

WATERS OF THE U.S. AND WETLAND
DELINEATION REPORT

IN SUPPORT OF

UTAH STATE CORRECTIONS
FACILITY RELOCATION

PREPARED IN ACCORDANCE WITH:
1987 CORPS OF ENGINEERS WETLAND
DELINEATION MANUAL &
ARID WEST REGIONAL SUPPLEMENT

PREPARED FOR:
DIVISION OF FACILITIES AND
CONSTRUCTION MANAGEMENT
4130 STATE OFFICE BUILDING
CAPITOL HILL COMPLEX
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1.0 INTRODUCTION

1.1 INTRODUCTION

The Utah Division of Facilities Construction and Management (DFCM) is investigating potential locations for the relocation of the Utah State Prison currently located in Draper, Utah. One potential relocation site encompasses approximately 592 acres and is located within the municipal boundaries of Salt Lake City near the Great Salt Lake. The site is located entirely within Section 20 of Township 1 North, Range 2 West in Salt Lake County (see Figure 1).

In order to comply with Section 404 of the Clean Water Act, DFCM must consider potential impacts to waters of the U.S. (WOUS) and special aquatic sites which could result as part of the prison relocation. Horrocks Engineers was contracted to perform a WOUS delineation of the potential prison relocation site. The delineation field work was conducted on October 5, 7, and 8, 2015. The purpose of this report is to document the results of that delineation.

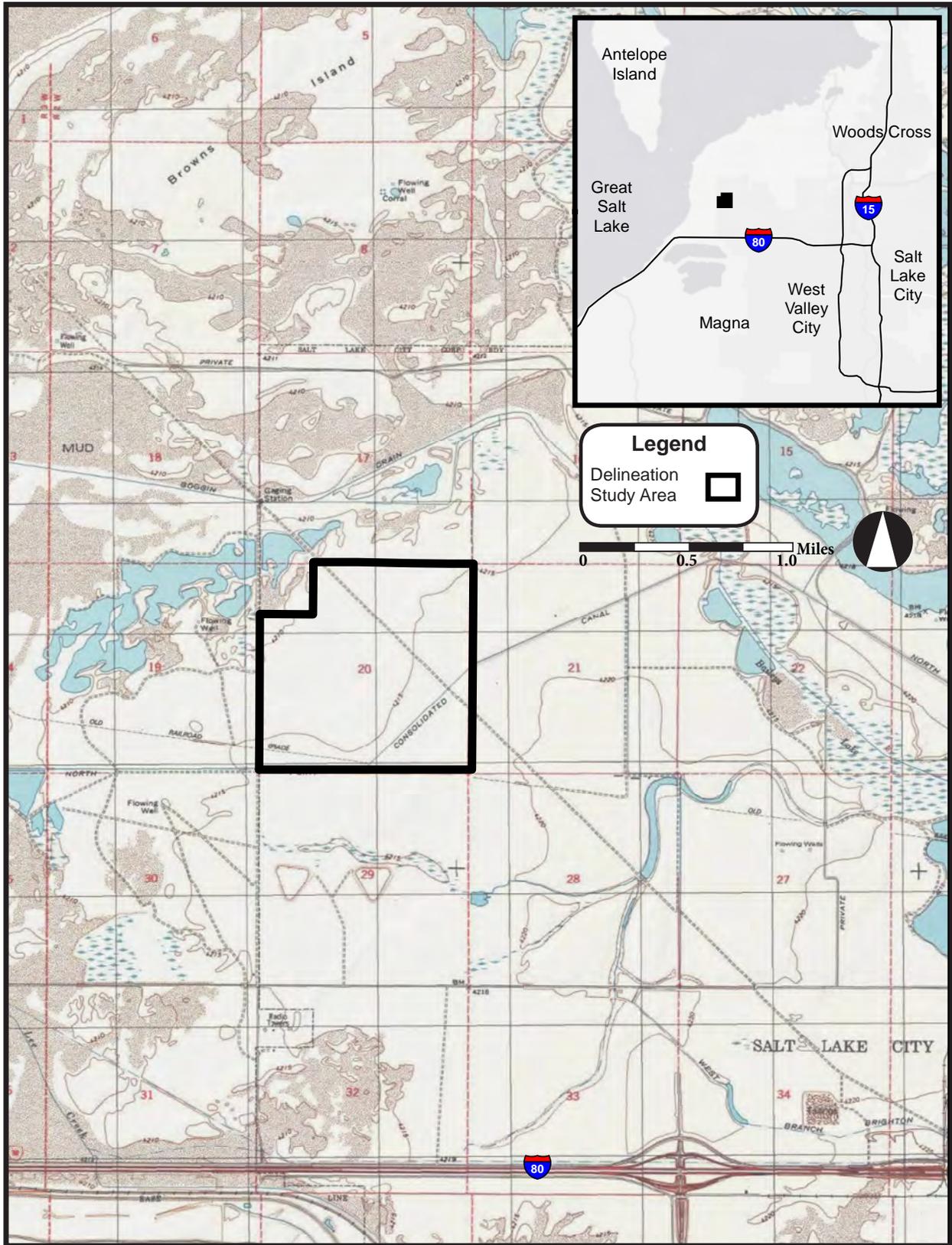
1.2 DIRECTIONS TO DELINEATION STUDY AREA

The delineation study area is located 4.5 miles west of the Salt Lake City International Airport and two miles north of Interstate 80. The study area can be accessed from Salt Lake City by traveling west on Interstate 80 to the 5600 West Interchange. From the Interchange, travel north on 5600 West for 0.3 miles to the intersection of 5600 West and Amelia Earhart Drive. Turn left (west) at the intersection and continue on Amelia Earhart Drive 0.65 miles to John Glenn Road. Turn right (north) and continue 0.35 miles to the end of John Glenn Road. Turn left (west) onto a well maintained dirt road and continue for one mile. Stay on the main road which takes a 45 degree turn to the right (northwest). In another half mile, take a slight jog to the left and continue traveling northwest on the dirt road for approximately 1.30 miles to a gate. The gate is located at the eastern boundary of delineation study area.



Photo 1 - General Conditions Observed within the Delineation Study Area

Figure 1 - Delineation Study Area Location

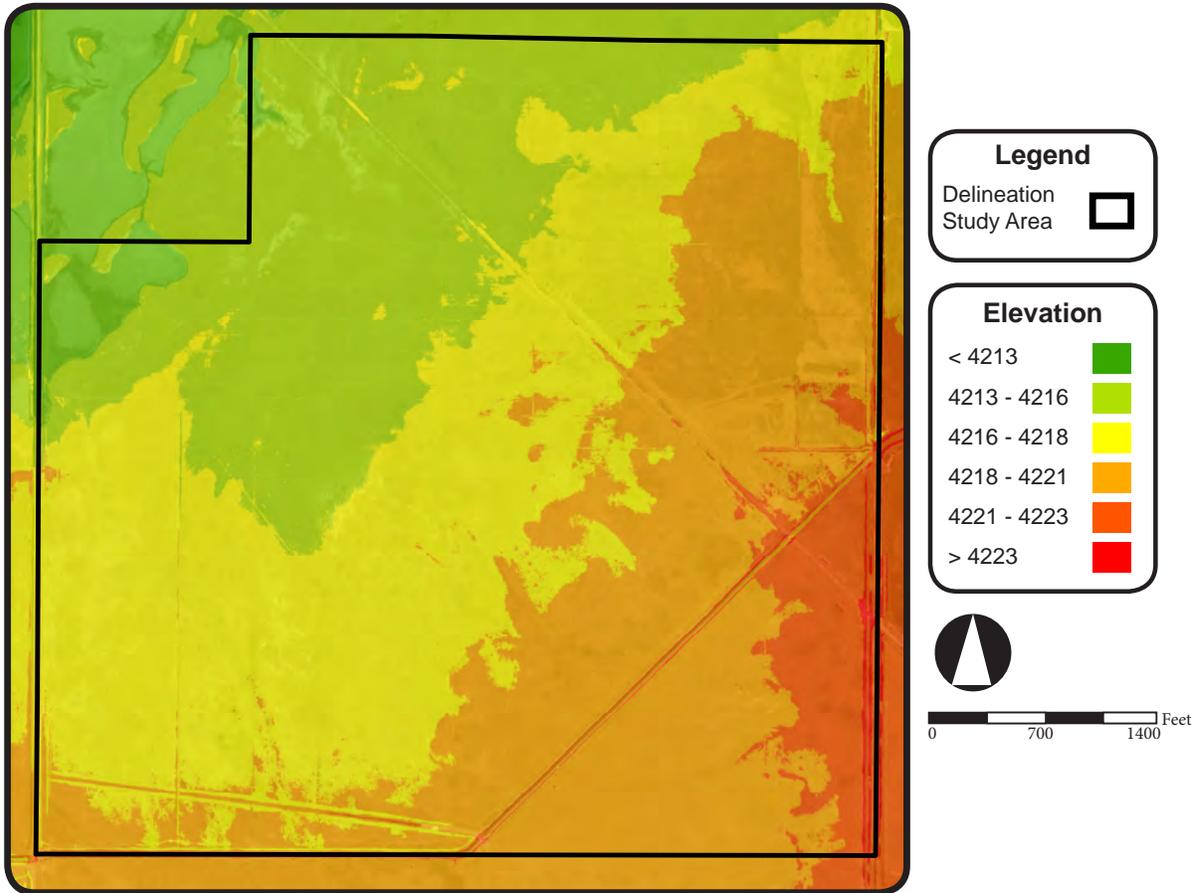


1.3 SITE DESCRIPTION

1.3.1 General Site Conditions

The delineation study area is located within the Salt Deserts subregion of the greater Central Basin and Range ecoregion near the southern shore of the Great Salt Lake (USEPA 2015). The site has an average annual precipitation of 16 inches. The topography of the delineation study area gently slopes from the southeast corner (4,224 feet) to the northwest corner (4,213 feet) (see Figure 2). The site is zoned for agriculture and is currently being used for grazing. More detailed information regarding the site's existing vegetation, soils, and hydrology is included in the sections below.

Figure 2 - General Topographic Conditions within the Delineation Study Area

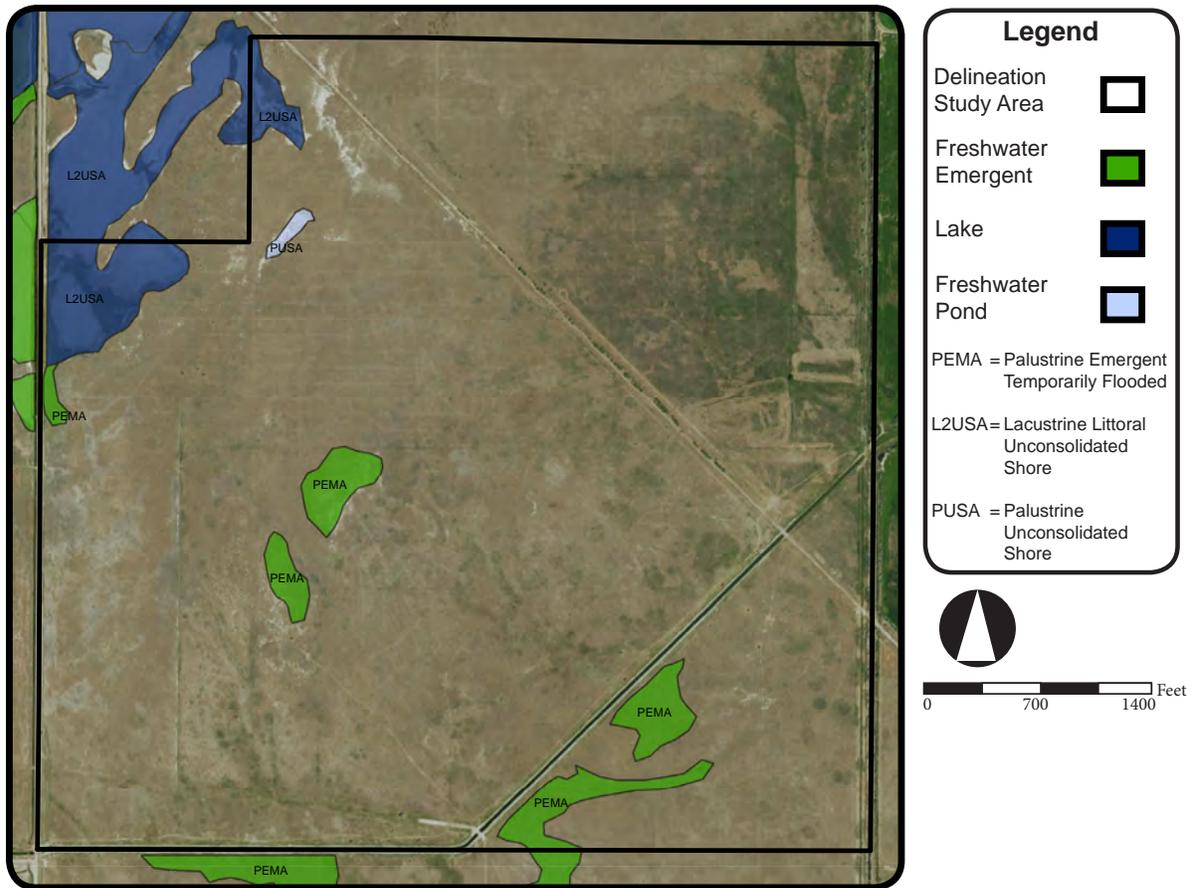


*For greater detail, refer to the enlarged delineation study area contour map at the back of this document

1.3.2 National Wetland Inventory Information

National Wetlands Inventory (NWI) data was obtained from U.S. Fish and Wildlife Service which shows potential wetlands within the delineation study area (USFWS 2015). See Figure 3. NWI data does not necessarily reflect conditions on site, so each feature identified on the NWI map was surveyed extensively to determine if the area met all three wetland parameters (vegetation, soils, and hydrology) necessary for classification as a wetland. For delineation results refer to Section 4.0 and Figure 7.

