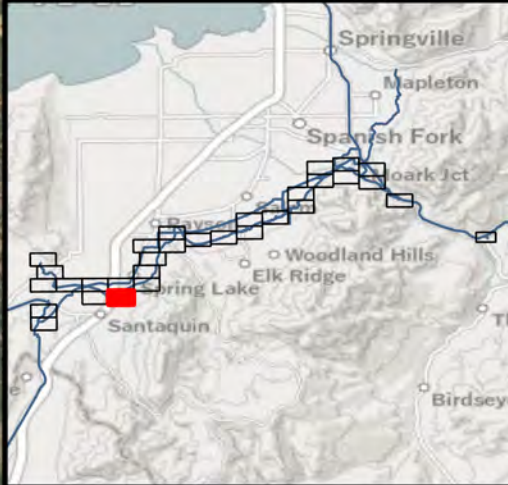
- Canal



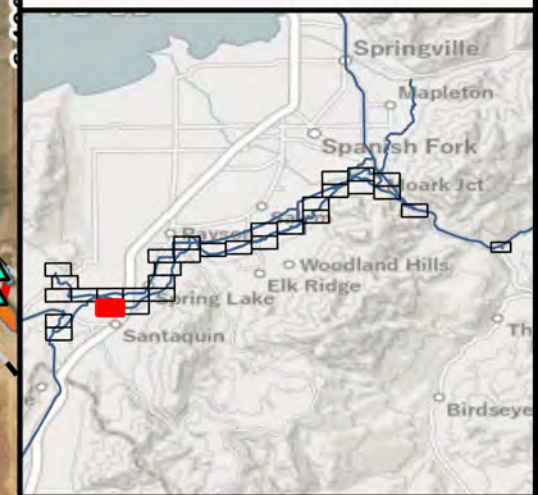
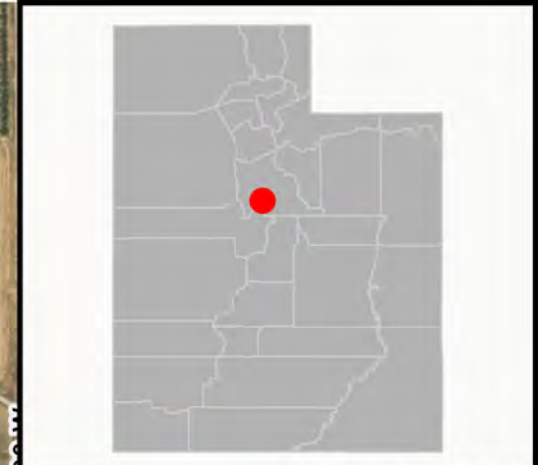
- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - Aquatic Resource Type**
 - Canal



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
- Aquatic Resource Type**
- Canal
 - Open Water Pond



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Open Water Pond

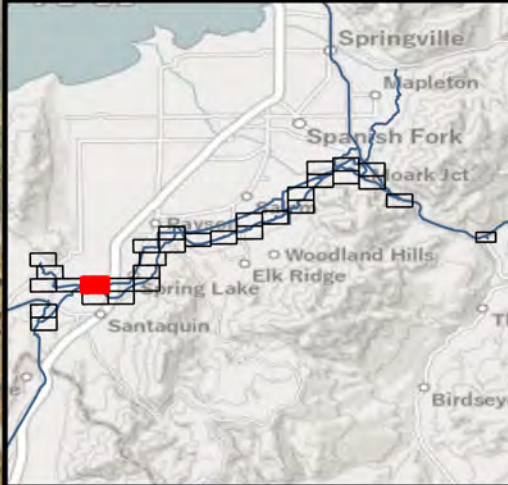


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Open Water Pond

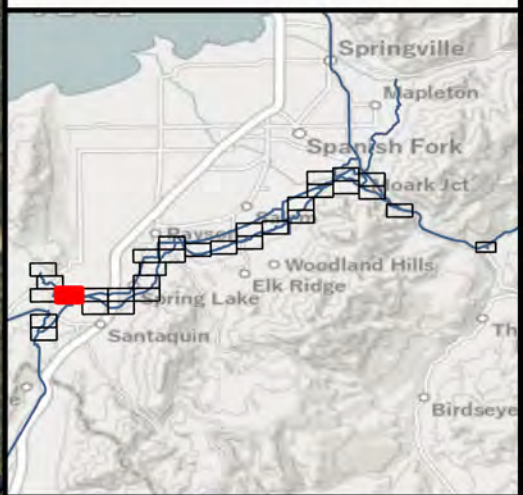
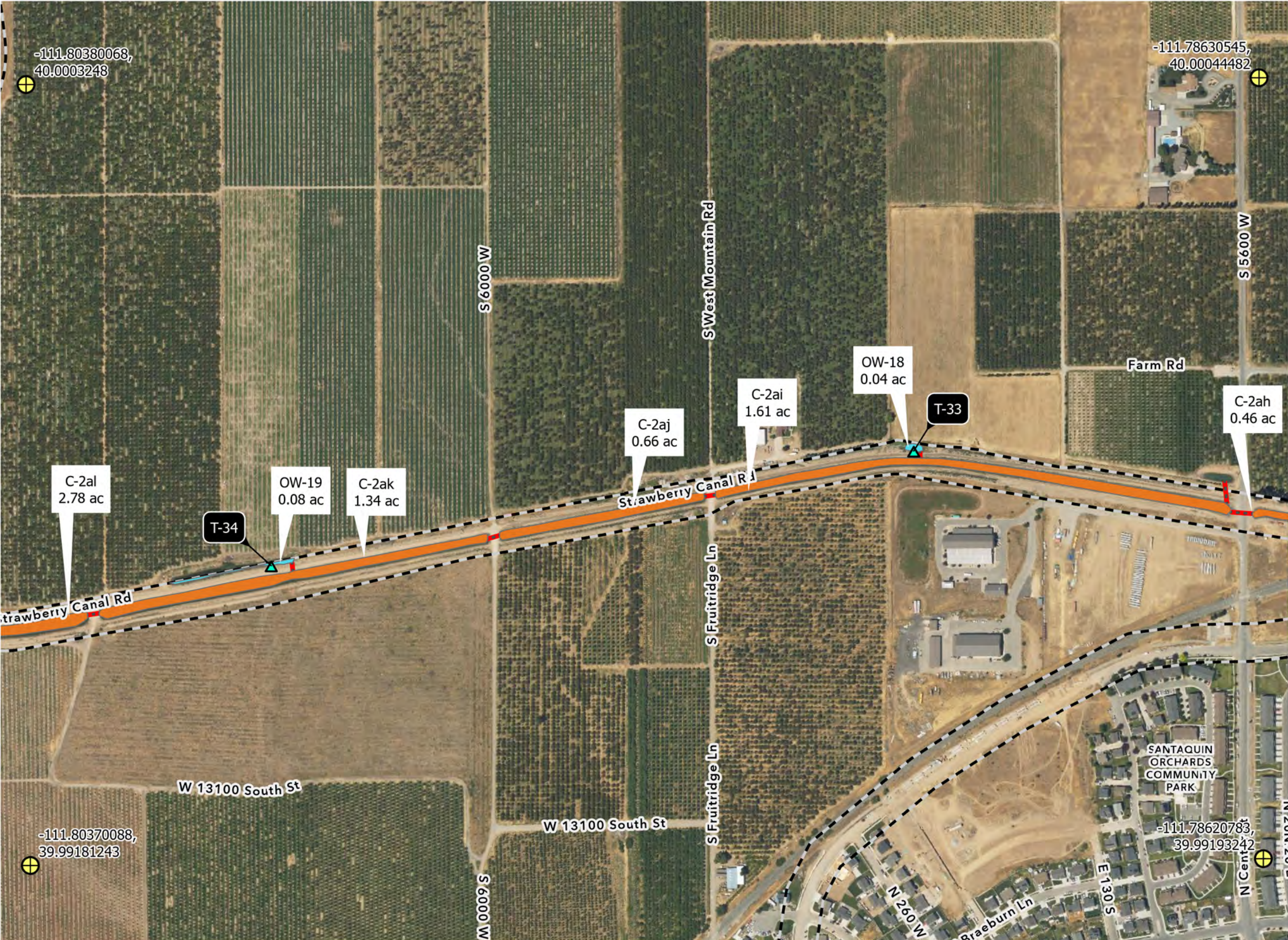


LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal
- Open Water Pond



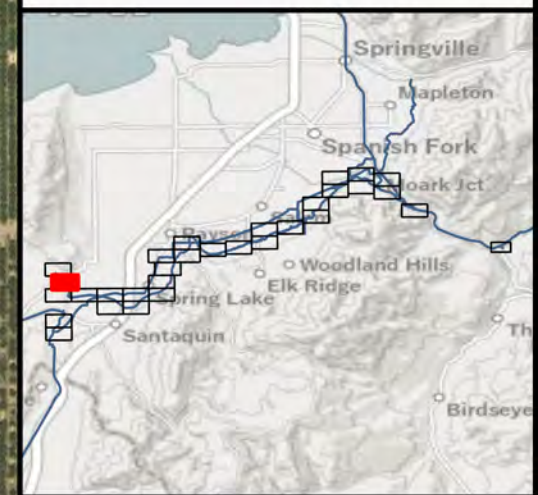
- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
- Aquatic Resource Type**
- Canal
 - Open Water Pond

-111.80330068,
40.0003248

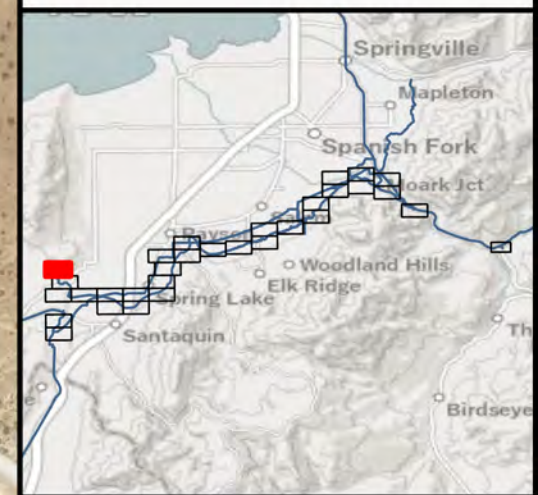
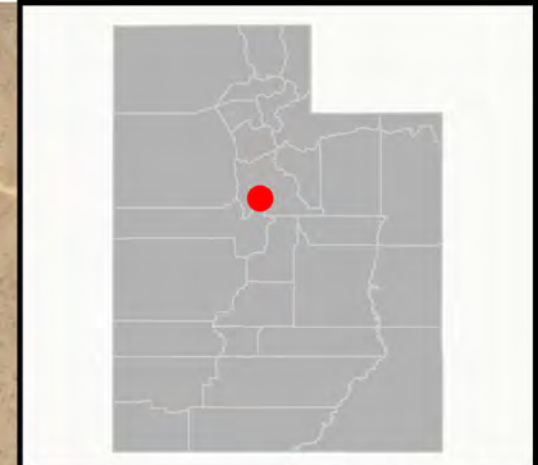
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40.00044482

-111.80370088,
39.99181243

-111.78620783,
39.99193242



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHWM Transect Location
 - Sampling Site**
 - In Point Wetland
 - Out Point NonWetland
 - Aquatic Resource Type**
 - Canal
 - Palustrine Emergent Wetland



LEGEND

- Geographic Control Points
- Survey Boundary
- Culvert
- OHWM Transect Location

Aquatic Resource Type

- Canal



-111.82200988,
40.00019707

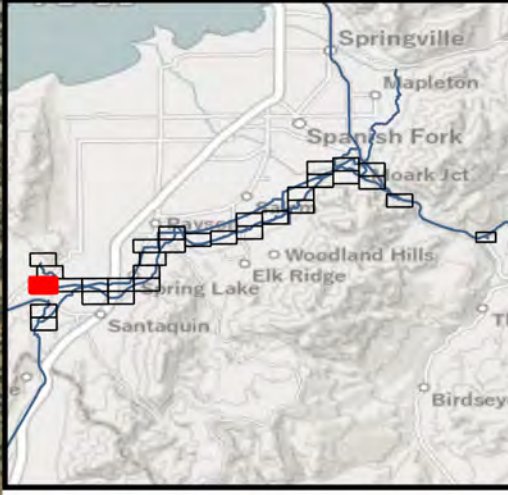
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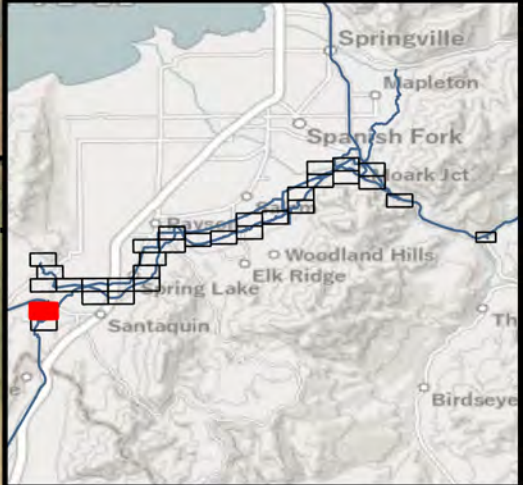
-111.80441488,
39.99180748

S 1000 E

C-2al
2.78 ac



- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Aquatic Resource Type**
 - Canal







- LEGEND**
- Geographic Control Points
 - Survey Boundary
 - Culvert
 - OHW Transect Location
- Aquatic Resource Type**
- Ephemeral Stream

-111.82168411,
39.9730125

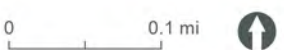
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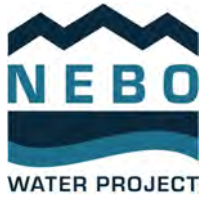


LEGEND

-  Geographic Control Points
-  Survey Boundary
-  OHWM Transect Location
- Aquatic Resource Type**
-  Intermittent Stream

-111.80409618,
39.96462275





Attachment C. Delineation Data

Attachment C-1. Wetland Determination Sampling Points
Summary

Attachment C-2. Wetland Determination Data Forms

Attachment C-3. Wetland Delineation Photographs

Attachment C-4. OHWM Delineation Data Summary

Attachment C-5. OHWM Delineation Data Forms

Attachment C-6. OHWM Delineation Photographs



Attachment C-1. Wetland Determination Sampling Points Summary

Attachment C-1. Wetland Determination Data Points Summary

Map_ID	Hydrophytic Vegetation Present?	Hydric Soils Present?	Wetland Hydrology Present?	Sampled Area Within Wetland?	Map Sheet Number(s) ^a
SP-1	Yes	Yes	Yes	Yes	1
SP-2	No	No	No	No	1
SP-3	Yes	Yes	Yes	Yes	1
SP-4	Yes	No	No	No	1
SP-5	Yes	Yes	Yes	Yes	1
SP-6	Yes	Yes	Yes	Yes	1
SP-7	No	No	No	No	1
SP-8	Yes	No	No	No	1
SP-9	Yes	Yes	Yes	Yes	1
SP-10	No	No	No	No	1
SP-11	Yes	Yes	Yes	Yes	1
SP-12	No	-	No	No	1
SP-13	Yes	Yes	Yes	Yes	1
SP-14	No	No	No	No	1
SP-15	Yes	Yes	Yes	Yes	1
SP-16	No	Yes	No	No	1
SP-17	Yes	Yes	Yes	Yes	1
SP-18	No	-	No	No	1
SP-19	Yes	Yes	Yes	Yes	1
SP-20	Yes	No	No	No	1
SP-21	Yes	Yes	Yes	Yes	1
SP-22	Yes	Yes	Yes	Yes	1
SP-23	Yes	Yes	Yes	Yes	1
SP-24	Yes	No	Yes	No	1
SP-25	Yes	Yes	Yes	Yes	1
SP-26	Yes	No	No	No	1
SP-27	Yes	Yes	Yes	Yes	1
SP-28	Yes	No	No	No	1
SP-29	Yes	Yes	Yes	Yes	1
SP-30	Yes	No	No	No	1

(continued on next page)

Map_ID	Hydrophytic Vegetation Present?	Hydric Soils Present?	Wetland Hydrology Present?	Sampled Area Within Wetland?	Map Sheet Number(s) ^a
SP-31	Yes	Yes	Yes	Yes	1
SP-32	Yes	No	No	No	1
SP-33	Yes	Yes	Yes	Yes	1
SP-34	Yes	Yes	Yes	Yes	1
SP-35	Yes	No	No	No	1
SP-36	Yes	Yes	Yes	Yes	27
SP-37	Yes	No	Yes	No	27

^a Map sheet numbers refer to pages in in Attachment B, *Aquatic Resource Delineation Map Series*.



Attachment C-2. Wetland Determination Data Forms

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
---	--

Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-1
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03073230 Long: -111.49808607 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
---	---

Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix lucida</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>340</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.52</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>135</u> (A)	<u>340</u> (B)	Prevalence Index = B/A = <u>2.52</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>80</u>	x 2 = <u>160</u>																				
FAC species <u>40</u>	x 3 = <u>120</u>																				
FACU species <u>15</u>	x 4 = <u>60</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>135</u> (A)	<u>340</u> (B)																				
Prevalence Index = B/A = <u>2.52</u>																					
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>60</u>		=Total Cover																	
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Agrostis gigantea</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</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.																
2.	<u>Carex praegracilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3.	<u>Schedonorus pratensis</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4.	<u>Trifolium repens</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>75</u>		=Total Cover																	
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2.	_____	_____	_____	_____																	
		_____		=Total Cover																	
% Bare Ground in Herb Stratum <u>0</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-1

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 4/1	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
9-18	10YR 5/2	90	10YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicators A2 and A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-2
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 5
 Subregion (LRR/MLRA): LRR E Lat: 40.03070763 Long: -111.49807301 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> </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>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>33.3%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____ =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">Total % Cover of:</td> <td style="width: 50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>60</u></td> <td>x 5 = <u>300</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>430</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.30</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>60</u>	x 5 = <u>300</u>	Column Totals: <u>100</u> (A)	<u>430</u> (B)	Prevalence Index = B/A = <u>4.30</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>15</u>	x 2 = <u>30</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>25</u>	x 4 = <u>100</u>																				
UPL species <u>60</u>	x 5 = <u>300</u>																				
Column Totals: <u>100</u> (A)	<u>430</u> (B)																				
Prevalence Index = B/A = <u>4.30</u>																					
1.	<u>Salix lucida</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>15</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </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>Bromus inermis</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>																	
2.	<u>Melilotus officinalis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>85</u> =Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____ =Total Cover																			
% Bare Ground in Herb Stratum <u>10</u>																					

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-2

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		
0-13	10YR 4/3	100				Loamy/Clayey	

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)		

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No hydric soil indicators observed. Rock at 13 inches.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology indicators observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-3
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03074728 Long: -111.49824421 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.																					
3.																					
4.																					
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix lucida</u>	40	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>295</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.27</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>295</u> (B)	Prevalence Index = B/A = <u>2.27</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>100</u>	x 2 = <u>200</u>																				
FAC species <u>25</u>	x 3 = <u>75</u>																				
FACU species <u>5</u>	x 4 = <u>20</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>130</u> (A)	<u>295</u> (B)																				
Prevalence Index = B/A = <u>2.27</u>																					
2.																					
3.																					
4.																					
5.																					
40 =Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Equisetum hyemale</u>	25	Yes	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	<u>Carex praegracilis</u>	20	Yes	FACW																	
3.	<u>Hordeum jubatum</u>	20	Yes	FAC																	
4.	<u>Phragmites australis</u>	15	No	FACW																	
5.	<u>Melilotus officinalis</u>	5	No	FACU																	
6.	<u>Agrostis gigantea</u>	5	No	FAC																	
7.																					
8.																					
9.																					
10.																					
11.																					
90 =Total Cover																					
Woody Vine Stratum	(Plot size: _____)																				
1.																					
2.																					
=Total Cover																					
% Bare Ground in Herb Stratum <u>0</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-3

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 4/1	95	10YR 5/8	5	C	M	Loamy/Clayey	
16-20	10YR 6/2	85	10YR 5/8	15	C	M	Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicators A2 and A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-4
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Berm Local relief (concave, convex, none): None Slope (%): 6
 Subregion (LRR/MLRA): LRR E Lat: 40.03075771 Long: -111.49829579 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>170</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.62</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u> (A)	<u>170</u> (B)	Prevalence Index = B/A = <u>2.62</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>35</u>	x 2 = <u>70</u>																				
FAC species <u>20</u>	x 3 = <u>60</u>																				
FACU species <u>10</u>	x 4 = <u>40</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>65</u> (A)	<u>170</u> (B)																				
Prevalence Index = B/A = <u>2.62</u>																					
1.	<u>Salix lucida</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Salix exigua</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>25</u>	=Total Cover																		
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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>Hordeum jubatum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2.	<u>Juncus arcticus</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3.	<u>Melilotus officinalis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>40</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____	=Total Cover																		
% Bare Ground in Herb Stratum		<u>35</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-4

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		
0-15	7.5YR 4/3	100				Loamy/Clayey	

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Iron Monosulfide (A18)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed. Rock at 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

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

Remarks:
Dry soils. No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-5
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03077105 Long: -111.49840045 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____	_____	_____	_____																	
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Salix lucida</u>	40	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr><td>OBL species</td><td style="text-align: center;">0 x 1 = 0</td></tr> <tr><td>FACW species</td><td style="text-align: center;">160 x 2 = 320</td></tr> <tr><td>FAC species</td><td style="text-align: center;">15 x 3 = 45</td></tr> <tr><td>FACU species</td><td style="text-align: center;">0 x 4 = 0</td></tr> <tr><td>UPL species</td><td style="text-align: center;">0 x 5 = 0</td></tr> <tr><td>Column Totals:</td><td style="text-align: center;"><u>175</u> (A) <u>365</u> (B)</td></tr> <tr><td>Prevalence Index = B/A =</td><td style="text-align: center;"><u>2.09</u></td></tr> </table>	Total % Cover of:	Multiply by:	OBL species	0 x 1 = 0	FACW species	160 x 2 = 320	FAC species	15 x 3 = 45	FACU species	0 x 4 = 0	UPL species	0 x 5 = 0	Column Totals:	<u>175</u> (A) <u>365</u> (B)	Prevalence Index = B/A =	<u>2.09</u>
Total % Cover of:	Multiply by:																			
OBL species	0 x 1 = 0																			
FACW species	160 x 2 = 320																			
FAC species	15 x 3 = 45																			
FACU species	0 x 4 = 0																			
UPL species	0 x 5 = 0																			
Column Totals:	<u>175</u> (A) <u>365</u> (B)																			
Prevalence Index = B/A =	<u>2.09</u>																			
2. <u>Salix exigua</u>	35	Yes	FACW																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
=Total Cover																				
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Juncus arcticus ssp. littoralis</u>	70	Yes	FACW	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% <u>X</u> _____ 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.																
2. <u>Hordeum jubatum</u>	15	No	FAC																	
3. <u>Phalaris arundinacea</u>	15	No	FACW																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
=Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. _____	_____	_____	_____																	
=Total Cover																				
% Bare Ground in Herb Stratum	<u>0</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-5

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	7.5YR 4/1	100					Loamy/Clayey	
3-20	7.5YR 4/1	90	7.5YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 10 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-6
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03042018 Long: -111.4982261 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				=Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				
1. <u>Salix amygdaloides</u>	75	Yes	FACW	
2. <u>Ribes aureum</u>	10	No	FAC	
3. <u>Rosa woodsii</u>	5	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				90 =Total Cover
Herb Stratum (Plot size: <u>5 ft radius</u>)				
1. <u>Elymus trachycaulus</u>	20	Yes	FAC	
2. <u>Carex aquatilis</u>	10	Yes	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
				30 =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: 100.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species	<u>10</u>	x 1 = <u>10</u>
FACW species	<u>75</u>	x 2 = <u>150</u>
FAC species	<u>30</u>	x 3 = <u>90</u>
FACU species	<u>5</u>	x 4 = <u>20</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>120</u> (A)	<u>270</u> (B)
Prevalence Index = B/A =	<u>2.25</u>	

Hydrophytic Vegetation Indicators:
 _____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 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 X No _____

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-6

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		
0-15	7.5YR 5/2	70	10YR 8/1	25	D	M	Loamy/Clayey	
			10YR 6/8	5	C	M		Prominent redox concentrations

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed. Rock at 15 inches.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 14 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-7
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR/MLRA): LRR E Lat: 40.03041074 Long: -111.4981787 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: _____

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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; font-size: small;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																					
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Herb Stratum	(Plot size: <u>5 ft radius</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>Bromus inermis</u>	90	Yes	UPL																	
2.	<u>Cirsium arvense</u>	10	No	FAC																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		100	=Total Cover																		
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____	=Total Cover																		
% Bare Ground in Herb Stratum		<u>0</u>																			

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-7

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		
0-18	10YR 4/3	100					Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: No hydric soil indicators observed.	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No wetland hydrology indicators observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-8
 Investigator(s): Michael Perkins Section, Township, Range: S16 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03017542 Long: -111.49885905 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
2.																					
3.																					
4.																					
=Total Cover					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>420</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.80</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>150</u> (A)	<u>420</u> (B)	Prevalence Index = B/A = <u>2.80</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>110</u>	x 2 = <u>220</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>40</u>	x 5 = <u>200</u>																				
Column Totals: <u>150</u> (A)	<u>420</u> (B)																				
Prevalence Index = B/A = <u>2.80</u>																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix exigua</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>																	
2.																					
3.																					
4.																					
5.																					
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Juncus arcticus ssp. littoralis</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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.																
2.	<u>Bromus inermis</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>																	
3.	<u>Phalaris arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
=Total Cover																					
Woody Vine Stratum	(Plot size: _____)																				
1.																					
2.																					
=Total Cover																					
% Bare Ground in Herb Stratum		<u>0</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-8

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		
0-14	7.5YR 4/3	100					Loamy/Clayey	

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Iron Monosulfide (A18)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed. Rock at 14 inches.

HYDROLOGY

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

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

Remarks:
Soils are damp but not saturated. No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-9
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR/MLRA): LRR E Lat: 40.03087592 Long: -111.50002939 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">Total % Cover of:</td> <td style="width: 50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>205</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table> Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>95</u>	x 2 = <u>190</u>																				
FAC species <u>5</u>	x 3 = <u>15</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>100</u> (A)	<u>205</u> (B)																				
Prevalence Index = B/A = <u>2.05</u>																					
1.	<u>Juncus arcticus ssp. littoralis</u>	<u>95</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Alopecurus arundinaceus</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>100</u>		=Total Cover																	
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____		=Total Cover																	
% Bare Ground in Herb Stratum <u>0</u>					Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
Remarks: Vegetation community is hydrophytic.																					

SOIL

Sampling Point: SP-9

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	7.5YR 4/2	100					Loamy/Clayey	
3-14	7.5YR 4/2	90	10YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed. Soil is rocky at 14".

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 and secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-10
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03091452 Long: -111.5000335 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	1. _____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>470</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.70</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>90</u>	x 5 = <u>450</u>	Column Totals: <u>100</u> (A)	<u>470</u> (B)	Prevalence Index = B/A = <u>4.70</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>10</u>	x 2 = <u>20</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>90</u>	x 5 = <u>450</u>																			
Column Totals: <u>100</u> (A)	<u>470</u> (B)																			
Prevalence Index = B/A = <u>4.70</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Herb Stratum (Plot size: <u>5 ft radius</u>)	1. <u>Bromus inermis</u>	<u>90</u>	<u>Yes</u>	<u>UPL</u>																
2. <u>Juncus arcticus ssp. littoralis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
_____ =Total Cover	<u>100</u>	_____	_____																	
Woody Vine Stratum (Plot size: _____)	1. _____	_____	_____	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.																
2. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
% Bare Ground in Herb Stratum <u>0</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-10

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		
0-7	10YR 4/3	100					Loamy/Clayey	
7-16	10YR 4/2	100					Loamy/Clayey	
16-20	10YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology indicators observed. Soils are dry.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/10/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-11
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03030479 Long: -111.49968877 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>100</u>	x 2 = <u>200</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>100</u> (A)	<u>200</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
1.	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>100</u>		=Total Cover																	
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____		=Total Cover																	
% Bare Ground in Herb Stratum		<u>0</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-11

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		
0-7	10YR 3/2	100					Loamy/Clayey	
7-20	10YR 4/2	75	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/1	20	D	M		

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicators A11 and F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>7</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-12
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03029187 Long: -111.49971284 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not mee the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	1. _____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>75</u></td> <td>x 5 = <u>375</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>385</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.81</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>75</u>	x 5 = <u>375</u>	Column Totals: <u>80</u> (A)	<u>385</u> (B)	Prevalence Index = B/A = <u>4.81</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>75</u>	x 5 = <u>375</u>																			
Column Totals: <u>80</u> (A)	<u>385</u> (B)																			
Prevalence Index = B/A = <u>4.81</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Herb Stratum (Plot size: <u>5 ft radius</u>)	1. <u>Bromus tectorum</u>	<u>60</u>	<u>Yes</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.																
2. <u>Bromus inermis</u>	<u>15</u>	<u>No</u>	<u>UPL</u>																	
3. <u>Phragmites australis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
_____ =Total Cover	<u>80</u>	_____	_____																	
Woody Vine Stratum (Plot size: _____)	1. _____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
% Bare Ground in Herb Stratum <u>20</u>																				

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-12

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		

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No pit dug due to compacted road shoulder.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No surface wetland hydrology indicators observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-13
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03040788 Long: -111.50054666 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																									
1. _____	_____	_____	_____	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>100.0%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
_____ =Total Cover	_____	_____	_____																									
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																												
1. <u>Salix exigua</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> <td></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>140</u></td> <td>x 2 =</td> <td><u>280</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td></td> <td><u>280</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td><u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>140</u>	x 2 =	<u>280</u>	FAC species <u>0</u>	x 3 =	<u>0</u>	FACU species <u>0</u>	x 4 =	<u>0</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>140</u> (A)		<u>280</u> (B)	Prevalence Index = B/A =		<u>2.00</u>
Total % Cover of:	Multiply by:																											
OBL species <u>0</u>	x 1 =	<u>0</u>																										
FACW species <u>140</u>	x 2 =	<u>280</u>																										
FAC species <u>0</u>	x 3 =	<u>0</u>																										
FACU species <u>0</u>	x 4 =	<u>0</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>140</u> (A)		<u>280</u> (B)																										
Prevalence Index = B/A =		<u>2.00</u>																										
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ =Total Cover	<u>80</u>	_____	_____																									
Herb Stratum (Plot size: <u>5 ft radius</u>)																												
1. <u>Phragmites australis</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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.																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
_____ =Total Cover	<u>60</u>	_____	_____																									
Woody Vine Stratum (Plot size: _____)																												
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																								
2. _____	_____	_____	_____																									
_____ =Total Cover	_____	_____	_____																									
% Bare Ground in Herb Stratum <u>0</u>																												

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-13

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	7.5YR 4/3	100					Loamy/Clayey	
3-18	7.5YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-14
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR/MLRA): LRR E Lat: 40.03041394 Long: -111.50059671 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>50.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>60</u></td> <td>x 2 = <u>120</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>220</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.59</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>60</u>	x 2 = <u>120</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>220</u> (B)	Prevalence Index = B/A = <u>2.59</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>60</u>	x 2 = <u>120</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>25</u>	x 4 = <u>100</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>85</u> (A)	<u>220</u> (B)																				
Prevalence Index = B/A = <u>2.59</u>																					
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Herb Stratum	(Plot size: <u>5 ft radius</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>Phragmites australis</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Melilotus officinalis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>85</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____	=Total Cover																		
% Bare Ground in Herb Stratum <u>20</u>																					

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-14

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		
0-14	7.5YR 4/3	100					Loamy/Clayey	
14-18	7.5YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
Dry soils. No wetland hydrology indicators observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/7/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-15
 Investigator(s): Michael Perkins, Evan Blanford Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR/MLRA): LRR E Lat: 40.03064218 Long: -111.5011082 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																									
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
2.	_____	_____	_____	_____																									
3.	_____	_____	_____	_____																									
4.	_____	_____	_____	_____																									
		_____		=Total Cover																									
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																												
1.	_____	_____	_____	_____																									
2.	_____	_____	_____	_____																									
3.	_____	_____	_____	_____																									
4.	_____	_____	_____	_____																									
5.	_____	_____	_____	_____																									
		_____		=Total Cover																									
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;"></td> <td style="width: 25%;">Total % Cover of:</td> <td style="width: 25%;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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.		Total % Cover of:	Multiply by:	OBL species	<u>0</u>	x 1 = <u>0</u>	FACW species	<u>100</u>	x 2 = <u>200</u>	FAC species	<u>0</u>	x 3 = <u>0</u>	FACU species	<u>0</u>	x 4 = <u>0</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>100</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.00</u>		
	Total % Cover of:	Multiply by:																											
OBL species	<u>0</u>	x 1 = <u>0</u>																											
FACW species	<u>100</u>	x 2 = <u>200</u>																											
FAC species	<u>0</u>	x 3 = <u>0</u>																											
FACU species	<u>0</u>	x 4 = <u>0</u>																											
UPL species	<u>0</u>	x 5 = <u>0</u>																											
Column Totals:	<u>100</u> (A)	<u>200</u> (B)																											
Prevalence Index = B/A = <u>2.00</u>																													
1.	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>																									
2.	_____	_____	_____	_____																									
3.	_____	_____	_____	_____																									
4.	_____	_____	_____	_____																									
5.	_____	_____	_____	_____																									
6.	_____	_____	_____	_____																									
7.	_____	_____	_____	_____																									
8.	_____	_____	_____	_____																									
9.	_____	_____	_____	_____																									
10.	_____	_____	_____	_____																									
11.	_____	_____	_____	_____																									
		<u>100</u>		=Total Cover																									
Woody Vine Stratum	(Plot size: _____)																												
1.	_____	_____	_____	_____																									
2.	_____	_____	_____	_____																									
		_____		=Total Cover																									
% Bare Ground in Herb Stratum <u>0</u>																													

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-15

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 4/1	100					Loamy/Clayey	
4-14	10YR 4/1	90	10YR 6/8	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-16
 Investigator(s): Michael Perkins, Evan Blanford Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR/MLRA): LRR E Lat: 40.03066370 Long: -111.5010917 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table> 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) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>	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 = _____	
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 = _____																					
1.	<u>Grindelia squarrosa</u>	40	Yes	FACU																	
2.	<u>Verbena bracteata</u>	3	No	FAC																	
3.	<u>Phalaris arundinacea</u>	7	No	FACW																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		50		=Total Cover																	
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____		=Total Cover																	
% Bare Ground in Herb Stratum		50																			

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	7.5YR 5/2	100					Loamy/Clayey	
2-4	7.5YR 5/2	95	2.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
4-9	7.5YR 5/2	60	10YR 8/1	40	D	M	Loamy/Clayey	
9-14	7.5YR 5/2	80	2.5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 8/1	10	D	M		

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary wetland hydrology indicator D2 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/7/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-17
 Investigator(s): Michael Perkins, Evan Blanford Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03040801 Long: -111.5014765 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>100</u>	x 2 = <u>200</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>100</u> (A)	<u>200</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		_____		=Total Cover																	
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>100</u>		=Total Cover																	
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____		=Total Cover																	
% Bare Ground in Herb Stratum <u>0</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-17

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		
0-1	10YR 4/1	100					Loamy/Clayey	
1-13	10YR 4/1	70	10YR 6/8	20	C	PL	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Additional matrix color observed: 1"-13" 2.5YR 5/4 10%; Loamy/Clayey. Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/7/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-18
 Investigator(s): Michael Perkins, Evan Blanford Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Road shoulder Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03034980 Long: -111.5015083 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	1. _____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>15</u> (A)</td> <td><u>55</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.67</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>15</u> (A)	<u>55</u> (B)	Prevalence Index = B/A = <u>3.67</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>15</u> (A)	<u>55</u> (B)																			
Prevalence Index = B/A = <u>3.67</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
Herb Stratum (Plot size: <u>5 ft radius</u>)	1. <u>Grindelia squarrosa</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																
2. <u>Verbena bracteata</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
_____ =Total Cover	<u>15</u>	_____	_____																	
Woody Vine Stratum (Plot size: _____)	1. _____	_____	_____	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.																
2. _____	_____	_____	_____																	
_____ =Total Cover	_____	_____	_____																	
% Bare Ground in Herb Stratum <u>85</u>				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-18

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		

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

Restrictive Layer (if observed): Type: <u>Asphalt</u> Depth (inches): <u>0</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No pit dug given sampling point is located on road shoulder.