Figure 3 - U.S. Fish and Wildlife Service National Wetland Inventory Map



1.3.3 Vegetation

The vegetation within the delineation study area consists mainly of salt-tolerant plants. Inland salt grass (*Distichlis spicata*), which has a wetland indicator status of FAC, occurs throughout the site. However, in non-wetland areas inland salt grass is typically mixed with upland grasses, shrubs, and weedy species. Refer to Table 1 below for a list of dominant plants observed within the delineation study area with their corresponding wetland indicator status.

Table 1 - Dominant Vegetation Observed within the Delineation Study Area

Scientific Name	Common Name	Indicator Status*
Dominant Hydrophytic Plants		
<i>Salicornia rubra</i>	Red Swampfire	OBL
<i>Allenrolfea occidentalis</i>	Iodine Bush	FACW
<i>Juncus arcticus</i>	Baltic Rush	FACW
<i>Muhlenbergia asperifolia</i>	Scratchgrass	FACW
<i>Phragmites australis</i>	Common Reed	FACW
<i>Sesuvium verrucosum</i>	Sea Purslane	FACW
<i>Suaeda occidentalis</i>	Western Seepweed	FACW
<i>Bassia hyssopifolia</i>	Five-horned Smotherweed	FAC
<i>Distichlis spicata</i>	Inland Salt Grass	FAC
<i>Sarcobatus vermiculatus</i>	Greasewood	FAC
<i>Tamarix chinensis</i>	Five-stamen Tamarisk	FAC

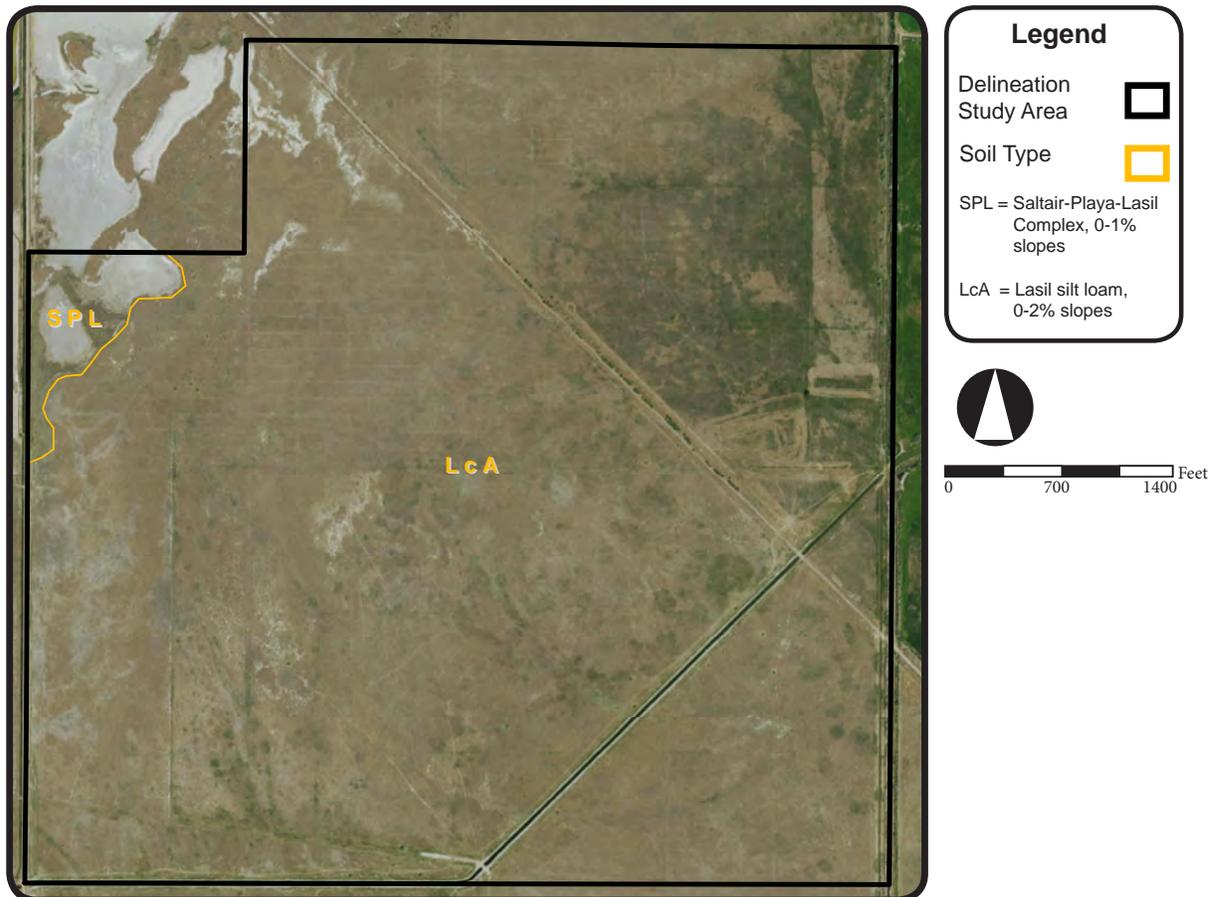
Scientific Name	Common Name	Indicator Status*
Dominant Upland Plants		
<i>Poa secunda</i>	Sandberg Bluegrass	FACU
<i>Malvella leprosa</i>	Alkali-mallow	FACU
<i>Bromus tectorum</i>	Cheatgrass	UPL
<i>Hordeum pusillum</i>	Little Barley	UPL
<i>Erodium cicutarium</i>	Stork's Bill	UPL
<i>Descuraina sophia</i>	Flixweed	UPL
<i>Rhaponticum repens</i>	Russian Knapweed	UPL
<i>Ericameria nauseosa</i>	Rubber Rabbitbrush	UPL
<i>Krascheninnikovia lantana</i>	Winterfat	UPL

*USACE 2014 Arid West Region North American Digital Flora: National Wetland Plant List

1.3.4 Soils

Soil survey information compiled by the National Resources Conservation Service (NRCS) identifies two soil series within the study area (see Figure 4). The Lasil Silt Loam 0-2% Slopes (LcA) series comprises 98 percent of the site and the Saltair-Playa-Lasil Unit (SPL) comprises the remaining 2 percent of the site. The following NRCS soil series descriptions provide general observations whereas the actual site conditions were recorded on the wetland determination data forms.

Figure 4 - Soil Series Found in the Delineation Study Area



Lasil Silt Loam 0-2% Slopes (LcA)

The Lasil series is a saline-alkali affected soil that is somewhat poorly drained with a seasonal high water table of 2.5 to 4.0 feet. These soils are generally located on low lake terraces and lake plains and are formed from calcareous mixed lake sediments originating from both sedimentary and igneous rocks. The Lasil series is typed as Typic Natrixeralfs, which means it is an Alfisol – a mineral soil with clay-enriched subsoil. The suborder name of *xeralf* indicates xeric environmental conditions and the great group root *Natrixeralf* indicates a natric (saline affected) horizon. The Lasil series is not on the National Hydric Soils list (USDA 2015b).

Saltair-Playa-Lasil Unit (SPL)

The SPL soils are a complex that consists of 40 percent of the Saltair soil unit, 35 percent of the Playa soil unit, and 20 percent of the Lasil soil unit. The complex is found on historic lake plains (playas) that formed from lacustrine deposits originating from mixed lake sediments. Taxonomy for the Saltair soil series is Typic Aquisalids, or an Aridisol (soil with a salic horizon that has its upper boundary within 4 inches of the soil surface) that experiences continuous to periodic saturation and reduction. The Saltair soil series is included on the National Hydric Soils list (USDA 2015b).

1.3.5 Hydrology

The delineation study area is situated in the northern terminus of Jordan River Watershed (HUC 16020204) and is near the historic floodplains of the Great Salt Lake. The historic high level of the Great Salt Lake is 4,211.6 feet (1987) and the historic low level is 4,191.35 feet (1963). The historic average elevation of the lake is 4,200 feet (USGS 2015). The 4,213-foot contour in the northwest corner is the lowest on the site (see attached enlarged delineation study area contour map).

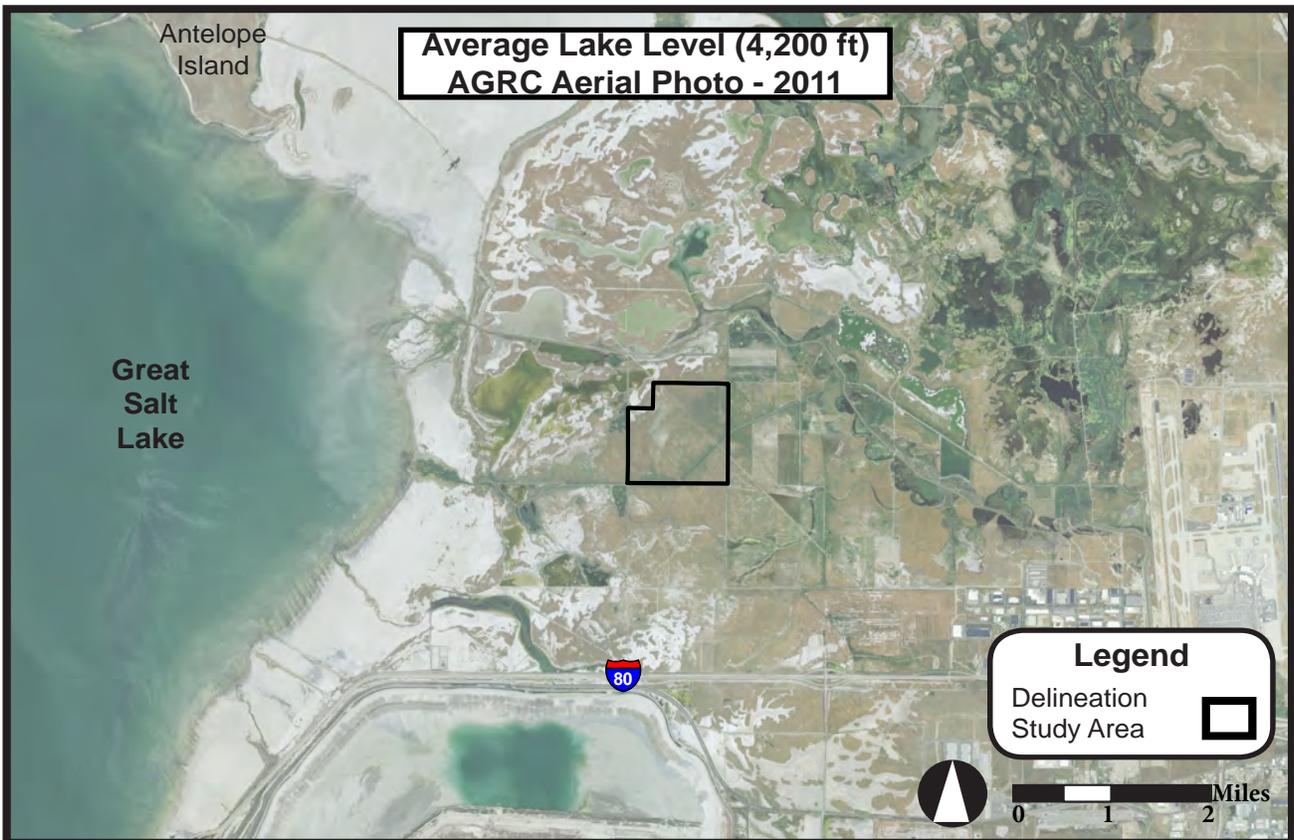
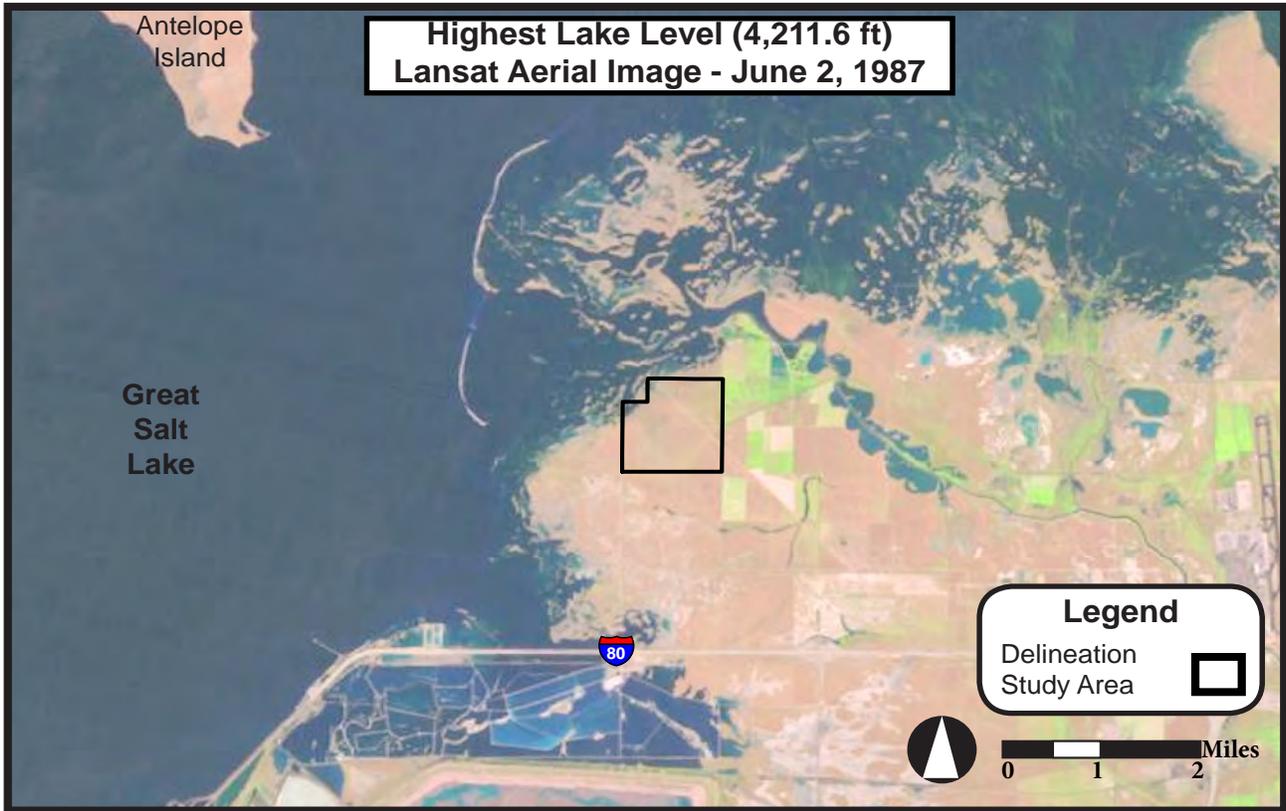
The saline playa area in the northwest corner of the site does have hydrologic indicators. These playas are situated two to three feet below the surrounding topography at an elevation of approximately 4,213 feet and connect to other playas adjacent to the Great Salt Lake. The indicators that support that these areas seasonally pond water include biotic crusts and a rusted lower wire on the mesh/barbed wire fencing that runs through the playa.