HYDROLOGY

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

Field Observations:				Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> </u>		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> </u>		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> </u>		

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

Remarks:
No surface wetland hydrology indicators observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-19
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.03030479 Long: -111.49928622 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix lucida</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>75</u> (A)</td> <td><u>150</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>75</u> (A)	<u>150</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>75</u>	x 2 = <u>150</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>75</u> (A)	<u>150</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Phragmites australis</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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.																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
=Total Cover																					
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2.	_____	_____	_____	_____																	
=Total Cover																					
% Bare Ground in Herb Stratum		<u>60</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-19

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 4/2	100					Loamy/Clayey	
4-9	10YR 4/2	98	10YR 6/8	2	C	M	Loamy/Clayey	Prominent redox concentrations
9-18	10YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 16 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-20
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion (LRR/MLRA): LRR E Lat: 40.02964355 Long: -111.49915119 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: _____

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 _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>25</u></td> <td>x 5 = <u>125</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>255</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.83</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>25</u>	x 5 = <u>125</u>	Column Totals: <u>90</u> (A)	<u>255</u> (B)	Prevalence Index = B/A = <u>2.83</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>65</u>	x 2 = <u>130</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>25</u>	x 5 = <u>125</u>																				
Column Totals: <u>90</u> (A)	<u>255</u> (B)																				
Prevalence Index = B/A = <u>2.83</u>																					
1.	<u>Salix exigua</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Salix lucida</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>55</u>	=Total Cover																		
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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>Bromus inermis</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>																	
2.	<u>Equisetum hyemale</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>35</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____	=Total Cover																		
% Bare Ground in Herb Stratum		<u>65</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-20

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		
0-17	10YR 4/3	100					Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
Dry soils. No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-21
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.0294806 Long: -111.49914127 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: R2UBG

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____ =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 = <u>140</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>180</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.64</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>70</u>	x 2 = <u>140</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>180</u> (B)	Prevalence Index = B/A = <u>1.64</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>40</u>	x 1 = <u>40</u>																				
FACW species <u>70</u>	x 2 = <u>140</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>110</u> (A)	<u>180</u> (B)																				
Prevalence Index = B/A = <u>1.64</u>																					
1.	<u>Salix exigua</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>40</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</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>Juncas arcticus</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>																	
2.	<u>Phragmites australis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>70</u> =Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____ =Total Cover																			
% Bare Ground in Herb Stratum _____																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-21

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		
0-14	10YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
14-20	10YR 5/2	90	10YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-22
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.02927638 Long: -111.50058442 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1.					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>100.0%</u> (A/B)																																								
2.																																													
3.																																													
4.																																													
		=Total Cover																																											
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																																												
1.	<u>Salix exigua</u>	30	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td style="text-align: center;">85</td> <td>x 1 =</td> <td style="text-align: center;">85</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">50</td> <td>x 2 =</td> <td style="text-align: center;">100</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td>x 3 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td>x 4 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>135</u> (A)</td> <td></td> <td style="text-align: center;"><u>185</u> (B)</td> <td></td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td></td> <td style="text-align: center;"><u>1.37</u></td> <td></td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	85	x 1 =	85		FACW species	50	x 2 =	100		FAC species	0	x 3 =	0		FACU species	0	x 4 =	0		UPL species	0	x 5 =	0		Column Totals:	<u>135</u> (A)		<u>185</u> (B)		Prevalence Index = B/A =			<u>1.37</u>	
Total % Cover of:		Multiply by:																																											
OBL species	85	x 1 =	85																																										
FACW species	50	x 2 =	100																																										
FAC species	0	x 3 =	0																																										
FACU species	0	x 4 =	0																																										
UPL species	0	x 5 =	0																																										
Column Totals:	<u>135</u> (A)		<u>185</u> (B)																																										
Prevalence Index = B/A =			<u>1.37</u>																																										
2.	<u>Populus angustifolia</u>	20	Yes	FACW																																									
3.																																													
4.																																													
5.																																													
		50 =Total Cover																																											
Herb Stratum	(Plot size: <u>5 ft radius</u>)																																												
1.	<u>Juncus arcticus</u>	85	Yes	OBL	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2.																																													
3.																																													
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7.																																													
8.																																													
9.																																													
10.																																													
11.																																													
		85 =Total Cover																																											
Woody Vine Stratum	(Plot size: _____)																																												
1.					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																								
2.																																													
		=Total Cover																																											
% Bare Ground in Herb Stratum <u>0</u>																																													

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-22

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	7.5YR 4/3	100					Loamy/Clayey	
3-20	7.5YR 4/2	90	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/1	5	D	M		

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 Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	18	

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

Remarks:
Secondary hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-23
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.03009538 Long: -111.5018873 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																																
2.	_____	_____	_____	_____																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
=Total Cover																																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																																				
1.	<u>Salix exigua</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td></td> <td style="text-align: right;">Multiply by:</td> <td></td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>90</u></td> <td style="text-align: right;">x 2 =</td> <td style="text-align: center;"><u>180</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>90</u> (A)</td> <td></td> <td style="text-align: center;"><u>180</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td></td> <td style="text-align: center;"><u>2.00</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>90</u>	x 2 =	<u>180</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>90</u> (A)		<u>180</u> (B)	Prevalence Index = B/A =			<u>2.00</u>
Total % Cover of:		Multiply by:																																			
OBL species	<u>0</u>	x 1 =	<u>0</u>																																		
FACW species	<u>90</u>	x 2 =	<u>180</u>																																		
FAC species	<u>0</u>	x 3 =	<u>0</u>																																		
FACU species	<u>0</u>	x 4 =	<u>0</u>																																		
UPL species	<u>0</u>	x 5 =	<u>0</u>																																		
Column Totals:	<u>90</u> (A)		<u>180</u> (B)																																		
Prevalence Index = B/A =			<u>2.00</u>																																		
2.	_____	_____	_____	_____																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
5.	_____	_____	_____	_____																																	
=Total Cover																																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																																				
1.	<u>Phalaris arundinacea</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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.																																
2.	_____	_____	_____	_____																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
5.	_____	_____	_____	_____																																	
6.	_____	_____	_____	_____																																	
7.	_____	_____	_____	_____																																	
8.	_____	_____	_____	_____																																	
9.	_____	_____	_____	_____																																	
10.	_____	_____	_____	_____																																	
11.	_____	_____	_____	_____																																	
=Total Cover																																					
Woody Vine Stratum	(Plot size: _____)																																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																																
2.	_____	_____	_____	_____																																	
=Total Cover																																					
% Bare Ground in Herb Stratum		<u>30</u>																																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-23

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		
0-8	10YR 4/2	100					Loamy/Clayey	
8-18	10YR 4/2	95	10YR 6/8	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator C3 and secondary hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-24
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR/MLRA): LRR E Lat: 40.03012314 Long: -111.5019130 Datum: NAD83
 Soil Map Unit Name: Sanpitch loam, red variant, 10 to 30 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. _____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																																
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
_____ =Total Cover	_____	_____	_____																																	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																																				
1. <u>Salix exigua</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; font-size: small;"> <tr><td style="text-align: right;">Total % Cover of:</td><td></td><td style="text-align: right;">Multiply by:</td><td></td></tr> <tr><td>OBL species</td><td><u>0</u></td><td>x 1 =</td><td><u>0</u></td></tr> <tr><td>FACW species</td><td><u>90</u></td><td>x 2 =</td><td><u>180</u></td></tr> <tr><td>FAC species</td><td><u>0</u></td><td>x 3 =</td><td><u>0</u></td></tr> <tr><td>FACU species</td><td><u>0</u></td><td>x 4 =</td><td><u>0</u></td></tr> <tr><td>UPL species</td><td><u>40</u></td><td>x 5 =</td><td><u>200</u></td></tr> <tr><td>Column Totals:</td><td><u>130</u> (A)</td><td></td><td><u>380</u> (B)</td></tr> <tr><td>Prevalence Index = B/A =</td><td colspan="3"><u>2.92</u></td></tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>90</u>	x 2 =	<u>180</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>40</u>	x 5 =	<u>200</u>	Column Totals:	<u>130</u> (A)		<u>380</u> (B)	Prevalence Index = B/A =	<u>2.92</u>		
Total % Cover of:		Multiply by:																																		
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>90</u>	x 2 =	<u>180</u>																																	
FAC species	<u>0</u>	x 3 =	<u>0</u>																																	
FACU species	<u>0</u>	x 4 =	<u>0</u>																																	
UPL species	<u>40</u>	x 5 =	<u>200</u>																																	
Column Totals:	<u>130</u> (A)		<u>380</u> (B)																																	
Prevalence Index = B/A =	<u>2.92</u>																																			
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
_____ =Total Cover	<u>60</u>	_____	_____																																	
Herb Stratum (Plot size: <u>5 ft radius</u>)																																				
1. <u>Bromus inermis</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 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.																																
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
_____ =Total Cover	<u>70</u>	_____	_____																																	
Woody Vine Stratum (Plot size: _____)																																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																																
2. _____	_____	_____	_____																																	
_____ =Total Cover	_____	_____	_____																																	
% Bare Ground in Herb Stratum <u>10</u>																																				

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-24

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		
0-15	10YR 4/2	100					Loamy/Clayey	
15-20	10YR 4/2	98	10YR 6/8	2	C	M	Loamy/Clayey	Prominent redox concentrations.

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary wetland hydrology indicators observed. Secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-25
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.02881223 Long: -111.50086983 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	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>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ =Total Cover	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>140</u> x 2 = <u>280</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>140</u> (A) <u>280</u> (B) Prevalence Index = B/A = <u>2.00</u>
1. <u>Salix exigua</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Salix lucida</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ =Total Cover	<u>90</u>	_____	_____	
Herb Stratum (Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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>Phragmites australis</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ =Total Cover	<u>50</u>	_____	_____	
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ =Total Cover	_____	_____	_____	
% Bare Ground in Herb Stratum <u>0</u>				

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-25

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		
0-5	7.5YR 3/2	100					Loamy/Clayey	
5-18	7.5YR 5/2	90	10YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicators A11 and F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 10 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-26
 Investigator(s): Michael Perkins Section, Township, Range: PEM1C
 Landform (hillside, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 3
 Subregion (LRR/MLRA): LRR E Lat: 40.02878767 Long: -111.50088692 Datum: NAD83
 Soil Map Unit Name: Xerofluvents and Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					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>100.0%</u> (A/B)																
2.																					
3.																					
4.																					
=Total Cover					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>55</u> (A)</td> <td><u>110</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>55</u> (A)	<u>110</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>55</u>	x 2 = <u>110</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>55</u> (A)	<u>110</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
=Total Cover					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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.																
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	<u>Salix lucida</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>																	
2.																					
3.																					
4.																					
5.																					
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	<u>Phragmites australis</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
=Total Cover																					
Woody Vine Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.																					
2.																					
=Total Cover																					
% Bare Ground in Herb Stratum		<u>50</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-26

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		
0-15	7.5YR 3/2	100				Loamy/Clayey	
15-20	7.5YR 5/2	100				Loamy/Clayey	

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)		

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025

Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-27

Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E

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

Subregion (LRR/MLRA): LRR E Lat: 40.02955264 Long: -111.5037599 Datum: NAD83

Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																																
2.	_____	_____	_____	_____																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
=Total Cover																																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																																				
1.	<u>Salix exigua</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td></td> <td style="text-align: right;">Multiply by:</td> <td></td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>20</u></td> <td style="text-align: right;">x 1 =</td> <td style="text-align: center;"><u>20</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>120</u></td> <td style="text-align: right;">x 2 =</td> <td style="text-align: center;"><u>240</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>140</u> (A)</td> <td></td> <td style="text-align: center;"><u>260</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A =</td> <td></td> <td style="text-align: center;"><u>1.86</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>20</u>	x 1 =	<u>20</u>	FACW species	<u>120</u>	x 2 =	<u>240</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>140</u> (A)		<u>260</u> (B)	Prevalence Index = B/A =			<u>1.86</u>
Total % Cover of:		Multiply by:																																			
OBL species	<u>20</u>	x 1 =	<u>20</u>																																		
FACW species	<u>120</u>	x 2 =	<u>240</u>																																		
FAC species	<u>0</u>	x 3 =	<u>0</u>																																		
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UPL species	<u>0</u>	x 5 =	<u>0</u>																																		
Column Totals:	<u>140</u> (A)		<u>260</u> (B)																																		
Prevalence Index = B/A =			<u>1.86</u>																																		
2.	_____	_____	_____	_____																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
5.	_____	_____	_____	_____																																	
=Total Cover																																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																																				
1.	<u>Phalaris arundinacea</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% <u>X</u> _____ 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.																																
2.	<u>Typha angustifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																																	
3.	_____	_____	_____	_____																																	
4.	_____	_____	_____	_____																																	
5.	_____	_____	_____	_____																																	
6.	_____	_____	_____	_____																																	
7.	_____	_____	_____	_____																																	
8.	_____	_____	_____	_____																																	
9.	_____	_____	_____	_____																																	
10.	_____	_____	_____	_____																																	
11.	_____	_____	_____	_____																																	
=Total Cover																																					
Woody Vine Stratum	(Plot size: _____)																																				
1.	_____	_____	_____	_____																																	
2.	_____	_____	_____	_____																																	
=Total Cover																																					
% Bare Ground in Herb Stratum		<u>10</u>																																			

Remarks:
Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	7.5YR 4/2	100					Loamy/Clayey	
2-20	7.5YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 and secondary wetland hydrology indicators C2, D2, and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/9/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-28
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR/MLRA): LRR E Lat: 40.02950867 Long: -111.5037890 Datum: NAD83
 Soil Map Unit Name: Birdow very fine sandy loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix exigua</u>	70	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">Total % Cover of:</td> <td style="width: 50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>280</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.55</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>110</u> (A)	<u>280</u> (B)	Prevalence Index = B/A = <u>2.55</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>90</u>	x 2 = <u>180</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>20</u>	x 5 = <u>100</u>																				
Column Totals: <u>110</u> (A)	<u>280</u> (B)																				
Prevalence Index = B/A = <u>2.55</u>																					
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
70 =Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Phalaris arundinacea</u>	20	Yes	FACW	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 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.																
2.	<u>Bromus inermis</u>	20	Yes	UPL																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
40 =Total Cover																					
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																
2.	_____	_____	_____	_____																	
=Total Cover																					
% Bare Ground in Herb Stratum <u>50</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-28

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		
0-8	10YR 4/3	100					Loamy/Clayey	
8-20	10YR 4/2	100					Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
Upper soils moist from rain but not saturated. No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-29
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.02884514 Long: -111.5019672 Datum: NAD83
 Soil Map Unit Name: Fluvaquents NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>130</u></td> <td>x 2 = <u>260</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>275</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.04</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>130</u>	x 2 = <u>260</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>135</u> (A)	<u>275</u> (B)	Prevalence Index = B/A = <u>2.04</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>130</u>	x 2 = <u>260</u>																				
FAC species <u>5</u>	x 3 = <u>15</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>135</u> (A)	<u>275</u> (B)																				
Prevalence Index = B/A = <u>2.04</u>																					
1.	<u>Salix exigua</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 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>Phalaris arundinacea</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
=Total Cover																					
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
=Total Cover																					
% Bare Ground in Herb Stratum		<u>0</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-29

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 4/2	100					Loamy/Clayey	
4-20	5YR 5/2	80	7.5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 8/1	10	D	M		

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 8 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 and secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-30
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 6
 Subregion (LRR/MLRA): LRR E Lat: 40.02881753 Long: -111.5019813 Datum: NAD83
 Soil Map Unit Name: Fluvaquents NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Acer negundo</u>	15	Yes	FAC																	
3. _____																				
4. _____																				
	15	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Salix exigua</u>	80	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>260</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.26</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>260</u> (B)	Prevalence Index = B/A = <u>2.26</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>85</u>	x 2 = <u>170</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>115</u> (A)	<u>260</u> (B)																			
Prevalence Index = B/A = <u>2.26</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
	80	=Total Cover																		
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Cirsium arvense</u>	15	Yes	FAC	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 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.																
2. <u>Phalaris arundinacea</u>	5	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
	20	=Total Cover																		
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																
2. _____																				
		=Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																				

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-30

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		
0-14	10YR 4/3	100					Loamy/Clayey
14-20	5YR 5/2	10					Loamy/Clayey

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 Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)		

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
Soils moist from rain but not saturated. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-31
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.02856935 Long: -111.50133866 Datum: NAD83
 Soil Map Unit Name: Fluvaquents NWI classification: PEM1C

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____	=Total Cover																		
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 0 </u></td> <td>x 1 = <u> 0 </u></td> </tr> <tr> <td>FACW species <u>120</u></td> <td>x 2 = <u>240</u></td> </tr> <tr> <td>FAC species <u> 0 </u></td> <td>x 3 = <u> 0 </u></td> </tr> <tr> <td>FACU species <u> 0 </u></td> <td>x 4 = <u> 0 </u></td> </tr> <tr> <td>UPL species <u> 0 </u></td> <td>x 5 = <u> 0 </u></td> </tr> <tr> <td>Column Totals: <u>120</u> (A)</td> <td><u>240</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> 0 </u>	x 1 = <u> 0 </u>	FACW species <u>120</u>	x 2 = <u>240</u>	FAC species <u> 0 </u>	x 3 = <u> 0 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Totals: <u>120</u> (A)	<u>240</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u> 0 </u>	x 1 = <u> 0 </u>																				
FACW species <u>120</u>	x 2 = <u>240</u>																				
FAC species <u> 0 </u>	x 3 = <u> 0 </u>																				
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																				
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																				
Column Totals: <u>120</u> (A)	<u>240</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
1.	<u>Salix exigua</u>	<u>90</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>90</u>	=Total Cover																		
Herb Stratum	(Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</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>Phragmites australis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>30</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
		_____	=Total Cover																		
% Bare Ground in Herb Stratum		<u>20</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-31

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		
0-5	10YR 3/2	100					Loamy/Clayey	
5-20	5YR 5/2	95	7.5YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicators A11 and F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Dry soils, but secondary wetland hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-32
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 5
 Subregion (LRR/MLRA): LRR E Lat: 40.02846932 Long: -111.50129812 Datum: NAD83
 Soil Map Unit Name: Harkers stony silt loam, 25 to 40 percent slopes NWI classification: PEM1C

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> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	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>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____ =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix lucida</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>205</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.16</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>2.16</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>80</u>	x 2 = <u>160</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>95</u> (A)	<u>205</u> (B)																				
Prevalence Index = B/A = <u>2.16</u>																					
2.	<u>Salix exigua</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>60</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Phragmites australis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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.																
2.	<u>Symphotrichum spathulatum</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>35</u> =Total Cover																			
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2.	_____	_____	_____	_____																	
		_____ =Total Cover																			
% Bare Ground in Herb Stratum <u>5</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-32

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		
0-12	10YR 3/2	100					Loamy/Clayey	
12-20	5YR 5/2	100					Loamy/Clayey	

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

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

Remarks:
Dry soils. No primary wetland hydrology indicators observed. Secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-33
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR/MLRA): LRR E Lat: 40.02838225 Long: -111.50117466 Datum: NAD83
 Soil Map Unit Name: Harkers stony silt loam, 25 to 40 percent slopes NWI classification: R2UBG

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> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
		_____ =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix exigua</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>120</u> (A)</td> <td><u>220</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.83</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>120</u> (A)	<u>220</u> (B)	Prevalence Index = B/A = <u>1.83</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>20</u>	x 1 = <u>20</u>																				
FACW species <u>100</u>	x 2 = <u>200</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>120</u> (A)	<u>220</u> (B)																				
Prevalence Index = B/A = <u>1.83</u>																					
2.	<u>Salix lucida</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		<u>50</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Phragmites australis</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</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.																
2.	<u>Typha angustifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
11.	_____	_____	_____	_____																	
		<u>70</u> =Total Cover																			
Woody Vine Stratum	(Plot size: _____)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2.	_____	_____	_____	_____																	
		_____ =Total Cover																			
% Bare Ground in Herb Stratum <u>20</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-33

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					Loamy/Clayey	
6-20	5YR 5/2	85	7.5YR 6/8	15	C	M	Loamy/Clayey	Prominent redox concentrations

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 :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)					

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator A11 and F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 18 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Secondary hydrology indicators D2 and D5 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-34
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR/MLRA): LRR E Lat: 40.02816374 Long: -111.50101967 Datum: NAD83
 Soil Map Unit Name: Harkers stony silt loam, 25 to 40 percent slopes NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					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>100.0%</u> (A/B)																
2.																					
3.																					
4.																					
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)																				
1.	<u>Salix exigua</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>175</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.06</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>175</u> (B)	Prevalence Index = B/A = <u>2.06</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>80</u>	x 2 = <u>160</u>																				
FAC species <u>5</u>	x 3 = <u>15</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>85</u> (A)	<u>175</u> (B)																				
Prevalence Index = B/A = <u>2.06</u>																					
2.																					
3.																					
4.																					
5.																					
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)																				
1.	<u>Phragmites australis</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.																
2.	<u>Rumex crispus</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
=Total Cover																					
Woody Vine Stratum	(Plot size: _____)																				
1.					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2.																					
=Total Cover																					
% Bare Ground in Herb Stratum <u>10</u>																					

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-34

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	7.5YR 5/2	90	10YR 5/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

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 Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)		

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 11 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Primary wetland hydrology indicator A3 observed.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 9/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Nebo Regional Water Project City/County: Utah County Sampling Date: 10/16/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-35
 Investigator(s): Michael Perkins Section, Township, Range: S17 T9S R4E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 3
 Subregion (LRR/MLRA): LRR E Lat: 40.02811928 Long: -111.50102265 Datum: NAD83
 Soil Map Unit Name: Harkers stony silt loam, 25 to 40 percent slopes NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					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>100.0%</u> (A/B)																
2.																					
3.																					
4.																					
=Total Cover					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>190</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>95</u>	x 2 = <u>190</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>95</u> (A)	<u>190</u> (B)																				
Prevalence Index = B/A = <u>2.00</u>																					
=Total Cover					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</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.																
Sapling/Shrub Stratum	(Plot size: <u>15 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	<u>Salix exigua</u>	<u>90</u>	<u>Yes</u>	<u>FACW</u>																	
2.																					
3.																					
4.																					
5.																					
=Total Cover																					
=Total Cover																					
Herb Stratum	(Plot size: <u>5 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	<u>Phragmites australis</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
=Total Cover																					
=Total Cover																					
Woody Vine Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.																					
2.																					
=Total Cover																					
=Total Cover																					
% Bare Ground in Herb Stratum		<u>35</u>																			

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-35

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		
0-14	10YR 3/2	100					Loamy/Clayey	

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Iron Monosulfide (A18)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
No hydric soil indicators observed. Rock at 14 inches.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

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

Remarks:
Dry soils. No wetland primary hydrology indicators observed.

Project/Site: Nebo Regional Water Project City/County: Utah and Juab Counties Sampling Date: 10/20/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-36
 Investigator(s): Michael Perkins, Kate Wollman Section, Township, Range: S27 T9S R1E
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRR D Lat: 40.00414528 Long: -111.8111908 Datum: NAD83
 Soil Map Unit Name: Hiko Peak stony sandy loam, 4 to 8 percent slopes NWI classification: _____

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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 Sampling point meets the criteria for a wetland.

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	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>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft radius</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>50</u> x 1 = <u>50</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>85</u> (A) <u>140</u> (B) Prevalence Index = B/A = <u>1.65</u>
1. <u>Salix exigua</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft radius</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phragmites australis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Typha latifolia</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Helianthus annuus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
=Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum <u>15</u>		% Cover of Biotic Crust _____		

Remarks:
 Vegetation community is hydrophytic.

SOIL

Sampling Point: SP-36

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		
0-10	7.5YR 5/2	90	7.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 6/1	5	D	M		

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil indicator F3 observed.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

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

Remarks:
Primary wetland hydrology indicator A3 and secondary wetland hydrology indicator D5 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
 See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nebo Regional Water Project City/County: Utah and Juab Counties Sampling Date: 10/20/2025
 Applicant/Owner: Central Utah Water Conservancy District State: UT Sampling Point: SP-37
 Investigator(s): Michael Perkins, Kate Wollman Section, Township, Range: S27 T9S R1E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 3
 Subregion (LRR): LRR D Lat: 40.00418097 Long: -111.8111977 Datum: NAD83
 Soil Map Unit Name: Hiko Peak stony sandy loam, 4 to 8 percent slopes NWI classification: _____

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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
 Sampling point does not meet the criteria for a wetland.

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0.0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>70</u> x 5 = <u>350</u> Column Totals: <u>125</u> (A) <u>565</u> (B) Prevalence Index = B/A = <u>4.52</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft radius</u>)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft radius</u>)	_____	_____	_____	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus tectorum</u>	<u>70</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Cirsium arvense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
3. <u>Helianthus annuus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rumex crispus</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
5. <u>Artemisia ludoviciana</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>125</u> =Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust _____			

Remarks:
 Vegetation community is not hydrophytic.

SOIL

Sampling Point: SP-37

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		
0-12	7.5YR 4/2	100					Loamy/Clayey	
12-20	7.5YR 5/2	98	7.5YR 5/8	2	C	M	Loamy/Clayey	Prominent redox concentrations

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 :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

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

Remarks:
Primary wetland hydrology indicator A3 observed.



Attachment C-3. Wetland Delineation Photographs

Wetland Sampling Point SP-1



Date: 10/10/2025

Upland Sampling Point SP-2



Date: 10/10/2025

Wetland Sampling Point SP-3



Date: 10/15/2024

Upland Sampling Point SP-4



Date: 10/10/2025

Wetland Sampling Point SP-5



Date: 10/10/2025

Weland Sampling Point SP-6



Date: 10/10/2025

Upland Sampling Point SP-7



Date: 10/10/2025

Upland Sampling Point SP-8



Date: 10/10/2025

Wetland Sampling Point SP-9



Date: 10/9/2025

Upland Sampling Point SP-10



Date: 10/9/2025

Wetland Sampling Point SP-11



Date: 10/16/2025

Upland Sampling Point SP-12



Date: 10/16/2025

Wetland Sampling Point SP-13



Date: 10/16/2025

Upland Sampling Point SP-14



Date: 10/16/2025

Wetland Sampling Point SP-15



Date: 10/7/2025

Upland Sampling Point SP-16



MPEB100720251930-DWT
0-2 7.5%R S₂ 100% LIC
2-4 7.5%R S₂ 95% LIC
2.5%R S₂ S₂C, M
4-9 7.5%R S₂ 60% LIC
10% R₁ 90% R₁ M
9-14 7.5%R S₂ 80% LIC
CNR UP 10% R₁ MPEB100720251930-DWT

Date: 10/7/2025

Wetland Sampling Point SP-17



Date: 10/7/2025

Wetland Sampling Point SP-18



Date: 10/7/2025

Wetland Sampling Point SP-19



Date: 10/16/2025

Upland Sampling Point SP-20



Date: 10/16/2025

Wetland Sampling Point SP-21



Date: 10/16/2025

Wetland Sampling Point SP-22



Date: 10/16/2025

Wetland Sampling Point SP-23



Date: 10/9/2025

Upland Sampling Point SP-24



Date: 10/9/2025

Wetland Sampling Point SP-25



0-5.75YR 3/2 100% L/C
5-18 7.5YR 5/2 90% L/C
10YR 6/8 10% C/M

Date: 10/16/2025

Upland Sampling Point SP-26



Date: 10/16/2025

Wetland Sampling Point SP-27



Date: 10/9/2025

Upland Sampling Point SP-28



Date: 10/9/2025

Wetland Sampling Point SP-29



Date: 10/16/2025

Upland Sampling Point SP-30



Date: 10/16/2025

Wetland Sampling Point SP-31



Date: 10/16/2025

Upland Sampling Point SP-32



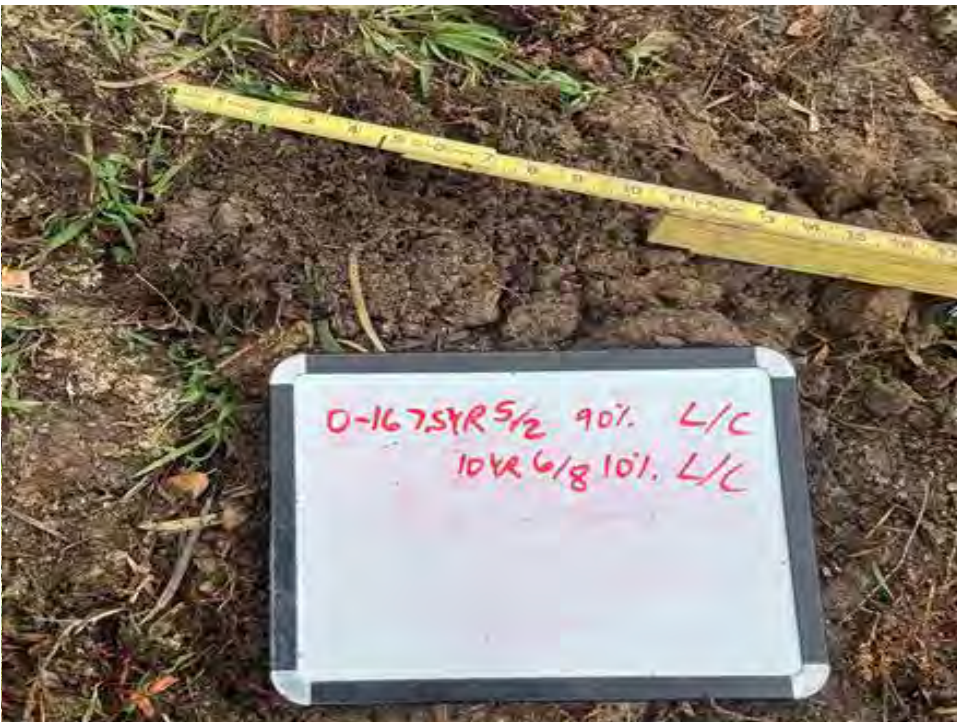
Date: 10/16/2025

Wetland Sampling Point SP-33



Date: 10/16/2025

Wetland Sampling Point SP-34



Date: 10/16/2025

Upland Sampling Point SP-35



Date: 10/16/2025

Wetland Sampling Point SP-36



Date: 10/20/2025

Upland Sampling Point SP-37



Date: 10/20/2025



Attachment C-4. OHWM Delineation Data Summary

Attachment C-4. OHWM Delineation Data Summary

OHWM Transect ID	Waterway ID (Name)	Waterway Type	OHWM Width (feet)	OHWM Indicators	Map Sheet Number(s) ^a
T-1	P-1 (Diamond Fork Creek)	Perennial	24	break in bank, vegetation density, vegetation species	1
T-2	P-1 (Diamond Fork Creek)	Perennial	46	break in bank, vegetation density, vegetation species	1
T-3	OW-1	Open Water Pond	N/A	vegetation density, vegetation species	1
T-4	P-2a (Spanish Fork River)	Perennial	104	break in bank, vegetation density, vegetation species	2
T-5	C-1a (Power Canal)	Canal	22	water staining	3
T-6	OW-2	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	3
T-7	P-2b (Spanish Fork River)	Perennial	15	break in bank, vegetation species	4
T-8	OW-3	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	5
T-9	P-2c (Spanish Fork River)	Perennial	33	break in bank, vegetation density, vegetation species	5
T-10	C-4a	Canal	25	water staining	5
T-11	C-5a (Salem Canal)	Canal	18	water staining	5
T-12	P-2d (Spanish Fork River)	Perennial	84	break in bank, vegetation density, vegetation species	5
T-13	C-2c (Strawberry Highline Canal)	Canal	24	water staining	5
T-14	C-2d (Strawberry Highline Canal)	Canal	33	break in bank, vegetation density, vegetation species	8
T-15	OW-4	Open Water Pond	N/A	vegetation density, vegetation species	8
T-16	C-2i (Strawberry Highline Canal)	Canal	21	break in bank, vegetation density, vegetation species	10
T-17	C-2k (Strawberry Highline Canal)	Canal	26	break in bank, vegetation density, vegetation species	11
T-18	OW-6	Open Water Pond	N/A	water staining	11
T-19	OW-7	Open Water Pond	N/A	water staining	13

OHWM Transect ID	Waterway ID (Name)	Waterway Type	OHWM Width (feet)	OHWM Indicators	Map Sheet Number(s) ^a
T-20	C-2q (Strawberry Highline Canal)	Canal	15	water staining, sediment deposits	15
T-21	D-1	Ditch	6	water staining	17
T-22	I-1a (Peteetneet Creek)	Intermittent	10	break in bank, vegetation density, vegetation species, water staining	17
T-23	OW-10	Open Water Pond	N/A	water staining	17
T-24	I-2a (Dry Creek)	Intermittent	11	break in bank, vegetation density, vegetation species, water staining	17
T-25	C-2y (Strawberry Highline Canal)	Canal	14	water staining, sediment deposits	20
T-26	OW-11	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	23
T-27	OW-12	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	23
T-28	C-ae (Strawberry Highline Canal)	Canal	28	break in bank, vegetation density, vegetation species	24
T-29	OW-13	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	24
T-30	OW-14	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	24
T-31	OW-15	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	25
T-32	OW-16	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	25
T-33	OW-18	Open Water Pond	N/A	break in bank, vegetation density, vegetation species	26
T-34	OW-19	Open Water Pond	N/A	vegetation density, vegetation species	26
T-35	C-6	Canal	13	water staining, sediment deposits	27
T-36	C-am (Strawberry Highline Canal)	Canal	10	water staining, sediment deposits	27
T-37	C-2ao (Strawberry Highline Canal)	Canal	14	water staining, sediment deposits	28
T-38	C-7b	Canal	9	water staining, sediment deposits	28
T-39	E-1	Ephemeral	18	break in bank, vegetation density, vegetation species, sediment size	30

OHWM Transect ID	Waterway ID (Name)	Waterway Type	OHWM Width (feet)	OHWM Indicators	Map Sheet Number(s) ^a
T-40	I-3	Intermittent	8	break in bank, vegetation density, vegetation species	31



Attachment C-5. OHWM Delineation Data Forms

Project ID #: CUWCD Nebo Project Site Name: T-1 at P-1 (Diamond Fork Creek) Date and Time: 10/10/2025

Location (lat/long): 40.029416, -111.499666 Investigator(s): Michael Perkins

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land use is transportation and undeveloped land.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.
 Just upstream from a bridge that crosses Diamond Fork Creek.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> graminoids <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-2 at P-1 (Diamond Fork Creek) Date and Time: 10/16/2025

Location (lat/long): 40.028270, -111.501169 Investigator(s): Michael Perkins

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land use is transportation and undeveloped land.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Just upstream from a large box culvert that crosses under US-6.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> graminoids <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-4 at P-2a (Spanish Fork River) Date and Time: 10/9/2025

Location (lat/long): 40.056583, -111.562413 Investigator(s): Michael Perkins

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are transportation and railroad.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.
 Just upstream from the Spanish Fork Diversion Dam.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> <hr/> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> woody shrubs <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: <hr/> Other observed indicators? Describe: <hr/> Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-7 at P-2b (Spanish Fork River) Date and Time: 10/13/2025

Location (lat/long): 40.073941, -111.588608 Investigator(s): Michael Perkins, Evan Blanford

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are wind farm and commercial.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

No disturbances observed.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> on the bank: x <input type="checkbox"/> undercut bank: <input type="checkbox"/> valley bottom: <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> shelf at top of bank: <input type="checkbox"/> natural levee: <input type="checkbox"/> man-made berms or levees: <input type="checkbox"/> other berms: _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> shelving (berms) on bar: <input type="checkbox"/> unvegetated: <input type="checkbox"/> vegetation transition (go to veg. indicators) <input type="checkbox"/> sediment transition (go to sed. indicators) <input type="checkbox"/> upper limit of deposition on bar: <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) <input type="checkbox"/> bedforms (e.g., poofs, riffles, steps, etc.): <input type="checkbox"/> erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.) <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> transition from _____ to _____ <input type="checkbox"/> upper limit of sand-sized particles <input type="checkbox"/> silt deposits: <hr/> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> vegetation absent to: woody shrubs <input type="checkbox"/> moss to: <input type="checkbox"/> forbs to: <input type="checkbox"/> graminoids to: <input type="checkbox"/> woody shrubs to: <input type="checkbox"/> deciduous trees to: <input type="checkbox"/> coniferous trees to: <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: <hr/> Other observed indicators? Describe: <hr/> Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-9 at P-2c (Spanish Fork River) Date and Time: 10/13/2025

Location (lat/long): 40.084526, -111.596509 Investigator(s): Michael Perkins, Evan Blanford

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are transportation and golf course.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.
 Just upstream from bridge that crosses over the Spanish Fork River.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> woody shrubs <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-12 at P-2d (Spanish Fork River) Date and Time: 10/13/2025

Location (lat/long): 40.080722, -111.605954 Investigator(s): Michael Perkins

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are transportation, agriculture, and golf course.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.
 Just downstream from a diversion dam.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> woody shrubs <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: <p>Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:</p>

Project ID #: CUWCD Nebo Project Site Name: T-22 at I-1a (Peteetneet Creek) Date and Time: 10/15/2025

Location (lat/long): 40.026804, -111.723727 Investigator(s): Michael Perkins, Kate Wollman

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are transportation, residential, commercial.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Just downstream from a concrete lined segment of the creek that turns to dirt.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> forbs <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input checked="" type="checkbox"/> Water staining: x <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-24 at I-2a (Dry Creek) Date and Time: 10/15/2025

Location (lat/long): 40.024835, -111.727893 Investigator(s): Michael Perkins, Kate Wollman

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are commercial, residential, and transportation.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Just downstream from a pedestrian bridge that crosses Dry Creek and just upstream from a concrete lined segment of the creek that continues into a box culvert that crosses under the Strawberry High Line Canal.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> <hr/> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input checked="" type="checkbox"/> <i>vegetation absent to:</i> graminoids <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input type="checkbox"/> <i>graminoids to:</i> <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: <hr/> Other observed indicators? Describe: <hr/> Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:

Project ID #: CUWCD Nebo Project Site Name: T-40 at I-3 (intermittent stream) Date and Time: 11/5/2025

Location (lat/long): 39.970298, -111.815593 Investigator(s): Michael Perkins

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

gage data LiDAR geologic maps
 climatic data satellite imagery land use maps
 aerial photos topographic maps Other: NWI data

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?
 Adjacent land uses are residential, transportation, and undeveloped land.