The North Point Consolidated Canal enters the delineation study area midway along the eastern boundary line, flows southwest to the southern boundary line and proceeds west along the southern boundary. The canal historically provided flood irrigation to the delineation study area through a series of feeder ditches constructed in a grid pattern that covers a good portion of the site. These ditches are still evident from aerial photos and are noticeable as one walks across the delineation study area. The flowline of the canal is above the surrounding topography (see photo on page A-74 of Appendix A). Borrow ditches exist adjacent to the canal where material was sourced to help construct the canal banks. A smaller unnamed canal runs along the eastern boundary of the delineation study area entering in the southeast corner of the site and flowing north to the North Point Consolidated Canal.



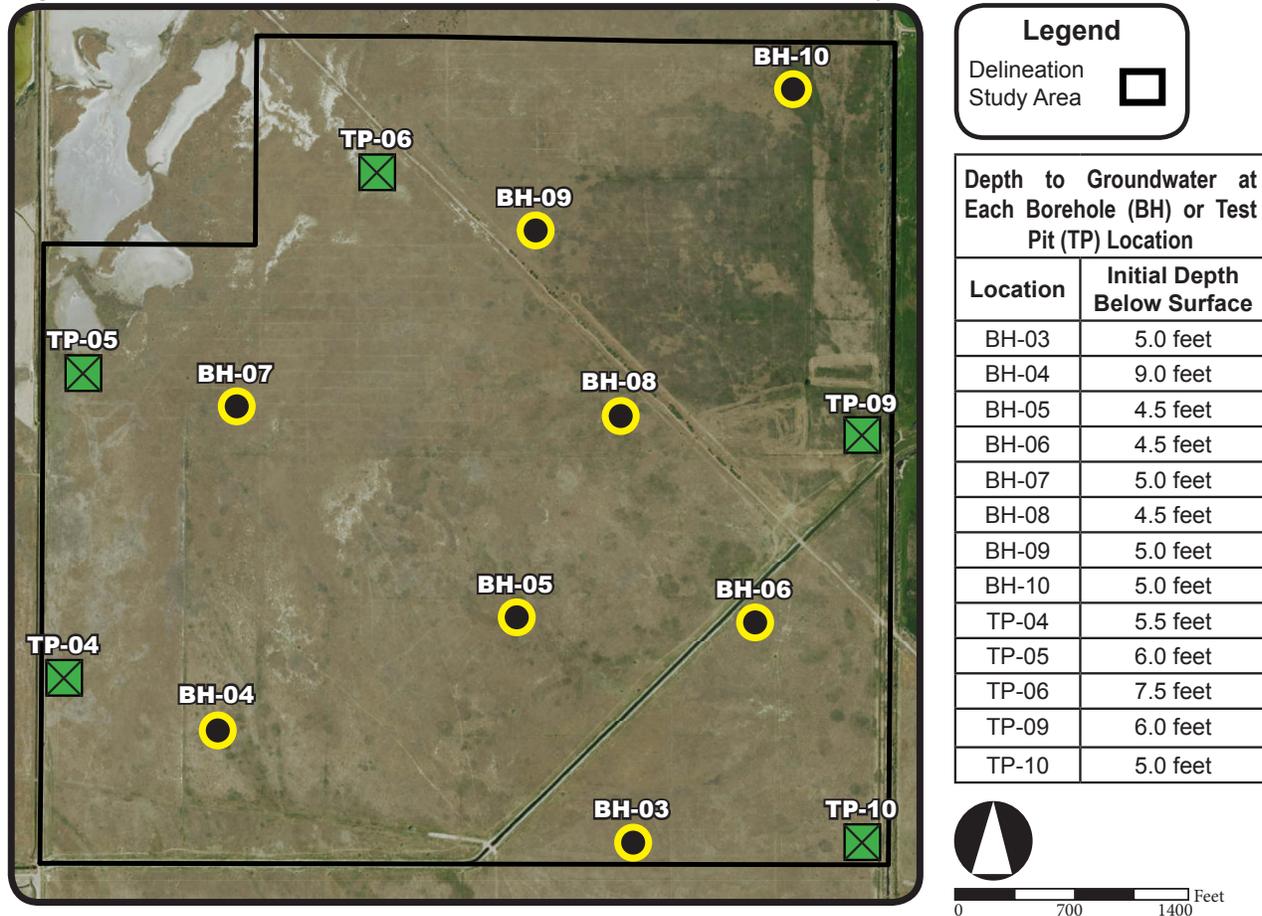
Photo 2 and Photo 3 - Examples of Feeder Ditches Found within the Delineation Study Area

Figure 5 - Great Salt Lake Water Levels



According to the NRCS soil data, the majority of the site has a seasonal high water table between 2.5 and 4.0 feet below the soil surface. Test pits and boreholes taken at several locations across the site by Epic Engineering from April 20 to May 4, 2015 also indicate that there is not a high water table (see Figure 6 for borehole locations and water table depths) (Epic Engineering 2015).

Figure 6 - Borehole and Test Pit Locations within the Delineation Study Area



1.4 EXISTING FIELD CONDITIONS

The delineation field work was conducted by Terry Johnson and Marley Haupt of Horrocks Engineers over the course of three days -- October 5, 7, and 8, 2015. The weather was mostly sunny with an overall high of 75°F on October 8, and an overall low of 51°F on October 7. Salt Lake City International Airport reported 0.01 inches of rain on October 6, 2015, but no other precipitation was recorded in or near the delineation study area during the three days of the delineation field work (Accuweather 2015). As per the National Oceanic and Atmospheric Administration's (NOAA) Palmer Drought Severity Index, over the past year Salt Lake County has experienced moderate to severe drought conditions and was experiencing moderate drought at the time the delineation field work was performed (NOAA 2015). However, summer precipitation levels in the area were above average (U.S. Climate Data 2015) (see Table 2). Given these circumstances, conditions on site appeared to be typical for that time of the year.

Natural Resource Conservation Service (NRCS) WETS tables were consulted to determine the growing season (see Table 3 and Table 4) (USDA 2015a). The growing season was also verified from observations of above ground growth and development of on site vascular plants during the delineation field work.

Table 2 - Salt Lake City Summer Precipitation (Inches)

Month	Average Precipitation	2015 Precipitation	Percent of Average
May	2.09	4.23	202%
June	1.14	0.43	37%
July	0.59	1.59	269%
August	0.71	0.85	120%
September	1.54	2.12	138%
Total	6.07	9.22	152%

Source: U.S. Climate Data 2015

Table 3 - WETS Table for Temperature and Precipitation by Month

Month	Temperature (°F)				Precipitation (Inches)			
	Avg Daily Max	Avg Daily Min	Avg Temp	Avg Precip	30% chance will have		Avg # of days w/0.1 or more	Avg total snow fall
					less than	more than		
January	37.0	21.3	29.2	1.37	0.90	1.64	4	14.5
February	43.4	25.5	34.5	1.33	0.81	1.62	4	10.3
March	52.8	33.4	43.1	1.91	1.33	2.27	6	9.2
April	60.9	39.0	50.0	2.02	1.20	2.45	6	5.7
May	70.6	46.9	58.8	2.09	1.28	2.53	5	0.7
June	82.2	55.8	69.0	0.77	0.25	0.93	2	0.0
July	90.6	63.4	77.0	0.72	0.29	0.87	2	0.0
August	88.7	62.4	75.6	0.76	0.30	0.93	2	0.0
September	77.6	52.4	65.0	1.33	0.37	1.57	3	0.2
October	64.0	41.0	52.5	1.57	0.63	1.92	4	2.1
November	48.7	30.4	39.6	1.40	0.85	1.70	4	7.8
December	38.0	22.4	30.2	1.23	0.60	1.50	4	12.2
Annual	--	--	--	--	14.00	18.47	--	--
Average	62.9	41.2	52.0	--	--	--	--	--
Average	--	--	--	16.5	--	--	47	62.6

Source: U.S. Department of Agriculture, Natural Resource Conservation Service 2015a

Table 4 - WETS Table for Growing Season Beginning and Ending Dates

Probability	Temperature		
	24°F or higher	28°F or higher	32°F or higher
	Beginning and Ending Dates / Growing Season Length		
50 Percent*	3/14 to 11/13	3/28 to 11/1	4/19 to 10/14
	243 days	217 days	188 days
70 Percent*	3/9 to 11/18	3/23 to 11/6	4/14 to 10/29
	254 days	227 days	198 days

Source: U.S. Department of Agriculture, Natural Resource Conservation Service 2015a

*Percent chance of the growing season occurring between the Beginning and Ending dates

2.0 WATERS OF THE U.S. DELINEATION METHODOLOGY

2.1 DELINEATION METHODOLOGY FOR WETLANDS

The wetland delineation was completed in accordance with the U.S. Army Corps of Engineers' (USACE) 1987 Wetland Delineation Manual (USACE 1987) and the Arid West Regional Supplement Version 2.0 (USACE 2008). All potential wetland areas were verified for wetland indicators as established in the above delineation manuals. The following procedures were implemented at each sample point to determine the presence of wetland indicators and the information was recorded on Arid West Supplement data forms. Photographs were also taken to document each sample point (see Appendix A for wetland determination data forms and sample point photos).

2.1.1 Hydrophytic Vegetation

All plant species within a five-foot radius area at each sample point were recorded. The relative percent cover for each species was determined by estimating aerial cover. The indicator status of each species was determined using the Arid West 2014 Wetland Plant List (USACE 2014). Vegetation species comprising of at least 20 percent of the total aerial cover in its stratum were considered dominant, following the guidelines of the USACE 50/20 rule. If more than 50 percent of the dominant plant species had an indicator status of obligate wetland species (OBL), facultative wetland species (FACW), or facultative species (FAC), the sample point met the hydrophytic vegetation parameter.