Step 2 Site conditions during field assessment
 First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Just upstream from the Cedar Hallow Reservoir. Active construction occurring in the area. Concrete debris observed in the stream channel.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators	Sediment indicators	Ancillary indicators
<input checked="" type="checkbox"/> Break in slope: x <input checked="" type="checkbox"/> <i>on the bank:</i> x <input type="checkbox"/> <i>undercut bank:</i> <input type="checkbox"/> <i>valley bottom:</i> <input type="checkbox"/> Other: _____ <input type="checkbox"/> Shelving: <input type="checkbox"/> <i>shelf at top of bank:</i> <input type="checkbox"/> <i>natural levee:</i> <input type="checkbox"/> <i>man-made berms or levees:</i> <input type="checkbox"/> <i>other berms:</i> _____ <input type="checkbox"/> Channel bar: <input type="checkbox"/> <i>shelving (berms) on bar:</i> <input type="checkbox"/> <i>unvegetated:</i> <input type="checkbox"/> <i>vegetation transition (go to veg. indicators)</i> <input type="checkbox"/> <i>sediment transition (go to sed. indicators)</i> <input type="checkbox"/> <i>upper limit of deposition on bar:</i> <input type="checkbox"/> Instream bedforms and other bedload transport evidence: <input type="checkbox"/> <i>deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)</i> <input type="checkbox"/> <i>bedforms (e.g., poofs, riffles, steps, etc.):</i> <input type="checkbox"/> <i>erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</i> <input type="checkbox"/> Secondary channels:	<input type="checkbox"/> Soil development: <input type="checkbox"/> Changes in character of soil: <input type="checkbox"/> Mudcracks: <input type="checkbox"/> Changes in particle-sized distribution: <input type="checkbox"/> <i>transition from _____ to _____</i> <input type="checkbox"/> <i>upper limit of sand-sized particles</i> <input type="checkbox"/> <i>silt deposits:</i> Vegetation Indicators <input checked="" type="checkbox"/> Change in vegetation type and/or density: x Check the appropriate boxes and select the general vegetation change (e.g., <i>graminoids to woody shrubs</i>). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain. <input type="checkbox"/> <i>vegetation absent to:</i> <input type="checkbox"/> <i>moss to:</i> <input type="checkbox"/> <i>forbs to:</i> <input checked="" type="checkbox"/> <i>graminoids to:</i> woody shrubs <input type="checkbox"/> <i>woody shrubs to:</i> <input type="checkbox"/> <i>deciduous trees to:</i> <input type="checkbox"/> <i>coniferous trees to:</i> <input type="checkbox"/> Vegetation matted down and/or bent: <input type="checkbox"/> Exposed roots below intact soil layer:	<input type="checkbox"/> Wracking/presence of organic litter: <input type="checkbox"/> Presence of large wood: <input type="checkbox"/> Leaf litter disturbed or washed away: <input type="checkbox"/> Water staining: <input type="checkbox"/> Weathered clasts or bedrock: Other observed indicators? Describe: Step 4 Is additional information needed to support this determination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe and attach information to datasheet:



Attachment C-6. OHWM Delineation Photographs

OHWM Transect T-1



Upstream View (Date: 10/10/2025)



Downstream View (Date: 10/10/2025)

OHWM Transect T-2



Upstream View (Date: 10/16/2025)



Downstream View (Date: 10/16/2025)

OHWM Transect T-3



Open Water Pond (Date: 3/21/2025)

OHWM Transect T-4



Upstream View (Date: 10/9/2025)



Downstream View (Date: 10/9/2025)

OHWM Transect T-5



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-6



Upstream View (Date: 10/13/2025)

OHWM Transect T-7



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-8



Open Water Pond (Date: 10/13/2025)

OHWM Transect T-9



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-10



Upstream View (Date: 10/13/2025)

OHWM Transect T-11



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-12



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-13



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-14



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-15



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-16



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-17



Upstream View (Date: 10/13/2025)



Downstream View (Date: 10/13/2025)

OHWM Transect T-18



Open Water (Date: 10/13/2025)

OHWM Transect T-19



Open Water (Date: 10/15/2025)

OHWM Transect T-20



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-21



Ditch (Date: 10/15/2025)

OHWM Transect T-22



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-23



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-24



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-25



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-26



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-27



Upstream View (Date: 10/15/2025)

OHWM Transect T-28



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-29



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-30



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-31



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-32



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-33



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-34



Open Water Pond (Date: 10/15/2025)

OHWM Transect T-35



Upstream View (Date: 10/15/2025)



Downstream View (Date: 10/15/2025)

OHWM Transect T-36



Upstream View (Date: 10/16/2025)



Downstream View (Date: 10/16/2025)

OHWM Transect T-37



Upstream View (Date: 10/16/2025)



Downstream View (Date: 10/16/2025)

OHWM Transect T-38



Upstream View (Date: 10/16/2025)



Downstream View (Date: 10/16/2025)

OHWM Transect T-39



Ephemeral Wash (Date: 10/16/2025)

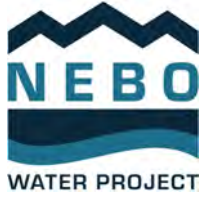
OHWM Transect T-40



Upstream View (Date: 11/5/2025)



Downstream View (Date: 11/5/2025)



Attachment D. Plant Species Observed

Attachment D. Plant Species Observed

Scientific Name ^a	Common Name ^a	Wetland Indicator Status	
		Western Mountains, Valleys, and Coasts ^c	Arid West ^c
<i>Acer negundo</i>	boxelder	FAC	FACW
<i>Agropyron cristatum</i>	crested wheatgrass	UPL	UPL
<i>Aster</i> species	aster	unknown	unknown
<i>Artemisia tridentata</i>	big sagebrush	UPL	UPL
<i>Betula occidentalis</i>	water birch	FACW	FACW
<i>Bromus inermis</i>	smooth brome	UPL	UPL
<i>Bromus tectorum</i>	cheatgrass	UPL	UPL
<i>Cirsium arvense</i>	Canada thistle	FAC	FACU
<i>Cornus sericea</i>	redosier dogwood	FACW	FACW
<i>Convolvulus arvensis</i>	field bindweed	UPL	UPL
<i>Conyza canadensis</i>	Canadian horseweed	UPL	UPL
<i>Cynoglossum officinale</i>	gypsyflower	FACU	FACU
<i>Elaeagnus angustifolia</i>	Russian olive	FAC	FAC
<i>Ericameria nauseosa</i>	rubber rabbitbrush	UPL	UPL
<i>Euthamia occidentalis</i>	western goldentop	FACW	FACW
<i>Glycyrrhiza lepidota</i>	American licorice	FAC	FAC
<i>Grindelia squarrosa</i>	curlycup gumweed	FACU	FACU
<i>Leymus cinereus</i>	basin wildrye	FAC	FAC
<i>Medicago sativa</i>	alfalfa	UPL	UPL
<i>Melilotus officinalis</i>	sweetclover	FACU	FACU
<i>Phalaris arundinacea</i>	reed canarygrass	FACW	FACW
<i>Plantago lanceolata</i>	narrowleaf plantain	FACU	FAC
<i>Populus angustifolia</i>	narrowleaf cottonwood	FACW	FACW
<i>Populus fremontii</i>	Fremont cottonwood	-	FACW
<i>Ribes aureum</i>	golden currant	FAC	FAC
<i>Salix amygdaloides</i>	peachleaf willow	FACW	FACW
<i>Salix exigua</i>	narrowleaf willow	FACW	FACW
<i>Salix lucida ssp. lasiandra</i>	Pacific willow	FACW	FACW
<i>Salsola tragus</i>	prickly Russian thistle	FACU	FACU

Scientific Name ^a	Common Name ^a	Wetland Indicator Status	
		Western Mountains, Valleys, and Coasts ^c	Arid West ^c
<i>Sarcobatus vermiculatus</i>	greasewood	FACU	FACU
<i>Schedonorus pratensis</i>	meadow fescue	FACU	FACU
<i>Symphyotrichum ascendens</i>	western aster	FACU	FAC
<i>Tamarix chinensis</i>	five-stamen tamarisk	FAC	FAC
<i>Verbascum thapsus</i>	common mullein	FACU	FACU
<i>Xanthium strumarium</i>	rough cocklebur	FAC	FAC

FAC = facultative; **FACU** = facultative upland; **FACW** = facultative wetland; **UPL** = upland plants; **OBL** = obligate wetland

^a Naming conventions according to USDA NRCS Plants Database (<https://plants.usda.gov>).

^b Indicator status as assigned for the Western Mountain, Valleys, and Coasts in the National Wetland Plant List (USACE 2023).

^c Indicator status as assigned for the Arid West in the National Wetland Plant List (USACE 2023).



Attachment E. USDA NRCS Custom Soil Resource Report



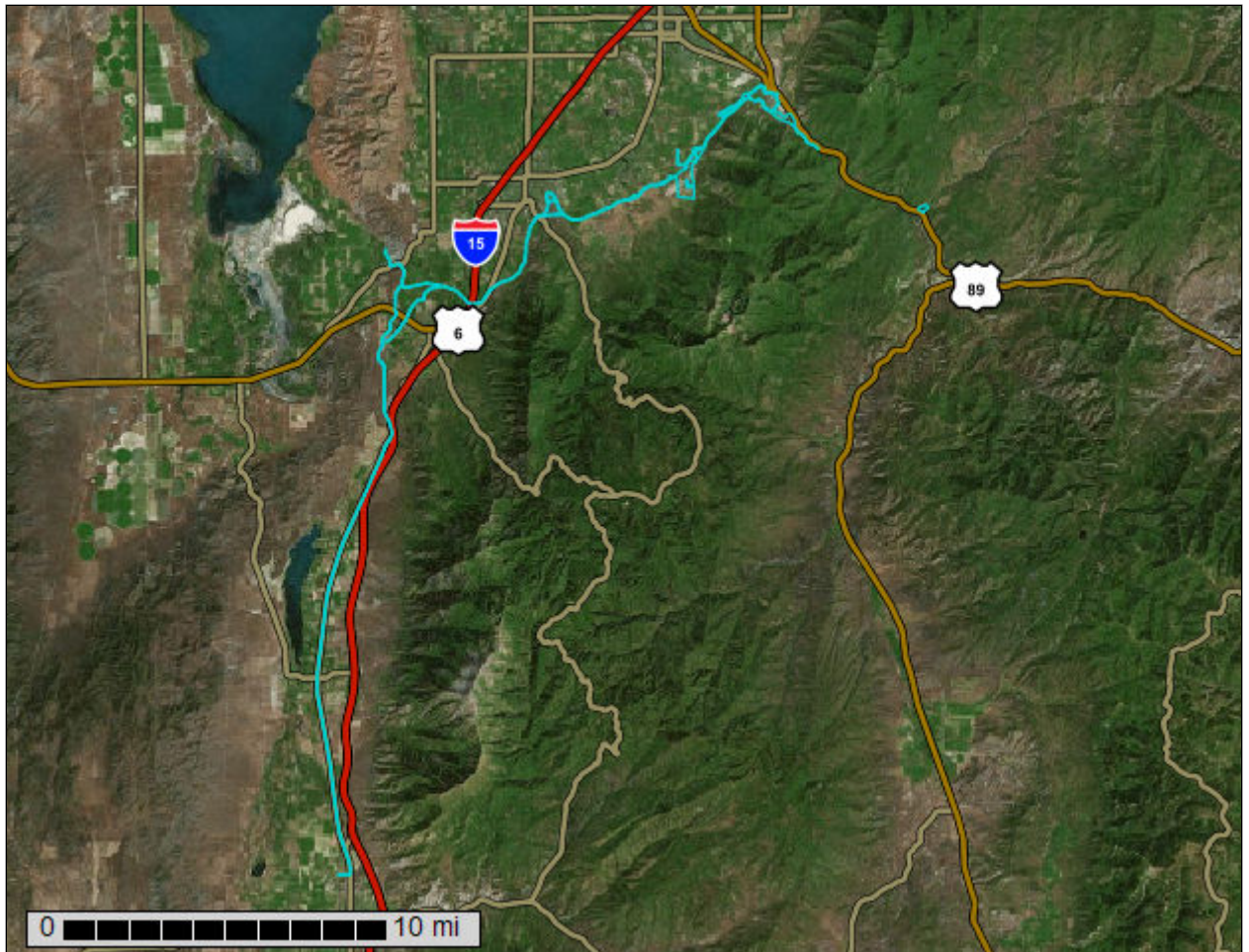
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Fairfield-Nephi Area, Utah; Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties; and Utah County, Utah - Central Part



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

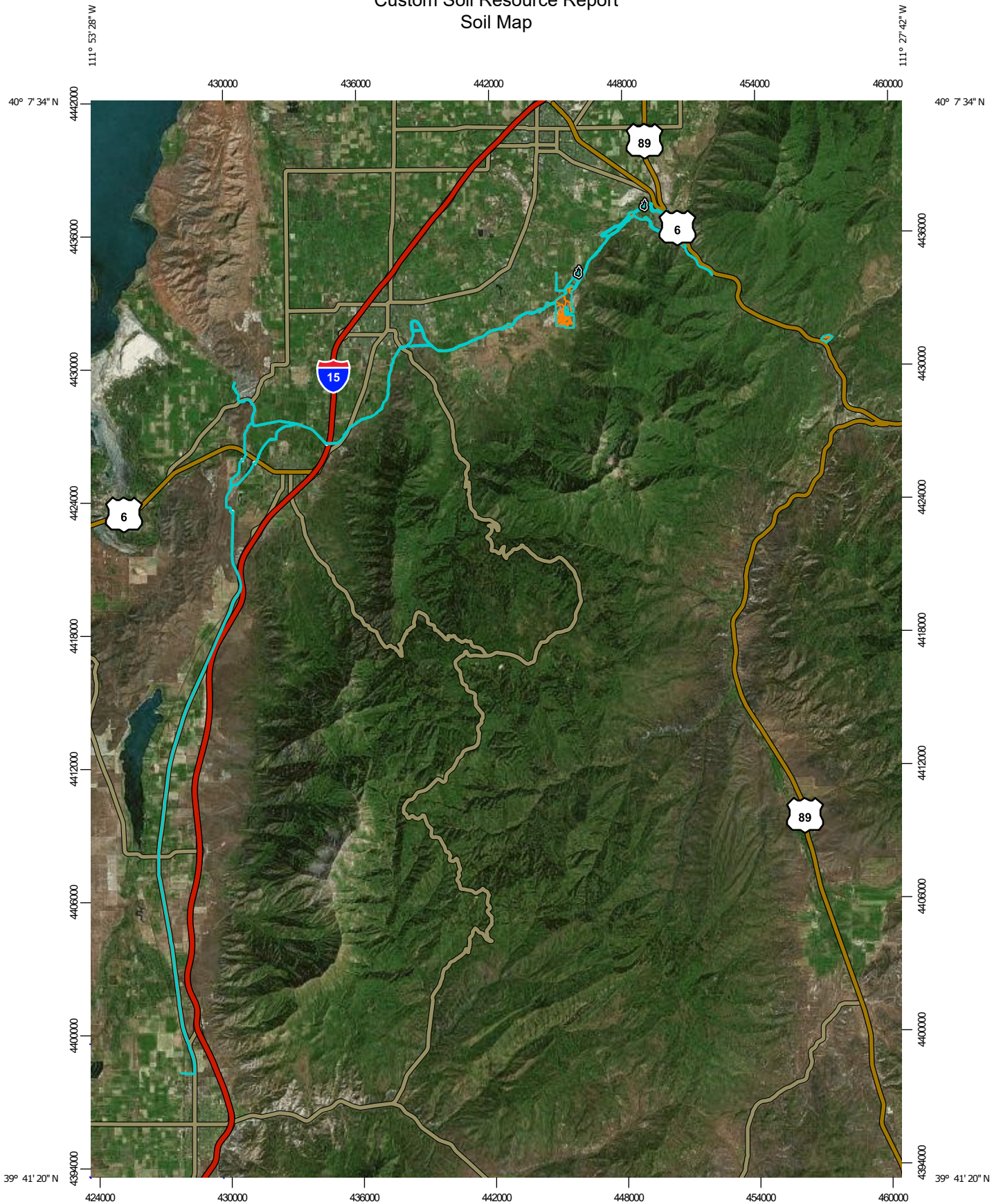
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

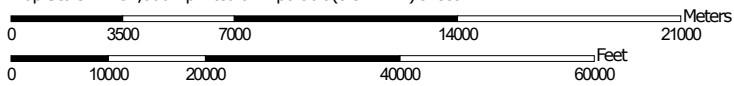
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:237,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Fairfield-Nephi Area, Utah
 Survey Area Data: Version 19, Aug 26, 2025

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
 Survey Area Data: Version 19, Aug 27, 2025

Soil Survey Area: Utah County, Utah - Central Part
 Survey Area Data: Version 18, Aug 27, 2025

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8012	Parleys loam, 3 to 8 percent slopes	1.1	0.1%
AdF	Amtoft, moist-Rock outcrop complex, 30 to 70 percent slopes	3.2	0.3%
Bb	Benjamin silty clay loam	0.1	0.0%
BgC	Borvant cobbly loam, 2 to 8 percent slopes	19.3	1.6%
CaB	Calita loam, 2 to 4 percent slopes	2.7	0.2%
DdC	Donnardo stony loam, 2 to 8 percent slopes	50.6	4.3%
DdE	Donnardo stony loam, 8 to 25 percent slopes	16.2	1.4%
DfB	Doyce loam, 2 to 4 percent slopes	11.5	1.0%
HdC	Hiko Peak stony sandy loam, 4 to 8 percent slopes	7.7	0.6%
HeC	Hillfield silt loam, 2 to 5 percent slopes	6.8	0.6%
JbA	Juab loam, 0 to 2 percent slopes	8.7	0.7%
JbB	Juab loam, 2 to 4 percent slopes	34.2	2.9%
JcB	Juab loam, gravelly substratum, 2 to 4 percent slopes	14.4	1.2%
KaB	Keigley silt loam, dry, 0 to 2 percent slopes	8.8	0.7%
LaC	Linoyer very fine sandy loam, 2 to 5 percent slopes	0.2	0.0%
Mm	Moroni silty clay loam	1.6	0.1%
MvC	Musinia silty clay loam, moist, 2 to 5 percent slopes	6.4	0.5%
PK	Pits-Dumps complex	7.9	0.7%
RaD	Reebok cobbly loam, 4 to 15 percent slopes	0.3	0.0%
RdE	Reywat-Reebok-Rock outcrop complex, 10 to 30 percent slopes	5.7	0.5%
ScD	Sanpete gravelly fine sandy loam, 4 to 15 percent slopes	1.0	0.1%
TaB	Taylorville silt loam, 2 to 4 percent slopes	2.7	0.2%

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WaB	Wales loam, 2 to 4 percent slopes	31.6	2.7%
Subtotals for Soil Survey Area		243.0	20.5%
Totals for Area of Interest		1,184.7	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BH	Bezzant-Gappmayer-Rock land association, very steep	0.0	0.0%
BnB	Birdow very fine sandy loam, 2 to 4 percent slopes	44.5	3.8%
FN	Fluvaquents	2.3	0.2%
HKE	Harkers stony silt loam, 25 to 40 percent slopes	0.5	0.0%
SFD	Sanpitch loam, red variant, 10 to 30 percent slopes	5.1	0.4%
TGH	Tingey-Rock outcrop complex, 70 to 80 percent slopes	11.3	1.0%
XE	Xerofluvents and Fluvaquents	47.2	4.0%
Subtotals for Soil Survey Area		110.9	9.4%
Totals for Area of Interest		1,184.7	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1000	Parleys loam, 0 to 4 percent slopes	24.0	2.0%
8001	Bingham gravelly loam, 1 to 3 percent slopes	17.8	1.5%
8012	Parleys loam, 3 to 8 percent slopes	4.3	0.4%
BhB	Bingham loam, 1 to 3 percent slopes	3.6	0.3%
BmC	Bingham cobbly loam, 3 to 6 percent slopes	14.1	1.2%
BmD	Bingham cobbly loam, 6 to 10 percent slopes	31.9	2.7%
CsC	Cleverly gravelly fine sandy loam, 3 to 6 percent slopes	14.3	1.2%
CsD	Cleverly gravelly fine sandy loam, 6 to 15 percent slopes	12.6	1.1%
CU	Cobbly alluvial land	1.9	0.2%
DEF	Dry Creek extremely stony loam, stony subsoil variant, 6 to 30 percent slopes	28.5	2.4%
HmE	Hillfield silt loam, 10 to 20 percent slopes	1.0	0.1%
HmF	Hillfield silt loam, 20 to 30 percent slopes	9.2	0.8%

Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HNG	Hillfield-Layton complex, 30 to 60 percent slopes	10.0	0.8%
KgA	Keigley silty clay loam, extended season, 0 to 2 percent slopes	3.5	0.3%
KmC	Kidman very fine sandy loam, 3 to 6 percent slopes	2.9	0.2%
KOD	Kilburn stony sandy loam, 3 to 15 percent slopes	6.5	0.6%
LaC	Lakewin gravelly fine sandy loam, 1 to 6 percent slopes	22.4	1.9%
LaD	Lakewin gravelly fine sandy loam, 6 to 15 percent slopes	22.7	1.9%
LcE	Lakewin cobbly fine sandy loam, 15 to 30 percent slopes	14.8	1.2%
LeD	Layton loamy fine sand, 6 to 15 percent slopes	1.1	0.1%
LnB	Layton fine sandy loam, water table, 1 to 3 percent slopes	1.2	0.1%
PK	Pits and dumps	20.1	1.7%
PIC	Pleasant Grove gravelly loam, 3 to 6 percent slopes	31.7	2.7%
PID	Pleasant Grove gravelly loam, 6 to 10 percent slopes	33.5	2.8%
PmE2	Pleasant Grove stony loam, 10 to 25 percent slopes, eroded	12.9	1.1%
PNG2	Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded	0.7	0.1%
PoA	Pleasant Vale loam, extended season, 0 to 2 percent slopes	14.0	1.2%
PoC	Pleasant Vale loam, extended season, 3 to 6 percent slopes	10.9	0.9%
PpB	Pleasant Vale gravelly loam, extended season, 1 to 3 percent slopes	12.4	1.0%
PrD	Pleasant Vale gravelly sandy loam, extended season, 6 to 10 percent slopes	0.1	0.0%
RdA	Redola loam, 0 to 3 percent slopes	0.0	0.0%
ReC	Redola gravelly loam, 3 to 6 percent slopes	15.9	1.3%
RW	Rock land	1.3	0.1%
Sd	Steed sandy loam	1.2	0.1%
Se	Steed gravelly sandy loam	7.0	0.6%
SgD	Sterling gravelly fine sandy loam, 6 to 10 percent slopes	34.2	2.9%

Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SNG	Sterling-Terrace escarpments complex, 30 to 70 percent slopes	73.6	6.2%
TcC2	Taylorsville silty clay loam, extended season, 3 to 6 percent slopes, eroded	5.7	0.5%
TmB	Timpanogos loam, 0 to 3 percent slopes	18.8	1.6%
TmC	Timpanogos loam, 3 to 6 percent slopes	7.9	0.7%
VnA	Vineyard fine sandy loam, 0 to 2 percent slopes	3.7	0.3%
W	Water	185.5	15.7%
WeB	Welby silt loam, extended season, 1 to 3 percent slopes	2.6	0.2%
WeC	Welby silt loam, extended season, 3 to 6 percent slopes	3.9	0.3%
WeD2	Welby silt loam, extended season, 6 to 10 percent slopes	2.2	0.2%
WhD	Welby-Hillfield silt loams, 6 to 10 percent slopes	11.8	1.0%
WhE	Welby-Hillfield silt loams, 10 to 30 percent slopes	70.7	6.0%
Subtotals for Soil Survey Area		830.8	70.1%
Totals for Area of Interest		1,184.7	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Custom Soil Resource Report

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Fairfield-Nephi Area, Utah

8012—Parleys loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tjxs
Landscape: Valleys
Elevation: 4,210 to 5,910 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Parleys and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Parleys

Setting

Landscape: Valleys
Landform: Stream terraces, Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Lacustrine deposits and/or alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 6 inches: loam
A - 6 to 11 inches: loam
Bt1 - 11 to 15 inches: silty clay loam
Bt2 - 15 to 19 inches: silty clay loam
Btk - 19 to 26 inches: silty clay loam
Bk - 26 to 30 inches: silty clay loam
CBk - 30 to 42 inches: silty clay loam
C1 - 42 to 52 inches: silty clay loam
C2 - 52 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

*Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)*

Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 10 percent

Hydric soil rating: No

AdF—Amtoft, moist-Rock outcrop complex, 30 to 70 percent slopes

Map Unit Setting

National map unit symbol: j60w

Elevation: 4,900 to 6,200 feet

Mean annual precipitation: 8 to 14 inches

Mean annual air temperature: 45 to 51 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Amtoft and similar soils: 55 percent

Rock outcrop: 25 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Amtoft

Setting

Landform: Ridges, Hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve, crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

*Parent material: Colluvium derived from sedimentary rock and/or residuum
weathered from sedimentary rock*

Typical profile

A11 - 0 to 3 inches: stony loam

A12 - 3 to 5 inches: gravelly loam

C1ca - 5 to 14 inches: very cobbly loam

C2ca - 14 to 19 inches: very gravelly fine sandy loam

R - 19 to 23 inches: unweathered bedrock

Custom Soil Resource Report

Properties and qualities

Slope: 30 to 70 percent
Surface area covered with cobbles, stones or boulders: 13.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY324UT - Upland Shallow Loam (Utah Juniper - Singleleaf Pinyon)
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Escarpments
Down-slope shape: Linear
Across-slope shape: Linear

Minor Components

Donnardo

Percent of map unit: 5 percent

Saxby

Percent of map unit: 5 percent

Lodar

Percent of map unit: 5 percent

Amtoft

Percent of map unit: 5 percent

Bb—Benjamin silty clay loam

Map Unit Setting

National map unit symbol: j614
Elevation: 4,480 to 5,200 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F

Custom Soil Resource Report

Frost-free period: 100 to 140 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Benjamin and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Benjamin

Setting

Landform: Flood plains

Landform position (three-dimensional): Dip, talf

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium derived from sedimentary rock

Typical profile

Ap1 - 0 to 3 inches: silty clay loam

Ap2 - 3 to 8 inches: silty clay loam

C1 - 8 to 17 inches: clay

C2 - 17 to 29 inches: clay

C3 - 29 to 36 inches: clay

C4 - 36 to 41 inches: clay

C5 - 41 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 30 to 60 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: D

Ecological site: R028AY012UT - Semiwet Fresh Meadow

Hydric soil rating: No

Minor Components

Benjamin

Percent of map unit: 10 percent

Kirkham

Percent of map unit: 5 percent

Roshe springs

Percent of map unit: 5 percent

Landform: Lake plains, Flood plains

Custom Soil Resource Report

Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

BgC—Borvant cobbly loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: j61c
Elevation: 4,700 to 7,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Borvant and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Borvant

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and sandstone

Typical profile

A11 - 0 to 2 inches: cobbly loam
A12 - 2 to 9 inches: cobbly loam
C1ca - 9 to 19 inches: very gravelly loam
C2cam - 19 to 26 inches: indurated
C3 - 26 to 60 inches: stratified indurated to very gravelly loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 10 to 20 inches to petrocalcic
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R028AY320UT - Upland Shallow Hardpan (Pinyon-Utah Juniper)

Hydric soil rating: No

Minor Components

Jericho

Percent of map unit: 5 percent

Donnardo

Percent of map unit: 5 percent

Spager

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

CaB—Calita loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j61n

Elevation: 5,000 to 6,500 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Calita and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Calita

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium derived from limestone and sandstone

Typical profile

Ap - 0 to 7 inches: loam

B2 - 7 to 12 inches: loam

C1ca - 12 to 18 inches: loam

C2ca - 18 to 30 inches: loam

C3ca - 30 to 39 inches: loam

C4 - 39 to 53 inches: loam

Custom Soil Resource Report

C5 - 53 to 60 inches: loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Calita

Percent of map unit: 5 percent

Juab

Percent of map unit: 5 percent

Doyce

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

DdC—Donnardo stony loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: j620

Elevation: 4,500 to 6,200 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Donnardo and similar soils: 80 percent

Minor components: 20 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Donnardo

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium derived from quartzite and/or alluvium derived from limestone and sandstone

Typical profile

A11 - 0 to 4 inches: stony loam

A12 - 4 to 10 inches: very cobbly fine sandy loam

C1ca - 10 to 27 inches: very cobbly loam

C2ca - 27 to 39 inches: very cobbly sandy loam

C3 - 39 to 48 inches: extremely cobbly fine sandy loam

C3 - 48 to 60 inches: extremely cobbly fine sandy loam

Properties and qualities

Slope: 2 to 8 percent

Surface area covered with cobbles, stones or boulders: 13.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B

Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)

Other vegetative classification: Upland Stony Loam (Mountain Big Sagebrush)
(028AY334UT)

Hydric soil rating: No

Minor Components

Donnardo

Percent of map unit: 5 percent

Juab

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

Pharo

Percent of map unit: 5 percent

DdE—Donnardo stony loam, 8 to 25 percent slopes

Map Unit Setting

National map unit symbol: j621
Elevation: 4,500 to 6,200 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Donnardo and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Donnardo

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from quartzite and/or alluvium derived from limestone and sandstone

Typical profile

A11 - 0 to 4 inches: stony loam
A12 - 4 to 10 inches: very cobbly fine sandy loam
C1ca - 10 to 27 inches: very cobbly loam
C2ca - 27 to 39 inches: very cobbly sandy loam
C3 - 39 to 48 inches: extremely cobbly fine sandy loam
C3 - 48 to 60 inches: extremely cobbly fine sandy loam

Properties and qualities

Slope: 8 to 25 percent
Surface area covered with cobbles, stones or boulders: 13.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Custom Soil Resource Report

Hydrologic Soil Group: B

Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)

Other vegetative classification: Upland Stony Loam (Mountain Big Sagebrush)
(028AY334UT)

Hydric soil rating: No

Minor Components

Donnardo

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

Pharo

Percent of map unit: 5 percent

Juab

Percent of map unit: 5 percent

DfB—Doyce loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j624

Elevation: 5,000 to 6,300 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Doyce and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Doyce

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium derived from limestone and sandstone and/or alluvium
derived from quartzite

Typical profile

Ap1 - 0 to 5 inches: loam

Ap2 - 5 to 10 inches: loam

B2t - 10 to 19 inches: clay loam

C1ca - 19 to 31 inches: gravelly loam

C2ca - 31 to 36 inches: gravelly loam

C3 - 36 to 60 inches: gravelly loam

Custom Soil Resource Report

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Doyce

Percent of map unit: 10 percent

Calita

Percent of map unit: 5 percent

Juab

Percent of map unit: 3 percent

Mountainville

Percent of map unit: 2 percent

HdC—Hiko Peak stony sandy loam, 4 to 8 percent slopes

Map Unit Setting

National map unit symbol: j635

Elevation: 4,800 to 5,800 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Hiko peak and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hiko Peak

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium derived from limestone and sandstone and/or alluvium derived from quartzite

Typical profile

A11 - 0 to 3 inches: stony sandy loam

A12 - 3 to 7 inches: stony sandy loam

B2 - 7 to 19 inches: gravelly sandy loam

C1ca - 19 to 28 inches: very gravelly sandy loam

C2ca - 28 to 37 inches: very gravelly sandy loam

C3ca - 37 to 44 inches: very gravelly sandy loam

C4 - 44 to 60 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 4 to 8 percent

Surface area covered with cobbles, stones or boulders: 11.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 13.0

Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R028AY215UT - Semidesert Gravelly Loam (Wyoming Big Sagebrush) North

Hydric soil rating: No

Minor Components

Hiko peak

Percent of map unit: 5 percent

Medburn

Percent of map unit: 5 percent

Spager

Percent of map unit: 5 percent

Sanpete

Percent of map unit: 5 percent

HeC—Hillfield silt loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: j638
Elevation: 5,000 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Hillfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hillfield

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from sedimentary rock

Typical profile

Ap - 0 to 5 inches: silt loam
A12 - 5 to 11 inches: very fine sandy loam
C1ca - 11 to 18 inches: very fine sandy loam
C3ca - 18 to 30 inches: very fine sandy loam
C3 - 30 to 42 inches: silt loam
C4 - 42 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Parleys

Percent of map unit: 5 percent

Dagor

Percent of map unit: 5 percent

Taylorflat

Percent of map unit: 5 percent

JbA—Juab loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j63d
Elevation: 4,550 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Juab and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Juab

Setting

Landform: Alluvial fans, Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Convex, linear
Parent material: Mixed alluvium and lake sediment derived from sedimentary and igneous rocks

Typical profile

A11 - 0 to 4 inches: loam
A12 - 4 to 8 inches: loam
A13 - 8 to 13 inches: loam
C1 - 13 to 21 inches: loam
C2 - 21 to 29 inches: loam
C3 - 29 to 38 inches: loam
C4 - 38 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Custom Soil Resource Report

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Very rare
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2c
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (028AY310UT)
Hydric soil rating: No

Minor Components

Juab, gravelly substratum

Percent of map unit: 5 percent

Musinia

Percent of map unit: 5 percent

Juab

Percent of map unit: 5 percent

Wales

Percent of map unit: 5 percent

JbB—Juab loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j63f
Elevation: 4,550 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Juab and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Juab

Setting

Landform: Alluvial fans, Lake terraces

Landform position (three-dimensional): Tread

Down-slope shape: Concave, linear

Across-slope shape: Convex, linear

Parent material: Mixed alluvium and lake sediment derived from sedimentary and igneous rocks

Typical profile

A11 - 0 to 4 inches: loam

A12 - 4 to 8 inches: loam

A13 - 8 to 13 inches: loam

C1 - 13 to 21 inches: loam

C2 - 21 to 29 inches: loam

C3 - 29 to 38 inches: loam

C4 - 38 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Juab

Percent of map unit: 5 percent

Wales

Percent of map unit: 5 percent

Juab, gravelly substratum

Percent of map unit: 5 percent

Musinia

Percent of map unit: 5 percent

JcB—Juab loam, gravelly substratum, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j63h
Elevation: 4,800 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Juab and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Juab

Setting

Landform: Alluvial fans, Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Convex, linear
Parent material: Mixed alluvium and lake sediment derived from sedimentary and igneous rocks

Typical profile

A11 - 0 to 4 inches: loam
A12 - 4 to 8 inches: loam
A13 - 8 to 13 inches: loam
C1 - 13 to 21 inches: loam
C2 - 21 to 29 inches: loam
C3 - 29 to 40 inches: gravelly loam
C4 - 40 to 60 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B

Custom Soil Resource Report

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

KaB—Keigley silt loam, dry, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j63m
Elevation: 4,600 to 5,300 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Keigley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keigley

Setting

Landform: Lake terraces, Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, convex
Parent material: Mixed alluvium and lake sediment derived dominantly from sedimentary rocks

Typical profile

Ap - 0 to 8 inches: silt loam
A12 - 8 to 13 inches: silty clay loam
A13 - 13 to 24 inches: silty clay loam
C1 - 24 to 40 inches: silty clay loam
C2 - 40 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 2c
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

Minor Components

Birdow

Percent of map unit: 10 percent

Wales

Percent of map unit: 5 percent

LaC—Linoyer very fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2smc4
Landscape: Intermontane basins
Elevation: 4,490 to 5,740 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 51 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Linoyer and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Linoyer

Setting

Landscape: Intermontane basins
Landform: Alluvial fans, Lake terraces, Lake plains
Landform position (three-dimensional): Tread, rise
Down-slope shape: Concave, linear
Across-slope shape: Convex, linear
Parent material: Alluvium and/or lacustrine deposits

Typical profile

A1 - 0 to 9 inches: very fine sandy loam
A2 - 9 to 15 inches: very fine sandy loam
C1 - 15 to 48 inches: very fine sandy loam
C2 - 48 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 2 to 5 percent

Custom Soil Resource Report

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R028AY226UT - Semidesert Sandy Loam (Wyoming Big Sagebrush)
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 15 percent
Hydric soil rating: No

Mm—Moroni silty clay loam

Map Unit Setting

National map unit symbol: j64d
Elevation: 4,850 to 5,450 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Moroni and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Moroni

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from shale

Custom Soil Resource Report

Typical profile

Ap1 - 0 to 1 inches: silty clay loam
Ap2 - 1 to 5 inches: silty clay loam
Ap3 - 5 to 7 inches: silty clay loam
C1 - 7 to 15 inches: silty clay
C2 - 15 to 19 inches: silty clay
C3 - 19 to 30 inches: silty clay
C4 - 30 to 39 inches: silty clay
C5 - 39 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Nephi

Percent of map unit: 10 percent

Woodrow

Percent of map unit: 5 percent

MvC—Musinia silty clay loam, moist, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: j64q
Elevation: 4,800 to 5,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Musinia and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Musinia

Setting

Landform: Alluvial fans, Flood plains

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Convex, concave

Parent material: Alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 7 inches: silty clay loam

C1 - 7 to 14 inches: silty clay loam

C2 - 14 to 23 inches: silty clay loam

C3 - 23 to 34 inches: silty clay loam

C4 - 34 to 46 inches: silty clay loam

C5 - 46 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 30.0

Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: D

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Keigley

Percent of map unit: 5 percent

Juab

Percent of map unit: 5 percent

Wales

Percent of map unit: 5 percent

Musina

Percent of map unit: 5 percent

PK—Pits-Dumps complex

Map Unit Composition

Pits: 65 percent

Dumps: 35 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

RaD—Reebok cobbly loam, 4 to 15 percent slopes

Map Unit Setting

National map unit symbol: j65c

Elevation: 4,900 to 6,600 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Reebok and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reebok

Setting

Landform: Alluvial fans, Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Concave, convex