2.1.2 Hydric Soils

At each sample point, a soil pit was dug to a minimum depth of 18 inches to assess soil characteristics and water conditions. A profile of the soil pit was used to determine soil color, texture, and moisture at different depths within the soil profile. Colors of the soil profile and any redox features were identified by comparing a moistened sample to the Munsell® Soil Color Charts (Munsell® 2000). Soil textures and moisture were determined by feeling the soil samples. If the soil characteristics met one of the primary hydric soil indicators or two or more secondary hydric soil indicators identified in the Arid West Regional Supplement (USACE 2008) and the Field Indicators of Hydric Soils in the U.S. Version 7 manual (USDA 2010), the sample point met the hydric soils parameter.

2.1.3 Wetland Hydrology

Each soil pit was also examined for the presence or absence of hydrologic indicators. These hydrologic indicators are described in the Arid West Regional Supplement (USACE 2008). If it was determined that at least one primary hydrologic indicator or two or more secondary hydrologic indicators were present, the sample point met the hydrologic parameter.

2.1.4 Wetland Boundary Determination Procedure

Sample points that met all three parameters (hydrophytic vegetation, hydric soils, and wetland hydrology) were classified as occurring in a wetland. A second sample point, located in the adjacent upland, was then documented for the presence of the three indicators. If the point did not meet all three parameters, the point was classified as occurring in an upland. The next step was to define the wetland boundary occurring between the wetland sample point and the upland sample point. The boundary was based on information gathered from the two sample points and observable changes in elevation and plant communities. The wetland boundary and sample points were surveyed using a handheld Trimble GeoExplorer XT global positioning system (GPS) receiver. The survey data was downloaded into ArcMAP to produce a map that shows delineated wetland boundaries and sample point locations. The acreages for each wetland polygon were calculated in ArcMAP and included on the map. The Cowardin Classification (Cowardin et al. 1979) was used to designate the wetland type.

2.2 DELINEATION METHODOLOGY FOR IDENTIFICATION OF NON-WETLAND WATERS OF THE U.S.

Non-wetland waters of the U.S. (WOUS) were delineated by using USACE guidelines for the identification of the ordinary high water mark (OHWM) (USACE 2001). An OHWM datasheet was completed for each of these waters. Non-wetland WOUS within the study area were identified and the OHWM for these waters was surveyed using a handheld Trimble GeoExplorer XT GPS receiver. The survey data was downloaded into ArcMAP to produce a map that depicts the delineated WOUS. The acreage for each WOUS within the study area was calculated using ArcMAP and included on the map.

3.0 CONTACT INFORMATION

3.1 APPLICANT CONTACT INFORMATION

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4.0 DELINEATION RESULTS

Five wetlands totaling 9.73 acres, three playas totaling 1.62 acres, and two canals totaling 3.52 acres and 8,767 linear feet were identified within the delineation study area. The delineation results for all identified waters of the U.S. including wetlands, playas, and canals, are summarized in Table 4 and Figure 7. Greater detail for each identified feature is provided in the paragraphs below.

Table 5 - Summary of Delineated Features

Delineated Waters of the U.S.				
Name	Cowardin Classification*	Acres	Linear Feet	Recommended Jurisdictional
Wetlands				
Wetland 1	PEMA	0.09	NA	Yes
Wetland 2	PEMA	0.02	NA	Yes
Wetland 3a	PEMA	8.97	NA	Yes
Wetland 3b	PEMA	0.20	NA	Yes
Wetland 4	PEMAx	0.16	NA	No
Wetland 5	PEMAx	0.29	NA	No
Playas				
Playa 1	L2USA3	0.12	NA	Yes
Playa 2	L2USA3	0.02	NA	Yes
Playa 3	L2USA3	0.26	NA	Yes
Playa 4	L2USA3	1.22	NA	Yes
Canals				
North Point Consolidated Canal	NA	3.14	6,247	
Unnamed Canal	NA	0.38	2,520	
Total Wetlands		9.28**	NA	
Total Playa		1.62	NA	
Total Canals		3.52	8,767	

*PEMA = Palustrine Emergent Temporarily Flooded

L2USA3 = Lacustrine Littoral Unconsolidated Shore Temporarily Flooded

**Total excludes Wetland 4 and Wetland 5 which are not being recommended as jurisdictional

4.1 WETLANDS

The transition line between wetlands and uplands across the delineation study area occurs mainly as a result of a difference in elevation. Wetlands are typically found in areas where the elevation dropped a few feet from the surrounding upland grade and are mainly adjacent to the playas located in the northwest corner of the site.

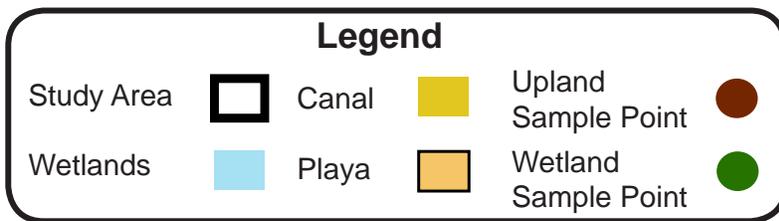
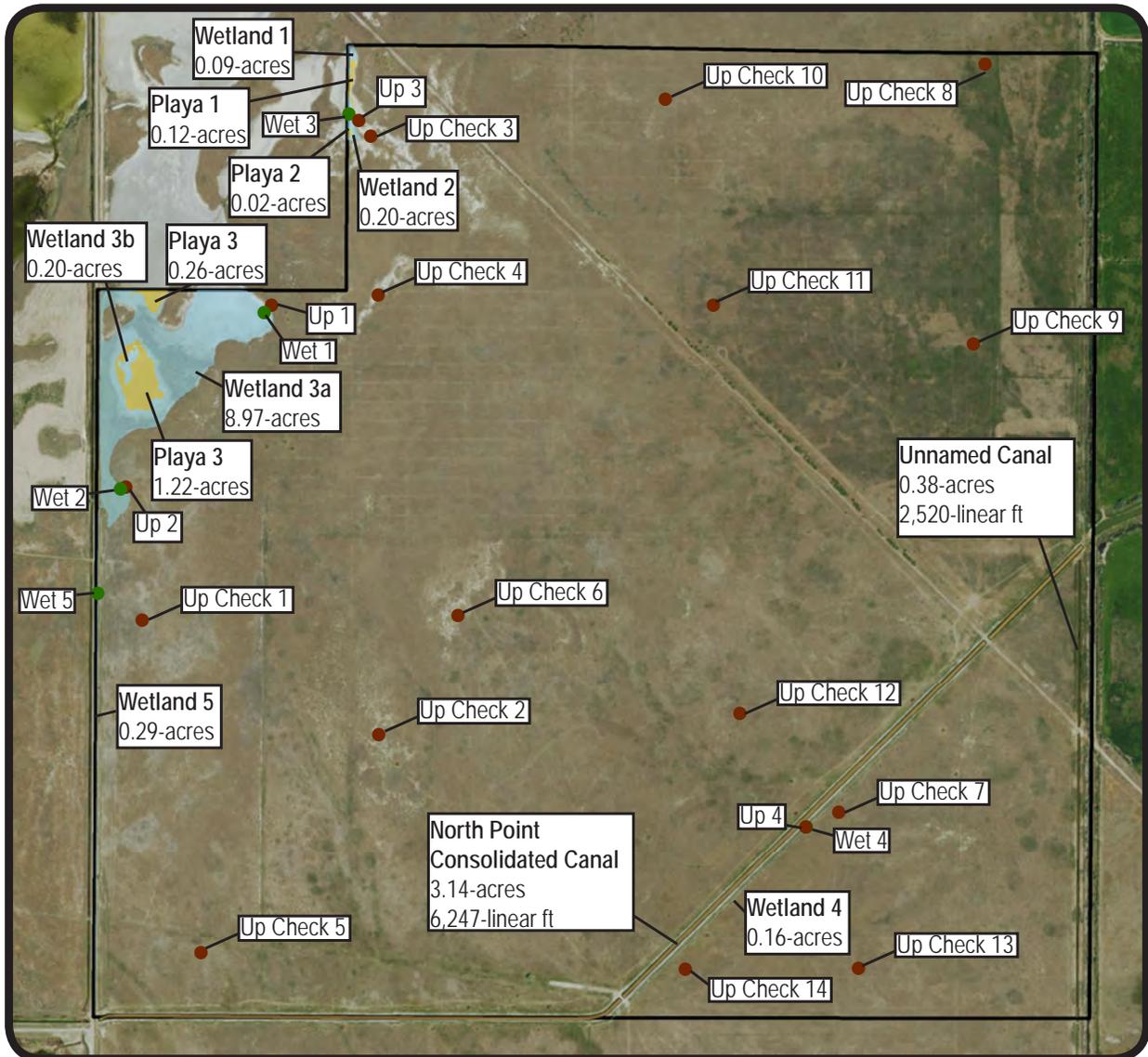
Vegetation

Vegetation in mapped wetland areas is robust and mainly consists of native hydrophytic plants with few upland species present. In upland areas, there may be one or two dominant hydrophytes, but there is typically 50 percent or more dominant upland grasses or weedy species.

Soils

Soils examined in the identified wetland areas met the hydric parameters for either a Depleted Matrix (F3), a Sandy Mucky Mineral (S1), or Hydrogen Sulfide (A4). Most wetlands on the delineation study area are located within the Saltair-Playa-Lasil Unit (SPL) occurring in the northwest corner which comprises only 2 percent of the site and is on the National Hydric Soils list. One of the 4 upland paired and none upland check excavated

Figure 7 - Delineation Results



*For greater detail, refer to the enlarged delineation study area contour map at the back of this document

sample points met a hydric soil indicator. The NRCS soil survey indicates that 98 percent of the delineation study area is a Lasil soil series, which is not included on the National Hydric Soils list.

Hydrology

Since the delineation field work occurred in the fall, none of the sample test pits in the identified wetland areas encountered a water table within 18" of the soil surface. However, other primary hydrology indicators such as Water Marks (B1), Biotic Crusts (B12), Surface Soil Cracks (B6), and a Hydrogen Sulfide Odor (C1) and secondary indicators including Drainage Patterns (B10) and FAC-Neutral Test (D5) were present. No wetland hydrology indicators were observed in the paired upland or the upland check sample points. According to the NRCS soil data the Lasil Series has a seasonal high water table between 2.5 and 4.0 feet. Resulting water table levels from test pits and boreholes taken at 13 locations across the delineation study area from April 20 to May 4, 2015 by Epic Engineering indicate that the water table was between 4.5 to 9 feet deep.

4.1.1 Wetland 1 and Wetland 2

Wetland 1 (0.07 acre) and Wetland 2 (0.02 acre) are part of a larger wetland that continues outside the delineation study area boundary. The wetland is part of the playa located in the northwest corner of the property and occurs near or below the 4,213-foot contour. The wetland was mapped as a wetland instead of a playa because the hydrophytic vegetation exceeds 5 percent ground cover. The dominant plants include *Allenrolfea occidentalis*, *Hordeum pusillum*, and *Bassia hyssopifolia*. The soil meets the criteria for a Depleted Matrix and hydrology indicators include Water Marks, Surface Soil Cracks, Hydrogen Sulfide Odor, and FAC-Neutral Test. The wetland has a continuous connection to the Great Salt Lake through wetlands and playas with an OHWM (see Appendix A for wetland determination data forms and sample point photos).

4.1.2 Wetland 3

Wetland 3a (8.97 acres) and 3b (0.20 acre) are part of the playa complex located in the northwest corner of the property and occur near or below the 4,213-foot contour. Wetland 3b lies below the OHWM of Playa 4. The wetlands were mapped as a wetland instead of a playa because the hydrophytic vegetation exceeds 5 percent ground cover. The dominant plants include *Sueada calceoliformis* and *Distichlis spicata*. The soil meets the criteria for a Depleted Matrix and hydrology indicators include Water Marks, Surface Soil Cracks, and FAC-Neutral Test. The wetland has a continuous connection to the Great Salt Lake through wetlands and playas with an OHWM (see Appendix A for wetland determination data forms and sample point photos).

4.1.3 Wetland 4

Wetland 4 (0.16 acre) is located in the bottom of a borrow ditch excavated to construct the banks of the adjacent North Point Unconsolidated Canal. The ditch is lower than the water level of the canal and is often saturated. The ditch has been used for irrigation purposes. The dominant plants include *Phragmites australis* and *Distichlis spicata*. The soil meets the criteria for Sandy Mucky Mineral and Hydrogen Sulfide and the hydrology indicator is Hydrogen Sulfide Odor. The borrow ditch was excavated in uplands, is not a relocated tributary, and does not drain wetlands and, as such, would not be considered a jurisdictional wetland (see Appendix A for wetland determination data forms and sample point photos).

4.1.4 Wetland 5

Wetland 5 (0.29 acre) is located in the bottom of a ditch located on the western boundary of the delineation study area. The only dominant plant is *Phragmites australis*. The soil meets the criteria for Hydrogen Sulfide and the hydrology indicator is Hydrogen Sulfide Odor. The ditch was excavated in uplands, is not a relocated tributary, and does not drain wetlands and as such, would not be considered a jurisdictional wetland (see Appendix A for wetland determination data forms and sample point photos).