Across-slope shape: Convex

Parent material: Alluvium derived from igneous rock and/or colluvium derived from igneous rock

Typical profile

A11 - 0 to 2 inches: cobbly loam

A12 - 2 to 5 inches: cobbly loam

B2t - 5 to 11 inches: very cobbly clay loam

B3ca - 11 to 15 inches: very cobbly clay loam

C1ca - 15 to 19 inches: extremely gravelly loam

C2cam - 19 to 23 inches: indurated

C3 - 23 to 60 inches: stratified indurated to extremely gravelly loam

Properties and qualities

Slope: 4 to 15 percent

Depth to restrictive feature: 10 to 20 inches to petrocalcic

Drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 50 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R028AY325UT - Upland Shallow Loam (Black Sagebrush)

Hydric soil rating: No

Minor Components

Reywat

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

Reebock

Percent of map unit: 5 percent

Sumine

Percent of map unit: 5 percent

RdE—Reywat-Reebok-Rock outcrop complex, 10 to 30 percent slopes

Map Unit Setting

National map unit symbol: j65h

Elevation: 5,000 to 6,600 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Reywat and similar soils: 40 percent

Reebok and similar soils: 35 percent

Rock outcrop: 15 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reywat

Setting

Landform: Hills, Alluvial fans

Landform position (three-dimensional): Side slope

Custom Soil Resource Report

Down-slope shape: Convex, concave

Across-slope shape: Convex

Parent material: Residuum weathered from igneous rock

Typical profile

A1 - 0 to 5 inches: very stony loam

B1 - 5 to 9 inches: cobbly clay loam

B21t - 9 to 13 inches: very cobbly clay loam

B22tca - 13 to 17 inches: extremely cobbly clay loam

R - 17 to 21 inches: unweathered bedrock

Properties and qualities

Slope: 10 to 30 percent

Surface area covered with cobbles, stones or boulders: 10.0 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R028AY325UT - Upland Shallow Loam (Black Sagebrush)

Hydric soil rating: No

Description of Reebok

Setting

Landform: Escarpments, Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve, crest

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Parent material: Slope alluvium and/or colluvium derived from igneous rocks

Typical profile

A11 - 0 to 2 inches: cobbly loam

A12 - 2 to 5 inches: cobbly loam

B2t - 5 to 11 inches: very cobbly clay loam

B3ca - 11 to 15 inches: very cobbly clay loam

C1ca - 15 to 19 inches: extremely gravelly loam

C2cam - 19 to 23 inches: indurated

C3 - 23 to 60 inches: stratified indurated to extremely gravelly loam

Properties and qualities

Slope: 15 to 40 percent

Depth to restrictive feature: 10 to 20 inches to petrocalcic

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)

Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY325UT - Upland Shallow Loam (Black Sagebrush)
Hydric soil rating: No

Minor Components

Sumine

Percent of map unit: 5 percent

Borvant

Percent of map unit: 5 percent

ScD—Sanpete gravelly fine sandy loam, 4 to 15 percent slopes

Map Unit Setting

National map unit symbol: j65z
Elevation: 4,600 to 5,300 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Sanpete and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sanpete

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A11 - 0 to 2 inches: gravelly fine sandy loam
A12 - 2 to 6 inches: gravelly fine sandy loam
A13 - 6 to 12 inches: very gravelly fine sandy loam
C1ca - 12 to 21 inches: very gravelly fine sandy loam
C2ca - 21 to 32 inches: very gravelly fine sandy loam

Custom Soil Resource Report

C3ca - 32 to 60 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 4 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 60 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 13.0

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R028AY215UT - Semidesert Gravelly Loam (Wyoming Big Sagebrush) North

Hydric soil rating: No

Minor Components

Medburn

Percent of map unit: 5 percent

Hiko peak

Percent of map unit: 5 percent

Sanpete

Percent of map unit: 5 percent

Spager

Percent of map unit: 5 percent

TaB—Taylorsville silt loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j66r

Elevation: 4,700 to 5,200 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Taylorsville and similar soils: 85 percent

Minor components: 15 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Taylorsville

Setting

Landform: Lake terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from quartzite and/or lacustrine deposits derived from limestone and sandstone

Typical profile

Ap1 - 0 to 2 inches: silt loam

Ap2 - 2 to 7 inches: silt loam

C1ca - 7 to 13 inches: silty clay loam

C2ca - 13 to 18 inches: silty clay loam

C3ca - 18 to 27 inches: silty clay loam

C4ca - 27 to 39 inches: silty clay loam

C5ca - 39 to 52 inches: silty clay loam

C6 - 52 to 63 inches: silty clay loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 30.0

Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: D

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Parleys

Percent of map unit: 5 percent

Hillfield

Percent of map unit: 5 percent

Hupp

Percent of map unit: 5 percent

WaB—Wales loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j66y
Elevation: 4,700 to 6,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Wales and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wales

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from quartzite and/or alluvium derived from limestone and sandstone

Typical profile

Ap - 0 to 7 inches: loam
A12 - 7 to 13 inches: loam
C1 - 13 to 25 inches: loam
C2 - 25 to 43 inches: silt loam
IIC3 - 43 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Juab

Percent of map unit: 10 percent

Donnardo

Percent of map unit: 5 percent

Birdow

Percent of map unit: 5 percent

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

BH—Bezzant-Gappmayer-Rock land association, very steep

Map Unit Setting

National map unit symbol: j5s6
Elevation: 5,400 to 7,200 feet
Mean annual precipitation: 16 to 25 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 70 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Bezzant and similar soils: 35 percent
Gappmayer and similar soils: 30 percent
Rock land: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bezzant

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from limestone and sandstone

Typical profile

A11 - 0 to 4 inches: very stony loam
A12 - 4 to 11 inches: very gravelly loam
AC - 11 to 27 inches: very cobbly loam
C1ca - 27 to 47 inches: extremely cobbly loam
C2 - 47 to 60 inches: extremely stony loam

Properties and qualities

Slope: 60 to 80 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e

Custom Soil Resource Report

Hydrologic Soil Group: C

Ecological site: R047XA338UT - Upland Stony Loam (Wyoming big sagebrush)

Hydric soil rating: No

Description of Gappmayer

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium and colluvium derived predominantly from sandstone

Typical profile

A11 - 0 to 4 inches: cobbly loam

A12 - 4 to 26 inches: very cobbly loam

B2t - 26 to 54 inches: extremely cobbly sandy clay loam

Cca - 54 to 60 inches: extremely cobbly fine sandy loam

Properties and qualities

Slope: 60 to 80 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R047XA471UT - Mountain Very Steep Stony Loam (oak)

Hydric soil rating: No

Description of Rock Land

Setting

Landform: Mountain slopes

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Minor Components

Deer creek, high rainfall

Percent of map unit: 5 percent

Bradshaw

Percent of map unit: 5 percent

BnB—Birdow very fine sandy loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: j5sg

Elevation: 5,400 to 6,100 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 110 to 130 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Birdow and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Birdow

Setting

Landform: Flood plains, Alluvial fans

Down-slope shape: Linear, concave

Across-slope shape: Concave, convex

Parent material: Alluvium derived from sandstone, limestone, and quartzite

Typical profile

A - 0 to 21 inches: very fine sandy loam

C1 - 21 to 30 inches: loam

C2 - 30 to 47 inches: loam

A1b - 47 to 60 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Custom Soil Resource Report

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

*Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)*

Hydric soil rating: No

Minor Components

Mountainville

Percent of map unit: 5 percent

Beck

Percent of map unit: 5 percent

Keigley

Percent of map unit: 5 percent

FN—Fluvaquents

Map Unit Setting

National map unit symbol: j5tn

Elevation: 5,000 to 6,000 feet

Mean annual precipitation: 10 to 14 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 115 to 130 days

Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium derived from sandstone and shale

Typical profile

A1 - 0 to 6 inches: loam

C1 - 6 to 60 inches: stratified loamy sand to clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Custom Soil Resource Report

Depth to water table: About 6 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

Minor Components

Ponded soils

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

HKE—Harkers stony silt loam, 25 to 40 percent slopes

Map Unit Setting

National map unit symbol: j5v4
Elevation: 6,400 to 7,500 feet
Mean annual precipitation: 20 to 25 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 80 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Harkers and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harkers

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from sandstone, quartzite, and mixed igneous rocks

Custom Soil Resource Report

Typical profile

A11 - 0 to 4 inches: stony silt loam
A12 - 4 to 12 inches: cobbly silt loam
B2t - 12 to 32 inches: cobbly clay
B3 - 32 to 44 inches: cobbly clay
C - 44 to 60 inches: very cobbly clay loam

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R047XA432UT - Mountain Loam (oak)
Hydric soil rating: No

Minor Components

Deer creek

Percent of map unit: 5 percent

Wallsburg

Percent of map unit: 5 percent

Yeates hollow

Percent of map unit: 5 percent

SFD—Sanpitch loam, red variant, 10 to 30 percent slopes

Map Unit Setting

National map unit symbol: j5x8
Elevation: 5,800 to 7,200 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 90 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Sanpitch variant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sanpitch Variant

Setting

Landform: Depressions, Alluvial fans

Down-slope shape: Concave

Across-slope shape: Concave, convex

Parent material: Alluvium derived from limestone and shale

Typical profile

A1 - 0 to 9 inches: loam

C1ca - 9 to 14 inches: gravelly loam

C2ca - 14 to 19 inches: gravelly sandy loam

C3 - 19 to 47 inches: loam

C4 - 47 to 60 inches: very channery silty clay loam

Properties and qualities

Slope: 10 to 30 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B

Ecological site: R028AY338UT - Upland Stony Loam (Pinyon-Utah Juniper)

Hydric soil rating: No

Minor Components

Badland

Percent of map unit: 5 percent

Atepic, eroded

Percent of map unit: 5 percent

Sanpitch

Percent of map unit: 5 percent

TGH—Tingey-Rock outcrop complex, 70 to 80 percent slopes

Map Unit Setting

National map unit symbol: j5xp
Elevation: 7,200 to 8,400 feet
Mean annual precipitation: 20 to 25 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 80 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Tingey and similar soils: 70 percent
Rock outcrop: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tingey

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from limestone and sandstone

Typical profile

A1 - 0 to 9 inches: very stony silt loam
B1 - 9 to 14 inches: sandy clay loam
B2t - 14 to 28 inches: stony clay loam
B3ca - 28 to 41 inches: stony sandy clay loam
C1ca - 41 to 60 inches: very stony loam

Properties and qualities

Slope: 70 to 80 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R047XA432UT - Mountain Loam (oak)
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Free face
Down-slope shape: Convex
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Bradshaw

Percent of map unit: 5 percent

Bezzant

Percent of map unit: 5 percent

XE—Xerofluvents and Fluvaquents

Map Unit Setting

National map unit symbol: j5y5
Elevation: 5,000 to 6,500 feet
Mean annual precipitation: 8 to 14 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Xerofluvents and similar soils: 45 percent
Fluvaquents and similar soils: 40 percent
Riverwash: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Xerofluvents

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 6 inches: sandy loam

Custom Soil Resource Report

C - 6 to 60 inches: stratified sandy loam to clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 42 to 72 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: B

Ecological site: R028AY012UT - Semiwet Fresh Meadow

Hydric soil rating: No

Description of Fluvaquents

Setting

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 6 inches: loam

C1 - 6 to 60 inches: stratified loamy sand to clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 6 to 24 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Custom Soil Resource Report

Ecological site: R028AY012UT - Semiwet Fresh Meadow
Hydric soil rating: Yes

Description of Riverwash

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Typical profile

C - 0 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 99.90 in/hr)
Depth to water table: About 0 to 20 inches
Frequency of flooding: Frequent
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: A/D
Ecological site: R048AY006UT - Semiwet Fresh Streambank
Hydric soil rating: Yes

Utah County, Utah - Central Part

1000—Parleys loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2tjtg
Landscape: Valleys
Elevation: 4,210 to 5,400 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Parleys and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Parleys

Setting

Landscape: Valleys
Landform: Lake terraces, Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits and/or alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 6 inches: loam
A - 6 to 15 inches: loam
Bt - 15 to 26 inches: clay loam
Bk - 26 to 33 inches: silty clay loam
CBk - 33 to 48 inches: silt loam
C - 48 to 60 inches: stratified fine sand to silty clay loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 15 percent
Hydric soil rating: No

8001—Bingham gravelly loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tjsk
Landscape: Hills
Elevation: 4,320 to 5,350 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 150 to 180 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bingham and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bingham

Setting

Landscape: Hills
Landform: Lake terraces, Fan remnants
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear, concave
Across-slope shape: Convex
Parent material: Fine-loamy slope alluvium derived from quartzite and/or limestone over sandy and gravelly lacustrine deposits derived from quartzite and/or limestone

Typical profile

Ap - 0 to 6 inches: gravelly loam
Bt1 - 6 to 12 inches: gravelly sandy clay loam
Bt2 - 12 to 18 inches: gravelly fine sandy loam
2Btk - 18 to 27 inches: very gravelly sandy loam
2Ck - 27 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 34 inches to strongly contrasting textural stratification

Custom Soil Resource Report

Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 15 percent
Hydric soil rating: No

8012—Parleys loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tjx
Landscape: Valleys
Elevation: 4,210 to 5,910 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Parleys and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Parleys

Setting

Landscape: Valleys
Landform: Lake terraces, Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave

Custom Soil Resource Report

Parent material: Lacustrine deposits and/or alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 6 inches: loam
A - 6 to 11 inches: loam
Bt1 - 11 to 15 inches: silty clay loam
Bt2 - 15 to 19 inches: silty clay loam
Btk - 19 to 26 inches: silty clay loam
Bk - 26 to 30 inches: silty clay loam
CBk - 30 to 42 inches: silty clay loam
C1 - 42 to 52 inches: silty clay loam
C2 - 52 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 10 percent
Hydric soil rating: No

BhB—Bingham loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: j6wj
Elevation: 4,700 to 5,200 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 45 to 52 degrees F

Custom Soil Resource Report

Frost-free period: 150 to 170 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bingham and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bingham

Setting

Landform: Terraces, Alluvial fans

Landform position (three-dimensional): Tread

Down-slope shape: Linear, concave

Across-slope shape: Linear, convex

Parent material: Alluvium and/or lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 6 inches: gravelly loam

B21t - 6 to 12 inches: gravelly sandy clay loam

B22t - 12 to 18 inches: gravelly fine sandy loam

IIIB3ca - 18 to 27 inches: very gravelly sandy loam

IICca - 27 to 60 inches: very gravelly sand

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

BmC—Bingham cobbly loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6wl

Elevation: 4,700 to 5,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 150 to 170 days

Custom Soil Resource Report

Farmland classification: Farmland of unique importance

Map Unit Composition

Bingham and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bingham

Setting

Landform: Terraces, Alluvial fans

Landform position (three-dimensional): Tread

Down-slope shape: Linear, concave

Across-slope shape: Linear, convex

Parent material: Alluvium and/or lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 6 inches: cobbly loam

B21t - 6 to 12 inches: gravelly sandy clay loam

B22t - 12 to 18 inches: gravelly fine sandy loam

IIIB3ca - 18 to 27 inches: very gravelly sandy loam

IICca - 27 to 60 inches: very gravelly sand

Properties and qualities

Slope: 3 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

BmD—Bingham cobbly loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j6wm

Elevation: 4,700 to 5,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Bingham and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bingham

Setting

Landform: Alluvial fans, Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Concave, linear

Across-slope shape: Convex, linear

Parent material: Alluvium and/or lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 6 inches: cobbly loam

B21t - 6 to 12 inches: gravelly sandy clay loam

B22t - 12 to 18 inches: gravelly fine sandy loam

IIIB3ca - 18 to 27 inches: very gravelly sandy loam

IICca - 27 to 60 inches: very gravelly sand

Properties and qualities

Slope: 6 to 10 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

CsC—Cleverly gravelly fine sandy loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6x0

Elevation: 4,650 to 5,580 feet

Mean annual precipitation: 14 to 20 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cleverly and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cleverly

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Slope alluvium derived from quartzite and/or sandstone

Typical profile

Ap - 0 to 7 inches: gravelly fine sandy loam

A1 - 7 to 16 inches: gravelly loam

B21 - 16 to 29 inches: gravelly loam

B3 - 29 to 42 inches: gravelly loam

Cca - 42 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 3 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 3 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

CsD—Cleverly gravelly fine sandy loam, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: j6x1

Elevation: 4,650 to 5,580 feet

Mean annual precipitation: 14 to 20 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Cleverly and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cleverly

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Slope alluvium derived from quartzite and/or sandstone

Typical profile

Ap - 0 to 7 inches: gravelly fine sandy loam

A1 - 7 to 16 inches: gravelly loam

B21 - 16 to 29 inches: gravelly loam

B3 - 29 to 42 inches: gravelly loam

Cca - 42 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 6 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 3 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

Minor Components

Kilburn

Percent of map unit: 5 percent

CU—Cobbly alluvial land

Map Unit Setting

National map unit symbol: j6wq

Custom Soil Resource Report

Elevation: 4,200 to 4,600 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 120 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquic xerofluvents and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquic Xerofluvents

Setting

Landform: Flood plains
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Lacustrine deposits derived from mixed sources

Typical profile

H1 - 0 to 60 inches: extremely cobbly coarse sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B
Ecological site: R028AY014UT - Semiwet Fresh Streambank
Hydric soil rating: Yes

Minor Components

Depressional soils

Percent of map unit: 5 percent
Landform: Depressions on lake terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R028AY001UT - Alkali Bottom (Alkali Sacaton)
Hydric soil rating: Yes

DEF—Dry Creek extremely stony loam, stony subsoil variant, 6 to 30 percent slopes

Map Unit Setting

National map unit symbol: j6x3
Elevation: 5,200 to 6,000 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Dry creek variant and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dry Creek Variant

Setting

Landform: Lake terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and/or slope alluvium derived from mixed sources

Typical profile

A1 - 0 to 4 inches: extremely stony loam
B1 - 4 to 10 inches: very cobbly clay loam
B21t - 10 to 14 inches: extremely cobbly clay loam
B22t - 14 to 20 inches: extremely cobbly clay loam
B3 - 20 to 30 inches: extremely cobbly sandy clay loam
C1ca - 30 to 43 inches: extremely cobbly sandy loam
C2 - 43 to 60 inches: extremely cobbly sandy loam

Properties and qualities

Slope: 6 to 30 percent
Surface area covered with cobbles, stones or boulders: 20.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

HmE—Hillfield silt loam, 10 to 20 percent slopes

Map Unit Setting

National map unit symbol: j6xg
Elevation: 4,700 to 5,200 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Hillfield and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hillfield

Setting

Landform: Escarpments, Lake terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 4 inches: silt loam
AC - 4 to 12 inches: silt loam
C1ca - 12 to 26 inches: silt loam
C2ca - 26 to 35 inches: loam
C3ca - 35 to 40 inches: loam
IIC4 - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 10 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Taylorville