4.2 PLAYAS

Playa areas that have the capability to seasonally pond water and exhibited an OHWM were identified in the northwest corner of the delineation study area. These playas are situated two to three feet below the surrounding topography at an elevation of approximately 4,213 feet. The OHWM indicators that support that these areas seasonally pond water include; a change in vegetation species, change in vegetation cover, a break

in the bank slope, biotic crusts, and a rusted lower wire on the mesh/barbed wire fencing that runs through the playa (see photos on page A-81 and A-84 in Appendix A). Using guidance provided in the Corps' Arid West Regional Supplement Manual, playa areas below the OHWM that have 5 percent or more vegetation were mapped as wetlands, whereas unvegetated areas not having five present vegetation were mapped as playas.

4.2.1 Playa 1 and Playa 2

Playa 1 (0.12 acre) and Playa 2 (0.02 acre) are located in the playa complex located in the northwest corner of the property and occurs near or below the 4,213-foot contour. The OHWM indicators that support that this area at least seasonally ponds water include; a change in vegetation species and cover, a break in the bank slope, and water marks in the form of a rusted lower wire on the mesh/barbed wire fencing that runs through the playa. Playa areas below the OHWM that were unvegetated were mapped as playas. The playas have a continuous connection to the Great Salt Lake through wetlands and playas with an OHWM (see Appendix A for OHWM data forms and photos).

4.2.3 Playa 3

Playa 3 (0.26 acre) is located in the playa complex located in the northwest corner of the property and occurs below the 4,213-foot contour. Playa 3 is part of a much larger playa that extends beyond the delineation study area boundary. The OHWM indicators that support that this area at least seasonally ponds water include; a change in vegetation species and cover, a break in the bank slope, biotic crusts, and water marks in the form of a rusted lower wire on the mesh/barbed wire fencing that runs through the playa. Playa areas below the OHWM that were unvegetated were mapped as playas. The playa has a continuous connection to the Great Salt Lake through wetlands and playas with an OHWM (see Appendix A for OHWM data forms and photos).

4.2.4 Playa 4

Playa 4 (1.22 acres) is located in the playa complex located in the northwest corner of the property and occurs near 4,213-foot contour. Playa 4 contains Wetland 3b below its OHWM. However, the vegetation within Wetland 3b is greater than 5 percent and was therefore delineated as a wetland. The OHWM indicators that support that this area at least seasonally ponds water include; a change in vegetation species and cover, a break in the bank slope, biotic crusts, and water marks in the form of a rusted lower wire on the mesh/barbed wire fencing that runs near the playa. Playa areas below the OHWM that were unvegetated were mapped as playas. The playa has a continuous connection to the Great Salt Lake through wetlands and playas with an OHWM (see Appendix A for OHWM data forms and photos).

4.3 CANALS

There are two water conveyance canals within the delineation study area, the North Point Consolidated Canal and an unnamed canal. These canals flow perennially and serve to deliver water from the Jordan River to the Great Salt Lake. The canals exhibit an OHWM with indicators that include a break in the bank slope and a change in vegetation species and cover. These canals would be classified as WOUS.

4.3.1 North Point Consolidated Canal

The North Point Consolidated has 3.14 acres of surface water below the OHWM (see Appendix A for OHWM data forms and photos).

4.3.2 Unnamed Canal

The unnamed canal has 0.38 acre of surface water below the OHWM (see Appendix A for OHWM data forms and photos).

5.0 INTERSTATE OR FOREIGN COMMERCE CONNECTION

The waters of the U.S. within the delineation study area have no identifiable connection to interstate or foreign commerce.

6.0 CONCLUSION

Five wetlands totaling 9.28 acres (excluding Wetland 4 and Wetland 5), three playas totaling 1.62 acres, and two canals (North Point Consolidating Canal and an unnamed canal) totaling 3.52 acres and 8,767 linear feet were identified within the delineation study area.

7.0 REFERENCES

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APPENDIX A: DATA FORMS AND PHOTOS

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Wet 1
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.483179 Long: 112.055337 Datum: NAD27
 Soil Map Unit Name: Saltair-Playas-Lasil complex, 0 to 1% slopes NWI classification: L2USA

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>Sample point located within a vegetated playa-like basin.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	67 %			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	67 %			
Herb Stratum				
1. <i>Suaeda calceoliformis</i>	34	Yes	FACW	
2. <i>Distichlis spicata</i>	33	Yes	FAC	
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover:	67 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	67 %			
% Bare Ground in Herb Stratum	23 %	% Cover of Biotic Crust	10 %	
Remarks: <u>Biotic crust present near sample point.</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>68</u>
FAC species	x 3 =	<u>99</u>
FACU species	x 4 =	<u>0</u>
UPL species	x 5 =	<u>0</u>
Column Totals:	<u>67</u> (A)	<u>167</u> (B)
Prevalence Index = B/A =		<u>2.49</u>

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Wet 1 – Soil Profile



Wet 1 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up 1
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): D - Interior Deserts Lat: 40.483206 Long: 112.055312 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Distichlis spicata</i>	40	Yes	FAC	
2. <i>Bromus tectorum</i>	10		UPL	
3. <i>Polygonum aviculare</i>	15		FACW	
4. <i>Erodium cicutarium</i>	20	Yes	UPL	
5.				
6.				
7.				
8.				
Total Cover:	85			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum	15	% Cover of Biotic Crust	%	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	15 x 2 =	30
FAC species	40 x 3 =	120
FACU species	x 4 =	0
UPL species	30 x 5 =	150
Column Totals:	85 (A)	300 (B)
Prevalence Index = B/A =		3.53

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: Up 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture ³	Remarks		
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²				
0-2	10YR 3/2	100					Sandy loam			
2-3	10YR 3/2	98	10YR 4/4	2	C	PL	Sandy loam			
3-4	10YR 4/2	98	10YR 4/4	2	C	PL	Sandy loam			
4-15	10YR 4/2	100					Sandy loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ² Location: PL=Pore Lining, RC=Root Channel, M=Matrix. ³ Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)						<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			Indicators for Problematic Hydric Soils:⁴ <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>				
Remarks: Soil pit located approximately 2.5 feet higher in elevation than paired wetland pit. Redox concentrations less than 4 inches thick (2") in the soil profile. No hydric soil indicators.										

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)				Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Land form is not conducive with ponding water. No hydrology indicators.					



Up 1 – Soil Profile



Up 1 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Wet 2
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.482205 Long: 112.060330 Datum: NAD27
 Soil Map Unit Name: Saltair-Playas-Lasil complex, 0 to 1% slopes NWI classification: PEMC

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Sample point located within a basin that is contiguous with the wetland associated with Sample Point Wet 1 but is heavily vegetated with salt grass	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Atriplex patula</i>	2		FACW	
2. <i>Distichlis spicata</i>	93	Yes	FAC	
3. <i>Muhlenbergia asperifolia</i>	5		FACW	
4.				
5.				
6.				
7.				
8.				
Total Cover:	100%			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum	0 %	% Cover of Biotic Crust	%	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	7 x 2 =	14
FAC species	93 x 3 =	279
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals:	100 (A)	293 (B)
Prevalence Index = B/A =		2.93

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Wet 2 – Soil Profile



Wet 2 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up 2
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D - Interior Deserts Lat: 40.482214 Long: 112.060290 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Distichlis spicata</i>	45	Yes	FAC	
2. <i>Bromus tectorum</i>	45	Yes	UPL	
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover:	90 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum <u>10 %</u>		% Cover of Biotic Crust _____ %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	90 (A)		360 (B)
Prevalence Index = B/A =			4.00

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up 2 – Soil Profile



Up 2 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Wet 3
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Alkali Flat Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.484181 Long: 112.054748 Datum: NAD27
 Soil Map Unit Name: Lasil Silt Loam, 0 to 2% slopes NWI classification: L2USA

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover: %				
Sapling/Shrub Stratum				
1. <i>Allenrolfea occidentalis</i>	7	Yes	FACW	
2.				
3.				
4.				
5.				
Total Cover: %				
Herb Stratum				
1. <i>Hordeum pusillum</i>	45	Yes	FACU	
2. <i>Bassia hyssopifolia</i>	35	Yes	FAC	
3. <i>Atriplex patula</i>	3		FACW	
4.				
5.				
6.				
7.				
8.				
Total Cover: %				
Woody Vine Stratum				
1.				
2.				
Total Cover: %				
% Bare Ground in Herb Stratum %		% Cover of Biotic Crust %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	 0
FACW species	x 2 =	 20
FAC species	x 3 =	 105
FACU species	x 4 =	 180
UPL species	x 5 =	 0
Column Totals:	 90 (A)	 305 (B)
Prevalence Index = B/A =		 3.39

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: Wet 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					Silty clay loam	Soil is damp
4-8	10YR 4/2	100					Silty clay loam	Soil is damp
8-16	2.5Y 6/2	100					Silty clay loam	Cemented layer at 7 inches

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils: ⁴		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)	

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

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

Remarks: Hard layer located 7 inches below soil surface.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<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 type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along 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"/> Thin Muck Surface (C7)	
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

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

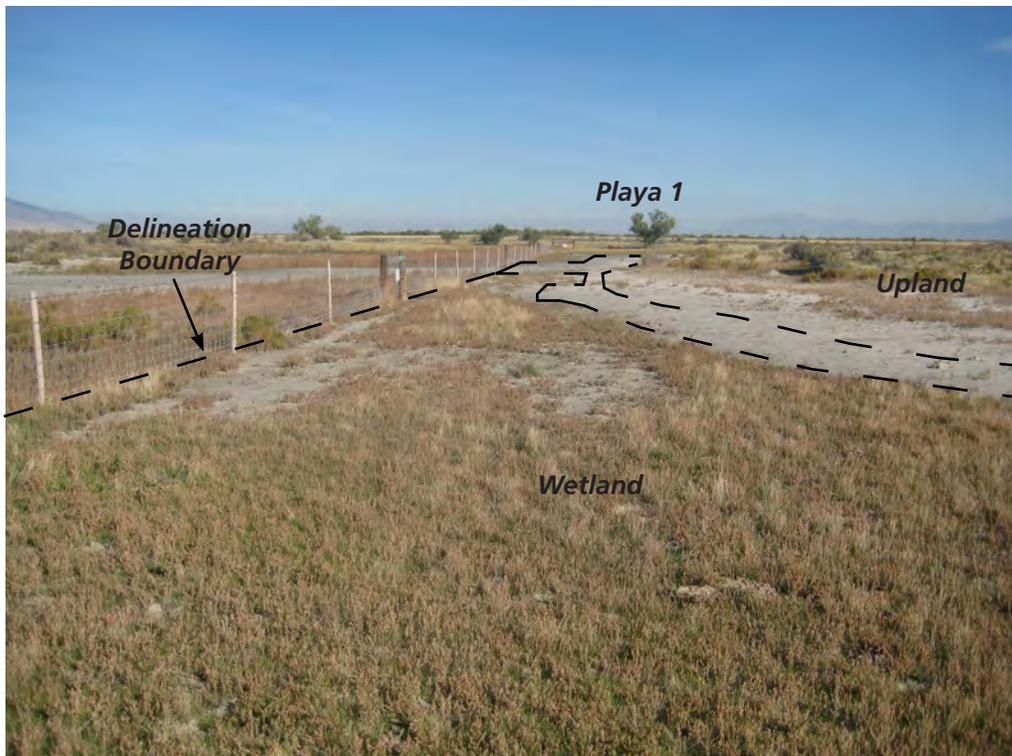
Wetland Hydrology Present? Yes No

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

Remarks:



Wet 3 – Soil Profile



Wet 3 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up 3
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D - Interior Deserts Lat: 40.484211 Long: 112.054687 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: L2USA

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	% <input type="text"/>			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	% <input type="text"/>			
Herb Stratum				
1. <i>Hordeum pusillum</i>	35	Yes	FACU	
2. <i>Bassia scoparia</i>	45	Yes	FAC	
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover:	80 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	% <input type="text"/>			
% Bare Ground in Herb Stratum	20 %	% Cover of Biotic Crust	%	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	<input type="text"/>	x 1 =	0	
FACW species	<input type="text"/>	x 2 =	0	
FAC species	45	x 3 =	135	
FACU species	35	x 4 =	140	
UPL species	<input type="text"/>	x 5 =	0	
Column Totals:	80 (A)		275 (B)	
Prevalence Index = B/A =			3.44	

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: Up 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-4	10YR 5/2	100				Loamy sand	
4-6	10YR 4/2	100				Loamy sand	
6-10	10YR 3/2	100				Sandy clay loam	
10-12	10YR 5/2	100				Sandy clay loam	
12-16	10YR 6/2	100				Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils:⁴ <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	--

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

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

Remarks: Borderline hydric soil.

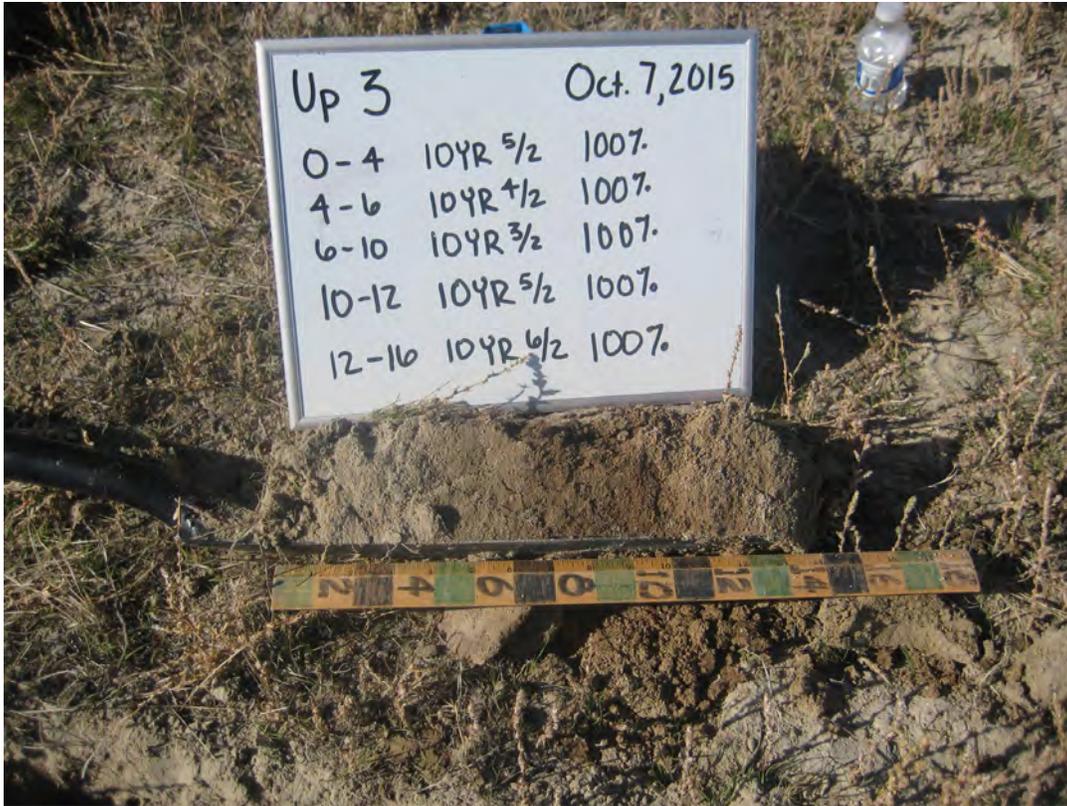
HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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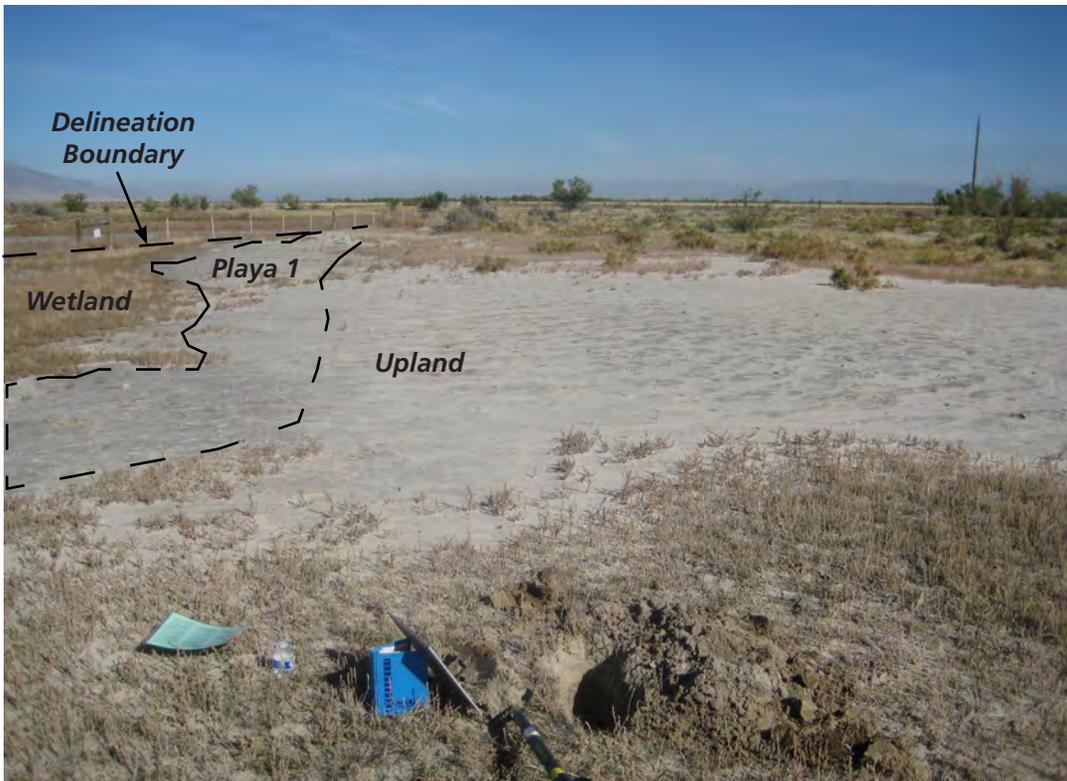
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrology indicators present.



Up 3 – Soil Profile



Up 3 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Wet 4
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.480299 Long: 112.051727 Datum: NAD27
 Soil Map Unit Name: Lasil Silt Loam, 0 to 2% slopes NWI classification: PEMC

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>Sample point located at the bottom of an old ditch adjacent to the North Point Consolidated Canal.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
Herb Stratum				
1. <i>Phragmites australis</i>	45	Yes	FACW	
2. <i>Distichlis spicata</i>	35	Yes	FAC	
3. <i>Juncus arcticus</i>	10		FACW	
4. <i>Schoenoplectus pungens</i>	5		FACW	
5. <i>Hordeum jubatum</i>	5		FAC	
6. _____				
7. _____				
8. _____				
Total Cover: 100%				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust _____ %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>120</u>
FAC species	x 3 =	<u>120</u>
FACU species	x 4 =	<u>0</u>
UPL species	x 5 =	<u>0</u>
Column Totals:	<u>100</u> (A)	<u>240</u> (B)
Prevalence Index = B/A =		<u>2.40</u>

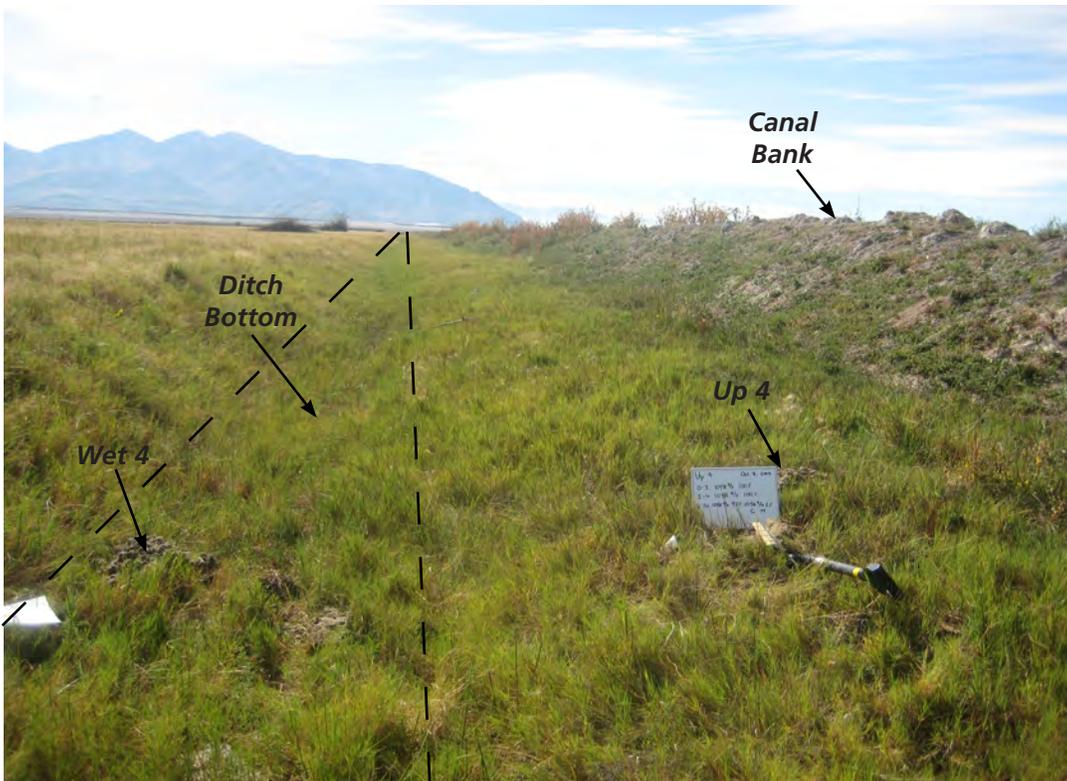
Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Wet 4 – Soil Profile



Wet 4 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up 4
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): D - Interior Deserts Lat: 40.480305 Long: 112.051755 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: PEMC

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Sample point taken in between the North Point Consolidated Canal and the old ditch. Sample point is approximately 1.5 feet higher in elevation than the paired wetland sample point.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
Herb Stratum				
1. <i>Distichlis spicata</i>	80	Yes	FAC	
2. <i>Hordeum jubatum</i>	5		FAC	
3. <i>Schoenoplectus pungens</i>	5		OBL	
4. <i>Juncus arcticus</i>	10		FACW	
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: 100%				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0</u> % % Cover of Biotic Crust _____ %				
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	5	x 1 = 5
FACW species	10	x 2 = 20
FAC species	85	x 3 = 255
FACU species		x 4 = 0
UPL species		x 5 = 0
Column Totals:	100 (A)	280 (B)
Prevalence Index = B/A = <u>2.80</u>		

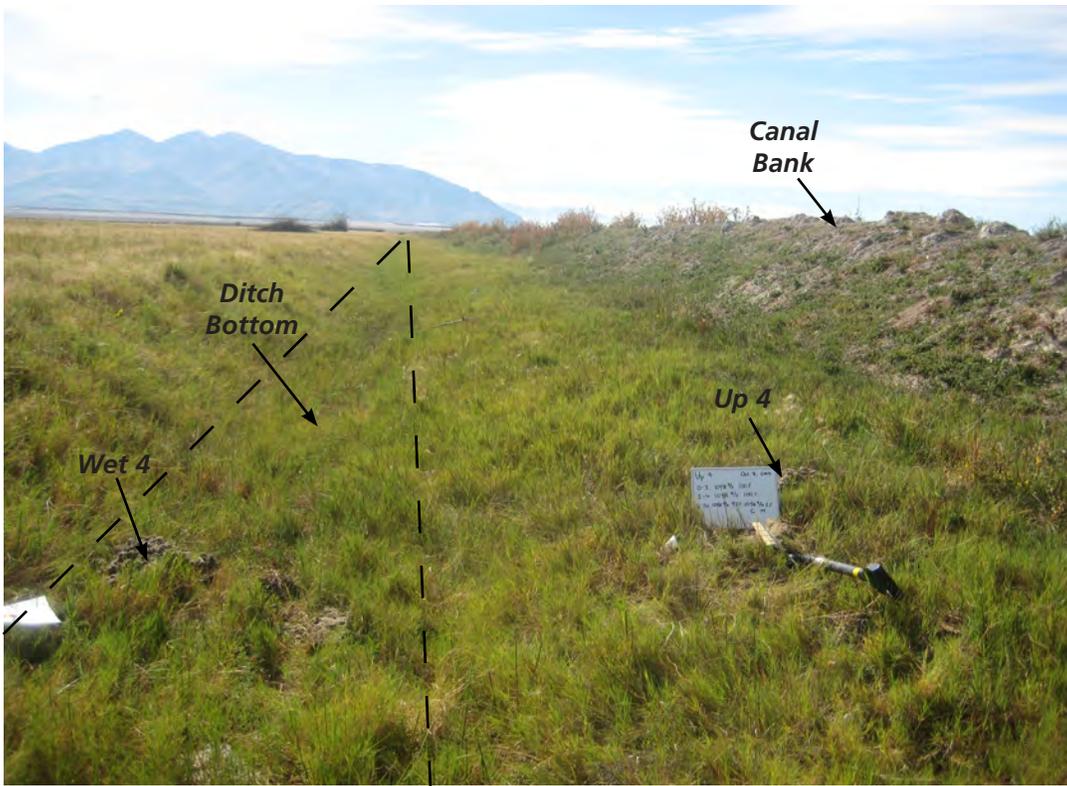
Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up 4 – Soil Profile



Up 4 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Wet 5
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.481641 Long: 112.060452 Datum: NAD27
 Soil Map Unit Name: Lasil Silt Loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Sample point located at the bottom of an old ditch. No paired upland pit due to the adjacent steep slopes. Sample point is located relatively close to the sample point Up Check 1.	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover: %				
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover: %				
Herb Stratum				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover: 62 %				
Woody Vine Stratum				
1.				
2.				
Total Cover: %				
% Bare Ground in Herb Stratum <u>38 %</u>		% Cover of Biotic Crust _____ %		
Remarks: Juvenile phragmites. Thick rhizomes in soil.				