Percent of map unit: 5 percent

Welby

Percent of map unit: 5 percent

HmF—Hillfield silt loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: j6xh

Elevation: 4,700 to 5,200 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Not prime farmland

Map Unit Composition

Hillfield and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hillfield

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 4 inches: silt loam

AC - 4 to 12 inches: silt loam

C1ca - 12 to 26 inches: silt loam

C2ca - 26 to 35 inches: loam

C3ca - 35 to 40 inches: loam

IIC4 - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 20 to 30 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 50 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)

Hydric soil rating: No

HNG—Hillfield-Layton complex, 30 to 60 percent slopes

Map Unit Setting

National map unit symbol: j6xd

Elevation: 4,500 to 5,200 feet

Mean annual precipitation: 12 to 17 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Not prime farmland

Map Unit Composition

Hillfield and similar soils: 60 percent

Layton and similar soils: 40 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hillfield

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 4 inches: silt loam

AC - 4 to 12 inches: silt loam

C1ca - 12 to 26 inches: silt loam

C2ca - 26 to 35 inches: loam

C3ca - 35 to 40 inches: loam

IIC4 - 40 to 60 inches: sandy loam

Custom Soil Resource Report

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

Description of Layton

Setting

Landform: Escarpments, Lake terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from sandstone and quartzite

Typical profile

A11 - 0 to 2 inches: loamy fine sand
A12 - 2 to 7 inches: loamy fine sand
AC - 7 to 14 inches: loamy fine sand
C1 - 14 to 26 inches: loamy fine sand
C2ca - 26 to 39 inches: loamy fine sand
C3ca - 39 to 60 inches: fine sand

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A

Custom Soil Resource Report

Ecological site: R028AY330UT - Upland Sand (Black Greasewood, Indian Ricegrass)
Hydric soil rating: No

KgA—Keigley silty clay loam, extended season, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j6xw
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Keigley and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keigley

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from mixed sources

Typical profile

Ap - 0 to 7 inches: silty clay loam
A12,A13 - 7 to 27 inches: silty clay loam
C1,C2 - 27 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

KmC—Kidman very fine sandy loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6xz
Elevation: 4,700 to 5,100 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Kidman and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kidman

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from quartzite and/or sandstone

Typical profile

Ap - 0 to 8 inches: very fine sandy loam
B2 - 8 to 20 inches: very fine sandy loam
C1,C2 - 20 to 44 inches: very fine sandy loam
C3ca - 44 to 60 inches: loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Layton

Percent of map unit: 5 percent

KOD—Kilburn stony sandy loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: j6xr
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Kilburn and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kilburn

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Colluvium and/or slope alluvium derived from granite and quartzite

Typical profile

A11 - 0 to 8 inches: stony sandy loam
A12 - 8 to 15 inches: very stony sandy loam
A12 - 15 to 36 inches: very stony sandy loam
C1 - 36 to 40 inches: extremely stony sandy loam
C2ca - 40 to 60 inches: extremely stony sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 12.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

LaC—Lakewin gravelly fine sandy loam, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6y3
Elevation: 4,600 to 5,100 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Lakewin and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewin

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from mixed sources

Typical profile

A11,A12 - 0 to 10 inches: gravelly fine sandy loam
B21 - 10 to 17 inches: gravelly fine sandy loam
B22 - 17 to 27 inches: very gravelly sandy loam
IIC1&IIC2ca - 27 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: A

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

Minor Components

Sterling

Percent of map unit: 5 percent

Bingham

Percent of map unit: 5 percent

LaD—Lakewin gravelly fine sandy loam, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: j6y4

Elevation: 4,600 to 5,100 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Lakewin and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewin

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

A11,A12 - 0 to 8 inches: gravelly fine sandy loam

B21 - 8 to 17 inches: gravelly fine sandy loam

B22 - 17 to 27 inches: very gravelly sandy loam

IIC1&C2ca - 27 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 6 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

LcE—Lakewin cobbly fine sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: j6y5
Elevation: 4,600 to 5,100 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakewin and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewin

Setting

Landform: Lake terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from mixed sources

Typical profile

A11,A12 - 0 to 10 inches: cobbly fine sandy loam
B21 - 10 to 17 inches: gravelly fine sandy loam
B22 - 17 to 27 inches: very gravelly sandy loam
IIC1&C2ca - 27 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

Minor Components

Sterling

Percent of map unit: 5 percent

LeD—Layton loamy fine sand, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: j6y6
Elevation: 4,500 to 4,600 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Layton and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Layton

Setting

Landform: Escarpments, Terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from sandstone and quartzite

Typical profile

A11,A12,AC - 0 to 12 inches: loamy fine sand
C1 - 12 to 26 inches: loamy fine sand
C2ca - 26 to 39 inches: loamy fine sand
C3ca - 39 to 60 inches: fine sand

Custom Soil Resource Report

Properties and qualities

Slope: 6 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: R028AY330UT - Upland Sand (Black Greasewood, Indian Ricegrass)
Hydric soil rating: No

LnB—Layton fine sandy loam, water table, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: j6y9
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 42 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Layton and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Layton

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from sandstone and quartzite

Typical profile

A11,A12,AC - 0 to 14 inches: fine sandy loam
C1 - 14 to 36 inches: loamy fine sand
C2ca - 36 to 48 inches: sandy clay loam
C3ca - 48 to 60 inches: fine sand

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B
Ecological site: R028AY330UT - Upland Sand (Black Greasewood, Indian Ricegrass)
Hydric soil rating: No

PK—Pits and dumps

Map Unit Setting

National map unit symbol: j6ys
Elevation: 4,490 to 4,900 feet
Farmland classification: Not prime farmland

Map Unit Composition

Pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

PIC—Pleasant Grove gravelly loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6z3
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pleasant grove and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Grove

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Colluvium and/or slope alluvium derived from limestone, quartzite and shale

Typical profile

A11,A12 - 0 to 6 inches: gravelly loam
A13 - 6 to 21 inches: cobbly loam
C1ca - 21 to 38 inches: very cobbly loam
C2ca - 38 to 49 inches: very cobbly fine sandy loam
C3ca - 49 to 60 inches: very cobbly loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

PID—Pleasant Grove gravelly loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j6z4
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pleasant grove and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Grove

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Colluvium and/or slope alluvium derived from limestone, quartzite and shale

Typical profile

A11&A12 - 0 to 6 inches: gravelly loam
A13 - 6 to 21 inches: cobbly loam
C1ca - 21 to 38 inches: very cobbly loam
C2ca - 38 to 49 inches: very cobbly fine sandy loam
C3ca - 49 to 60 inches: very cobbly loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

PmE2—Pleasant Grove stony loam, 10 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: j6z5
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Pleasant grove and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Grove

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Colluvium and/or slope alluvium derived from limestone, quartzite and shale

Typical profile

A11&A12 - 0 to 2 inches: stony loam
A13 - 2 to 21 inches: cobbly loam
C1ca - 21 to 38 inches: very cobbly loam
C2ca - 38 to 49 inches: very cobbly fine sandy loam
C3ca - 49 to 60 inches: very cobbly loam

Properties and qualities

Slope: 10 to 25 percent
Surface area covered with cobbles, stones or boulders: 10.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)
Hydric soil rating: No

PNG2—Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded

Map Unit Setting

National map unit symbol: j6yt
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Pleasant grove and similar soils: 80 percent
Terrace escarpments: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Grove

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Colluvium and/or slope alluvium derived from limestone, quartzite and shale

Typical profile

A11&A12 - 0 to 2 inches: stony loam

A13 - 2 to 21 inches: cobbly loam

C1ca - 21 to 38 inches: very cobbly loam

C2ca - 38 to 49 inches: very cobbly fine sandy loam

C3ca - 49 to 60 inches: very cobbly loam

Properties and qualities

Slope: 30 to 60 percent

Surface area covered with cobbles, stones or boulders: 10.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 10.0

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

Description of Terrace Escarpments

Setting

Landform: Escarpments

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

PoA—Pleasant Vale loam, extended season, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j6z7
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pleasant vale and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Vale

Setting

Landform: Alluvial fans, Flood plains
Landform position (three-dimensional): Talf, dip
Down-slope shape: Concave, linear
Across-slope shape: Convex, concave
Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

Ap - 0 to 6 inches: loam
A1 - 6 to 17 inches: loam
C1 - 17 to 24 inches: very fine sandy loam
C2 - 24 to 40 inches: very fine sandy loam
C3,C4 - 40 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 30.0
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

PoC—Pleasant Vale loam, extended season, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6z8
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pleasant vale and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Vale

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

Ap - 0 to 6 inches: loam
A1 - 6 to 12 inches: loam
C1 - 12 to 24 inches: very fine sandy loam
C2 - 24 to 40 inches: very fine sandy loam
C3,C4 - 40 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 30.0
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

PpB—Pleasant Vale gravelly loam, extended season, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: j6z9
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pleasant vale and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Vale

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

Ap - 0 to 6 inches: gravelly loam
A1 - 6 to 17 inches: gravelly sandy loam
C1 - 17 to 24 inches: very fine sandy loam
C2 - 24 to 40 inches: very fine sandy loam
C3,C4 - 40 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 30.0
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

PrD—Pleasant Vale gravelly sandy loam, extended season, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j6zb
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Pleasant vale and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Vale

Setting

Landform: Hills, Lake terraces
Landform position (three-dimensional): Side slope, tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

Ap - 0 to 6 inches: gravelly sandy loam
A1 - 6 to 17 inches: gravelly sandy loam
C1 - 17 to 24 inches: very fine sandy loam
C2 - 24 to 40 inches: very fine sandy loam
C3,C4 - 40 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 30.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

RdA—Redola loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: j6zp
Elevation: 4,600 to 5,000 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Redola and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Redola

Setting

Landform: Flood plains, Alluvial fans
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone and sandstone

Typical profile

Ap - 0 to 8 inches: loam
C1,C2 - 8 to 30 inches: loam
C3 - 30 to 50 inches: stratified gravelly coarse sand to very fine sandy loam
IIC4 - 50 to 60 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): 2c

Custom Soil Resource Report

Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Ecological site: R028AY006UT - Loamy Bottom (basin wildrye)
Other vegetative classification: Loamy Bottom (Great Basin Wildrye)
(028AY006UT)
Hydric soil rating: No

Minor Components

Martin

Percent of map unit: 5 percent

ReC—Redola gravelly loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6zq
Elevation: 4,600 to 5,000 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Redola and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Redola

Setting

Landform: Flood plains, Alluvial fans
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone and sandstone

Typical profile

Ap - 0 to 8 inches: gravelly loam
C1,C2 - 8 to 30 inches: loam
C3 - 30 to 50 inches: stratified gravelly coarse sand to very fine sandy loam
IIC4 - 50 to 60 inches: gravelly coarse sand

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent

Custom Soil Resource Report

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R028AY006UT - Loamy Bottom (basin wildrye)
Other vegetative classification: Loamy Bottom (Great Basin Wildrye)
(028AY006UT)
Hydric soil rating: No

RW—Rock land

Map Unit Setting

National map unit symbol: j6zn
Elevation: 4,500 to 4,800 feet
Farmland classification: Not prime farmland

Map Unit Composition

Rock land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Land

Setting

Landform: Cliffs, Ledges
Down-slope shape: Linear
Across-slope shape: Linear

Minor Components

Rake

Percent of map unit: 5 percent

Pleasant grove

Percent of map unit: 5 percent

Sd—Steed sandy loam

Map Unit Setting

National map unit symbol: j6zs
Elevation: 4,550 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 150 to 170 days

Custom Soil Resource Report

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Steed and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Steed

Setting

Landform: Alluvial fans

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

A1 - 0 to 7 inches: sandy loam

C1 - 7 to 31 inches: extremely gravelly loamy sand

C2,C3 - 31 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: About 48 to 72 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Ecological site: R028AY014UT - Semiwet Fresh Streambank

Hydric soil rating: No

Se—Steed gravelly sandy loam

Map Unit Setting

National map unit symbol: j6zt

Elevation: 4,550 to 5,200 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 47 to 50 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Steed and similar soils: 95 percent

Custom Soil Resource Report

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Steed

Setting

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium derived from limestone, sandstone, quartzite, and shale

Typical profile

A1 - 0 to 7 inches: gravelly sandy loam

C1 - 7 to 31 inches: extremely gravelly loamy sand

C2,C3 - 31 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: About 48 to 72 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Ecological site: R028AY014UT - Semiwet Fresh Streambank

Hydric soil rating: No

Minor Components

Provo

Percent of map unit: 5 percent

SgD—Sterling gravelly fine sandy loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j6zx

Elevation: 4,600 to 5,000 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 47 to 50 degrees F

Frost-free period: 150 to 170 days

Custom Soil Resource Report

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sterling and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sterling

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 5 inches: gravelly fine sandy loam

A1 - 5 to 11 inches: gravelly sandy loam

C1ca - 11 to 16 inches: gravelly sandy loam

C2ca - 16 to 21 inches: very gravelly sandy loam

C3ca - 21 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 6 to 10 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 10.0

Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B

Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)

Other vegetative classification: Upland Stony Loam (Mountain Big Sagebrush)
(028AY334UT)

Hydric soil rating: No

SNG—Sterling-Terrace escarpments complex, 30 to 70 percent slopes

Map Unit Setting

National map unit symbol: j6zr

Elevation: 4,600 to 5,000 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 47 to 50 degrees F

Custom Soil Resource Report

Frost-free period: 150 to 170 days

Farmland classification: Not prime farmland

Map Unit Composition

Sterling and similar soils: 60 percent

Terrace escarpments: 40 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sterling

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 5 inches: cobbly fine sandy loam

A1 - 5 to 11 inches: gravelly sandy loam

C1ca - 11 to 16 inches: gravelly sandy loam

C2ca - 16 to 21 inches: very gravelly sandy loam

C3ca - 21 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 30 to 70 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 10.0

Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)

Other vegetative classification: Upland Stony Loam (Mountain Big Sagebrush)
(028AY334UT)

Hydric soil rating: No

Description of Terrace Escarpments

Setting

Landform: Escarpments, Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

TcC2—Taylorsville silty clay loam, extended season, 3 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: j707
Elevation: 4,530 to 4,800 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Taylorsville and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Taylorsville

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone and shale

Typical profile

Ap - 0 to 7 inches: silty clay loam
AC - 7 to 13 inches: silty clay loam
C, C2 - 13 to 36 inches: silty clay loam
C3ca - 36 to 56 inches: silty clay loam
C4 - 56 to 62 inches: silty clay loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

TmB—Timpanogos loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: j708
Elevation: 4,700 to 4,900 feet
Mean annual precipitation: 15 to 18 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Timpanogos and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Timpanogos

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, quartzite and granite

Typical profile

Ap - 0 to 9 inches: loam
B2t - 9 to 14 inches: loam
B3ca - 14 to 18 inches: loam
C1ca,C2ca - 18 to 48 inches: silt loam
lIC3 - 48 to 60 inches: gravelly loamy coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c

Custom Soil Resource Report

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Parleys

Percent of map unit: 5 percent

Kidman

Percent of map unit: 5 percent

TmC—Timpanogos loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j709

Elevation: 4,700 to 4,900 feet

Mean annual precipitation: 15 to 18 inches

Mean annual air temperature: 47 to 50 degrees F

Frost-free period: 130 to 150 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Timpanogos and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Timpanogos

Setting

Landform: Lake terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from limestone, quartzite and granite

Typical profile

Ap - 0 to 9 inches: loam

B2t - 9 to 14 inches: loam

B3ca - 14 to 18 inches: loam

C1ca,C2ca - 18 to 48 inches: silt loam

IIC3 - 48 to 60 inches: gravelly loamy coarse sand

Properties and qualities

Slope: 3 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Welby

Percent of map unit: 5 percent

Parleys

Percent of map unit: 5 percent

VnA—Vineyard fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j70c
Elevation: 4,500 to 4,900 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Vineyard and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vineyard

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Custom Soil Resource Report

Typical profile

Ap - 0 to 7 inches: fine sandy loam
AC - 7 to 13 inches: fine sandy loam
C1ca,C2ca - 13 to 35 inches: fine sandy loam
C3ca - 35 to 42 inches: very fine sandy loam
C4 - 42 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: R028AY012UT - Semiwet Fresh Meadow
Hydric soil rating: No

Minor Components

Timpanogos

Percent of map unit: 5 percent

Welby

Percent of map unit: 5 percent

W—Water

Map Unit Setting

National map unit symbol: j70s
Elevation: 4,470 to 4,720 feet
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WeB—Welby silt loam, extended season, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: j70k
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Welby, c3, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby, C3

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 7 inches: silt loam
A1 - 7 to 12 inches: loam
AC - 12 to 22 inches: silt loam
C1ca,C2ca,C3 - 22 to 65 inches: silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Minor Components

Timpanogos

Percent of map unit: 5 percent

WeC—Welby silt loam, extended season, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j70l
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Welby and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 7 inches: silt loam
A1 - 7 to 12 inches: loam
AC - 12 to 22 inches: silt loam
C1ca,C2ca,C3 - 22 to 65 inches: silt loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

WeD2—Welby silt loam, extended season, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j70m
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Welby and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 7 inches: silt loam
A1 - 7 to 12 inches: loam
AC - 12 to 22 inches: silt loam
C1ca,C2ca,C3 - 22 to 65 inches: silt loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Custom Soil Resource Report

Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Hillfield

Percent of map unit: 5 percent

Timpanogos

Percent of map unit: 5 percent

WhD—Welby-Hillfield silt loams, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: j70n
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Welby and similar soils: 60 percent
Hillfield and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 7 inches: silt loam
A1 - 7 to 12 inches: loam
AC - 12 to 22 inches: silt loam
C1ca,C2ca,C3 - 22 to 65 inches: silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

Description of Hillfield

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 4 inches: silt loam
AC - 4 to 12 inches: silt loam
C1ca - 12 to 26 inches: silt loam
C2ca - 26 to 35 inches: loam
C3ca - 35 to 40 inches: loam
IIC4 - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

WhE—Welby-Hillfield silt loams, 10 to 30 percent slopes

Map Unit Setting

National map unit symbol: j70p
Elevation: 4,500 to 5,200 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Welby and similar soils: 60 percent
Hillfield and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby

Setting

Landform: Lake terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 7 inches: silt loam
A1 - 7 to 12 inches: loam
AC - 12 to 22 inches: silt loam
C1ca,C2ca,C3 - 22 to 65 inches: silt loam

Properties and qualities

Slope: 10 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0

Custom Soil Resource Report

Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

Description of Hillfield

Setting

Landform: Lake terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

Typical profile

Ap - 0 to 4 inches: silt loam

AC - 4 to 12 inches: silt loam

C1ca - 12 to 26 inches: silt loam

C2ca - 26 to 35 inches: loam

C3ca - 35 to 40 inches: loam

IIC4 - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 20 to 30 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 50 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)

Hydric soil rating: No

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