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	<u>0</u>
FACW species	<u>62</u>	x 2 =	<u>124</u>
FAC species		x 3 =	<u>0</u>
FACU species		x 4 =	<u>0</u>
UPL species		x 5 =	<u>0</u>
Column Totals:	<u>62</u>	(A)	<u>124</u> (B)
Prevalence Index = B/A =			<u>2.00</u>

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Wet 5 – Soil Profile



Wet 5 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk1
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.481827 Long: 112.055858 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Distichlis spicata</i>	80	Yes	FAC	
2. <i>Bromus tectorum</i>	10		UPL	
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover:	90 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum	10 %	% Cover of Biotic Crust	%	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	80 x 3 =	240
FACU species	x 4 =	0
UPL species	10 x 5 =	50
Column Totals:	90 (A)	290 (B)
Prevalence Index = B/A =		3.22

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 1 – Soil Profile



Up Check 1 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/5/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 2
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.480842 Long: 112.054354 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: PEMC

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. <i>Allenrolfea occidentalis</i>	40	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: 40 %				
Herb Stratum				
1. <i>Hordeum pusillum</i>	28	Yes	FACU	
2. <i>Bassia hyssopifolia</i>	10	Yes	FAC	
3. <i>Atriplex patula</i>	2		FACW	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: 40 %				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>20 %</u>	% Cover of Biotic Crust _____ %			
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>84</u>
FAC species	x 3 =	<u>30</u>
FACU species	x 4 =	<u>112</u>
UPL species	x 5 =	<u>0</u>
Column Totals:	<u>80</u> (A)	<u>226</u> (B)
Prevalence Index = B/A =		<u>2.83</u>

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 2 – Soil Profile



Up Check 2 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 3
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.484056 Long: 112.054537 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: L2USA

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Hordeum pusillum</i>	35	Yes	FACU	
2. <i>Bassia hyssopifolia</i>	55	Yes	FAC	
3. <i>Sesuvium verrucosum</i>	5		FACW	
4.				
5.				
6.				
7.				
8.				
Total Cover:	95 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum <u>5 %</u>		% Cover of Biotic Crust <u> % </u>		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

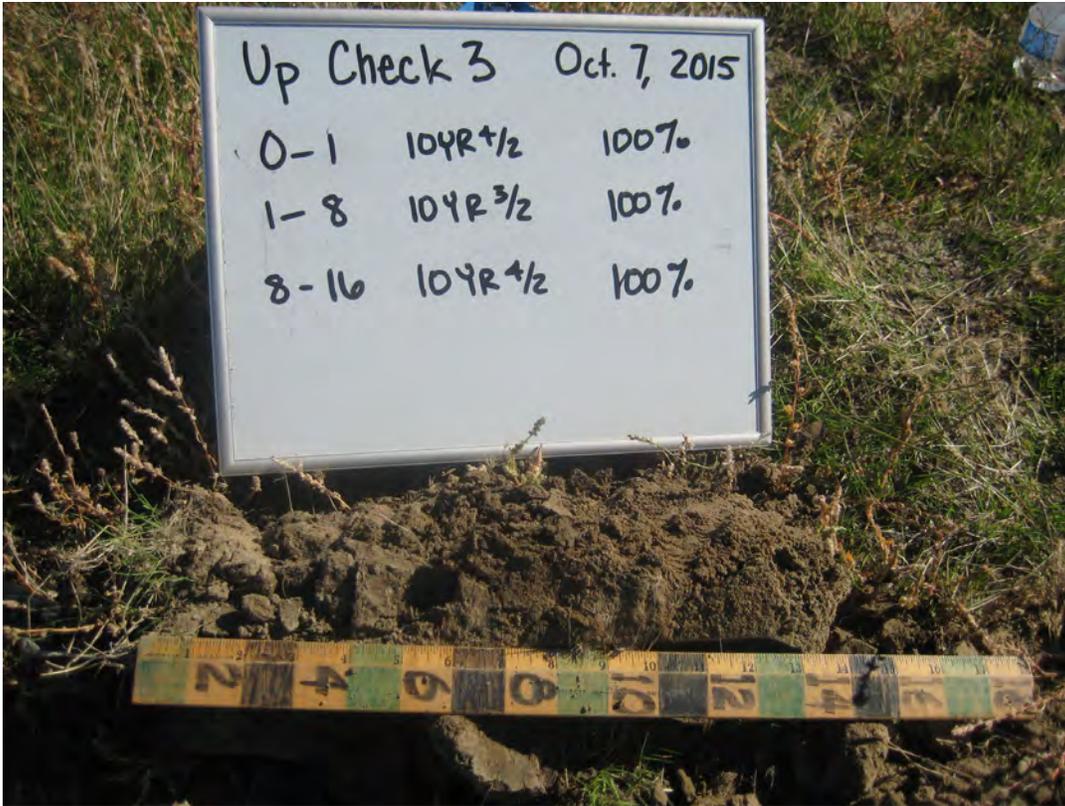
Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>10</u>
FAC species	x 3 =	<u>165</u>
FACU species	x 4 =	<u>140</u>
UPL species	x 5 =	<u>0</u>
Column Totals:	<u>95</u> (A)	<u>315</u> (B)
Prevalence Index = B/A =		<u>3.32</u>

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 3 – Soil Profile



Up Check 3 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 4
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.483149 Long: 112.054628 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: Freshwater Pond

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1. <i>Allenrolfea occidentalis</i>	10	Yes	FACW	
2.				
3.				
4.				
5.				
Total Cover:	10 %			
Herb Stratum				
1. <i>Hordeum pusillum</i>	25	Yes	FACU	
2. <i>Bassia hyssopifolia</i>	25	Yes	FAC	
3. <i>Distichlis spicata</i>	25	Yes	FAC	
4.				
5.				
6.				
7.				
8.				
Total Cover:	75 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum <u>15 %</u>	% Cover of Biotic Crust _____ %			
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	20
FAC species	x 3 =	150
FACU species	x 4 =	100
UPL species	x 5 =	0
Column Totals:	85 (A)	270 (B)
Prevalence Index = B/A =		3.18

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: Up Chk 4

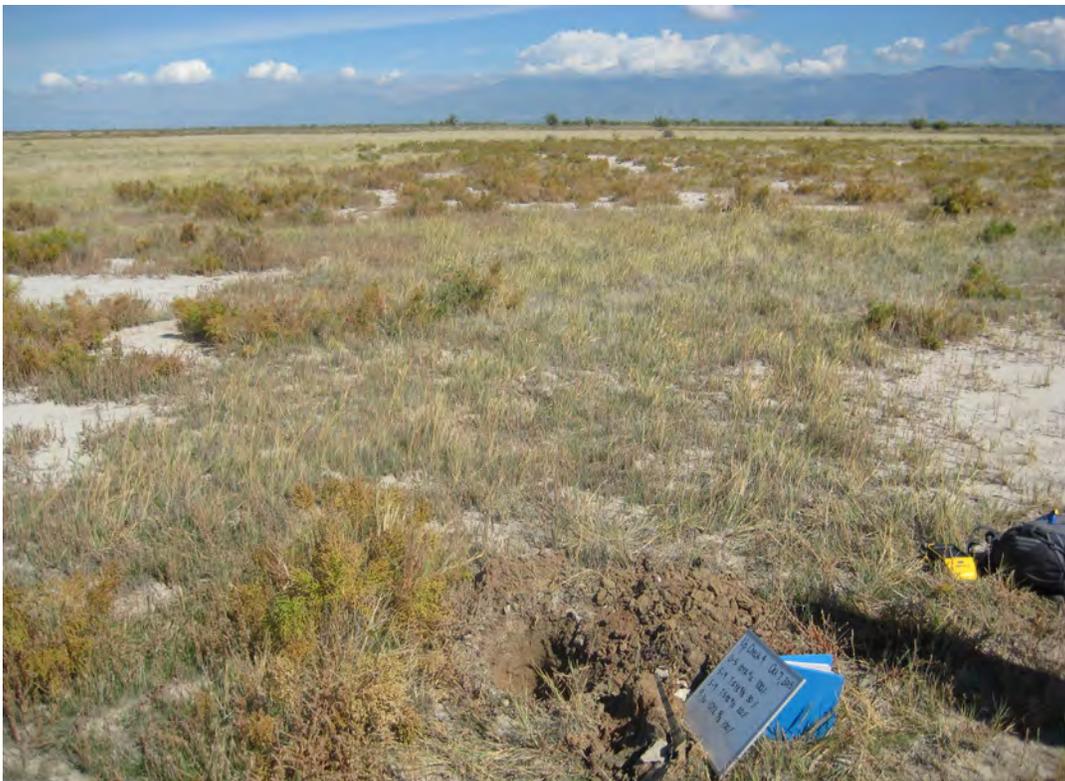
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-5	10YR 4/2	100				Silt loam	
5-9	7.5YR 5/3	80				Sandy clay loam	
5-9	7.5YR 4/2	20				Sandy clay loam	
9-16	10YR 5/3	100				Clay loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ² Location: PL=Pore Lining, RC=Root Channel, M=Matrix. ³ Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.							
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils:⁴			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Red Parent Material (TF2)	<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stratified Layers (A5) (LRR C)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
Restrictive Layer (if present):						Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Type: _____							
Depth (inches): _____							
Remarks: No hydric soil indicators.							

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)			
Primary Indicators (any one indicator is sufficient)							
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<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) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:				Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____		Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____		Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____		Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: No hydrology indicators.							



Up Check 4 – Soil Profile



Up Check 4 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 5
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.475730 Long: 112.055673 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
Herb Stratum				
1. <i>Distichlis spicata</i>	60	Yes	FAC	
2. <i>Polygonum aviculare</i>	10		FACW	
3. <i>Poa secunda</i>	20	Yes	FACU	
4. <i>Bromus tectorum</i>	10		UPL	
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: 100%				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust _____ %			
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>20</u>
FAC species	x 3 =	<u>180</u>
FACU species	x 4 =	<u>80</u>
UPL species	x 5 =	<u>50</u>
Column Totals:	<u>100</u> (A)	<u>330</u> (B)
Prevalence Index = B/A =		<u>3.30</u>

Hydrophytic Vegetation Indicators:

Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: Up Chk 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-4	10YR 3/2	100				Loam	
4-8	10YR 4/3	100				Silty clay	
8-12	10YR 3/2	100				Silty clay	

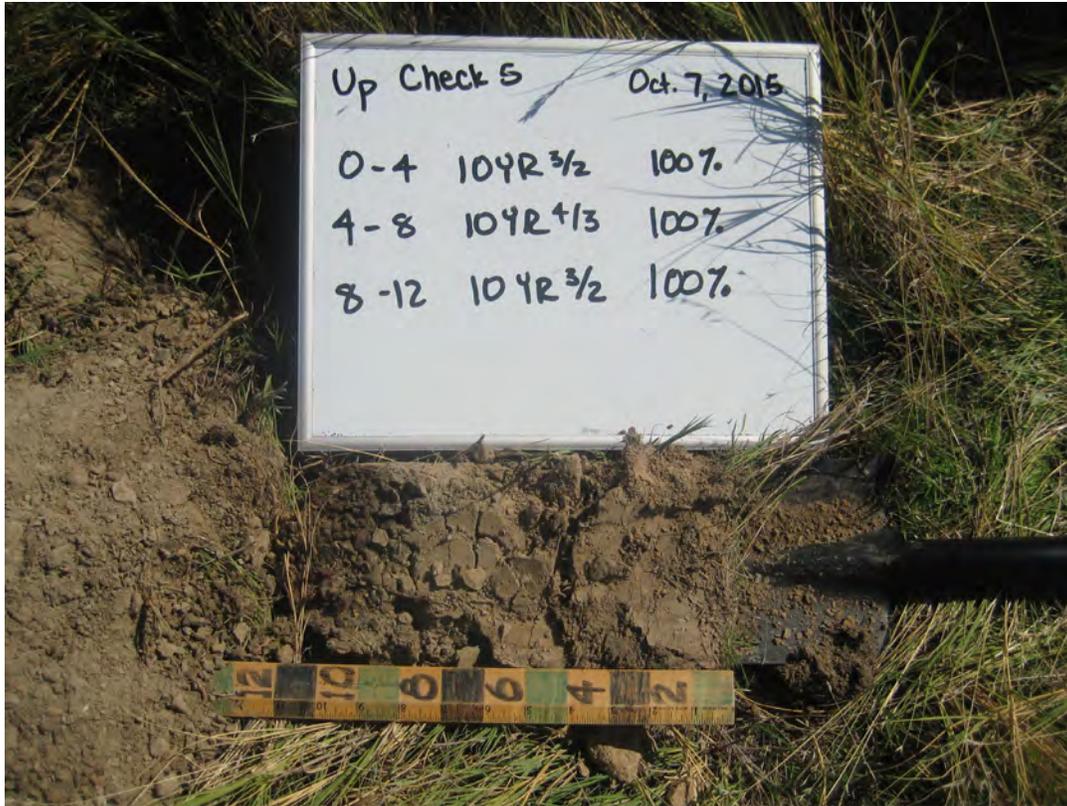
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils: ⁴
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
⁴ Indicators of hydrophytic vegetation and wetland hydrology must be present.	

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

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrology indicators.	



Up Check 5 – Soil Profile



Up Check 5 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 6
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.481764 Long: 112.054017 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: PEMC

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover: %				
Sapling/Shrub Stratum				
1. <i>Allenrolfea occidentalis</i>	25	Yes	FACW	
2. <i>Krascheninnikovia lanata</i>	10	Yes	UPL	
3.				
4.				
5.				
Total Cover: 35 %				
Herb Stratum				
1. <i>Hordeum pusillum</i>	25	Yes	FACU	
2. <i>Bassia hyssopifolia</i>	5		FAC	
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover: 30 %				
Woody Vine Stratum				
1.				
2.				
Total Cover: %				
% Bare Ground in Herb Stratum 35 %	% Cover of Biotic Crust %			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species		x 1 =	 0	
FACW species	 25	x 2 =	 50	
FAC species	 5	x 3 =	 15	
FACU species	 25	x 4 =	 100	
UPL species	 10	x 5 =	 50	
Column Totals:	 65 (A)		 215 (B)	
Prevalence Index = B/A =			 3.31	

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No

Remarks:

SOIL

Sampling Point: Up Chk 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-10	10YR 4/2	100				Silty clay	
10-12	7.5YR 3/2	100				Silty clay	Hardpan 10-12"
12-16	7.5YR 5/3	100				Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils: ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<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 (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)	

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

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

Remarks: Highly compact soil. No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<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 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 along 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"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

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

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

Remarks: No hydrology indicators.



Up Check 6 – Soil Profile



Up Check 6 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/7/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 7
 Investigator(s): T. Johnson, M. Haupt, R. Pitts Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.481764 Long: 112.054017 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: PEMC

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover: %				
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover: %				
Herb Stratum				
1. <i>Muhlenbergia asperifolia</i>	15	Yes	FACW	
2. <i>Iva axillaris</i>	3		FAC	
3. <i>Atriplex patula</i>	5		FACW	
4. <i>Distichlis spicata</i>	65	Yes	FAC	
5. <i>Malvella leprosa</i>	2		FACU	
6. <i>Poa secunda</i>	5		FACU	
7. <i>Hordeum jubatum</i>	5		FAC	
8.				
Total Cover: 100%				
Woody Vine Stratum				
1.				
2.				
Total Cover: %				
% Bare Ground in Herb Stratum 0 %		% Cover of Biotic Crust %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	 	x 1 = 0
FACW species	20	x 2 = 40
FAC species	73	x 3 = 219
FACU species	7	x 4 = 28
UPL species	 	x 5 = 0
Column Totals:	 100 (A)	 287 (B)
Prevalence Index = B/A =		 2.87

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 7 – Soil Profile



Up Check 7 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 8
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.484379 Long: 112.050386 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Rhaponticum repens</i>	35	Yes	UPL	
2. <i>Bromus tectorum</i>	35	Yes	UPL	
3. <i>Muhlenbergia asperifolia</i>	20	Yes	FACW	
4. <i>Distichlis spicata</i>	8		FAC	
5. <i>Polygonum aviculare</i>	2		FACW	
6.				
7.				
8.				
Total Cover:	100%			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust _____ %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 % (A/B)

Prevalence Index worksheet:

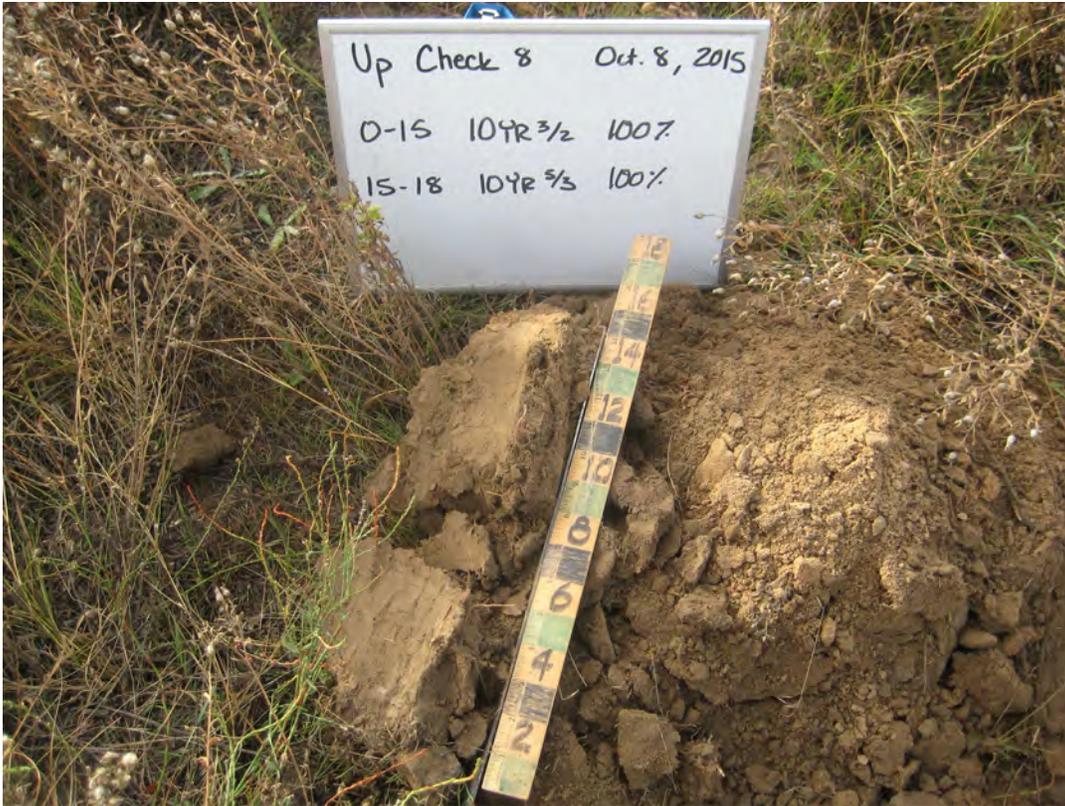
Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>44</u>
FAC species	x 3 =	<u>24</u>
FACU species	x 4 =	<u>0</u>
UPL species	x 5 =	<u>350</u>
Column Totals:	<u>100</u> (A)	<u>418</u> (B)
Prevalence Index = B/A =		<u>4.18</u>

Hydrophytic Vegetation Indicators:

Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 8 – Soil Profile



Up Check 8 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Chk 9
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.483017 Long: 112.050456 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Rhaponticum repens</i>	25	Yes	UPL	
2. <i>Polygonum aviculare</i>	15		FACW	
3. <i>Erodium cicutarium</i>	10		UPL	
4. <i>Distichlis spicata</i>	35	Yes	FAC	
5. <i>Bromus tectorum</i>	15		UPL	
6.				
7.				
8.				
Total Cover:	100%			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust _____ %		
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>30</u>
FAC species	x 3 =	<u>105</u>
FACU species	x 4 =	<u>0</u>
UPL species	x 5 =	<u>250</u>
Column Totals:	100 (A)	385 (B)
Prevalence Index = B/A =		<u>3.85</u>

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 9 – Soil Profile



Up Check 9 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Ck 10
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.484283 Long: 112.052357 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:				
Sapling/Shrub Stratum				
1. <i>Allenrolfea occidentalis</i>	15	Yes	FACW	
2.				
3.				
4.				
5.				
Total Cover:	15			
Herb Stratum				
1. <i>Bromus tectorum</i>	35	Yes	UPL	
2. <i>Descurainia sophia</i>	13		UPL	
3. <i>Erodium cicutarium</i>	12		UPL	
4. <i>Distichlis spicata</i>	15		FAC	
5. <i>Atriplex patula</i>	5		FACW	
6. <i>Hordeum pusillum</i>	5		FACU	
7.				
8.				
Total Cover:	85			
Woody Vine Stratum				
1.				
2.				
Total Cover:				
% Bare Ground in Herb Stratum	0	%	% Cover of Biotic Crust	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species		x 1 =	0	
FACW species	20	x 2 =	40	
FAC species	15	x 3 =	45	
FACU species	5	x 4 =	20	
UPL species	60	x 5 =	300	
Column Totals:	100	(A)	405	(B)
Prevalence Index = B/A =			4.05	

Hydrophytic Vegetation Indicators:

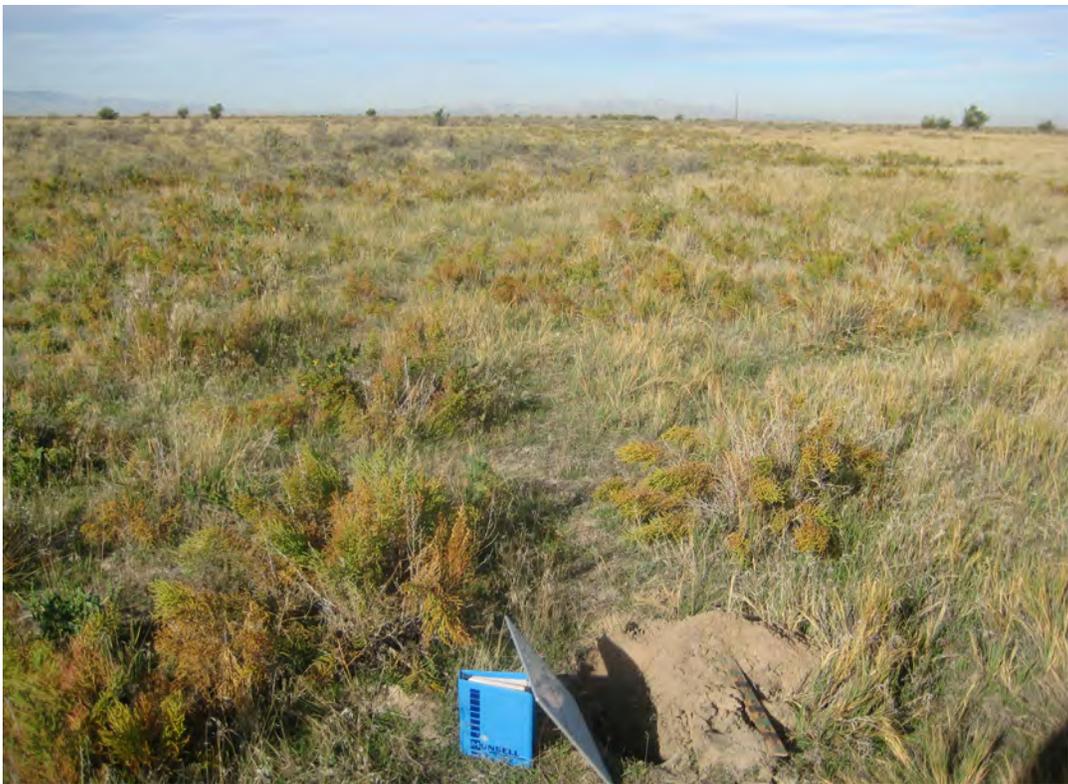
- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 10 – Soil Profile



Up Check 10 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Ck 11
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.483254 Long: 112.052250 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	%			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	%			
Herb Stratum				
1. <i>Bromus tectorum</i>	50	Yes	UPL	
2. <i>Distichlis spicata</i>	30	Yes	FAC	
3. <i>Malvella leprosa</i>	10		FACU	
4. <i>Polygonum aviculare</i>	10		FACW	
5.				
6.				
7.				
8.				
Total Cover:	100%			
Woody Vine Stratum				
1.				
2.				
Total Cover:	%			
% Bare Ground in Herb Stratum	0 %	% Cover of Biotic Crust	%	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	10 x 2 =	20
FAC species	30 x 3 =	90
FACU species	10 x 4 =	40
UPL species	50 x 5 =	250
Column Totals:	100 (A)	400 (B)
Prevalence Index = B/A =		4.00

Hydrophytic Vegetation Indicators:

Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 11 – Soil Profile



Up Check 11 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Ck 12
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.480700 Long: 112.052125 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	█ %			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	█ %			
Herb Stratum				
1. <i>Bromus tectorum</i>	40	Yes	UPL	
2. <i>Distichlis spicata</i>	25	Yes	FAC	
3. <i>Hordeum pusillum</i>	15		FACU	
4. <i>Polygonum aviculare</i>	10		FACW	
5. <i>Poa secunda</i>	10		FACU	
6.				
7.				
8.				
Total Cover:	100 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	█ %			
% Bare Ground in Herb Stratum	0 %	% Cover of Biotic Crust	█ %	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

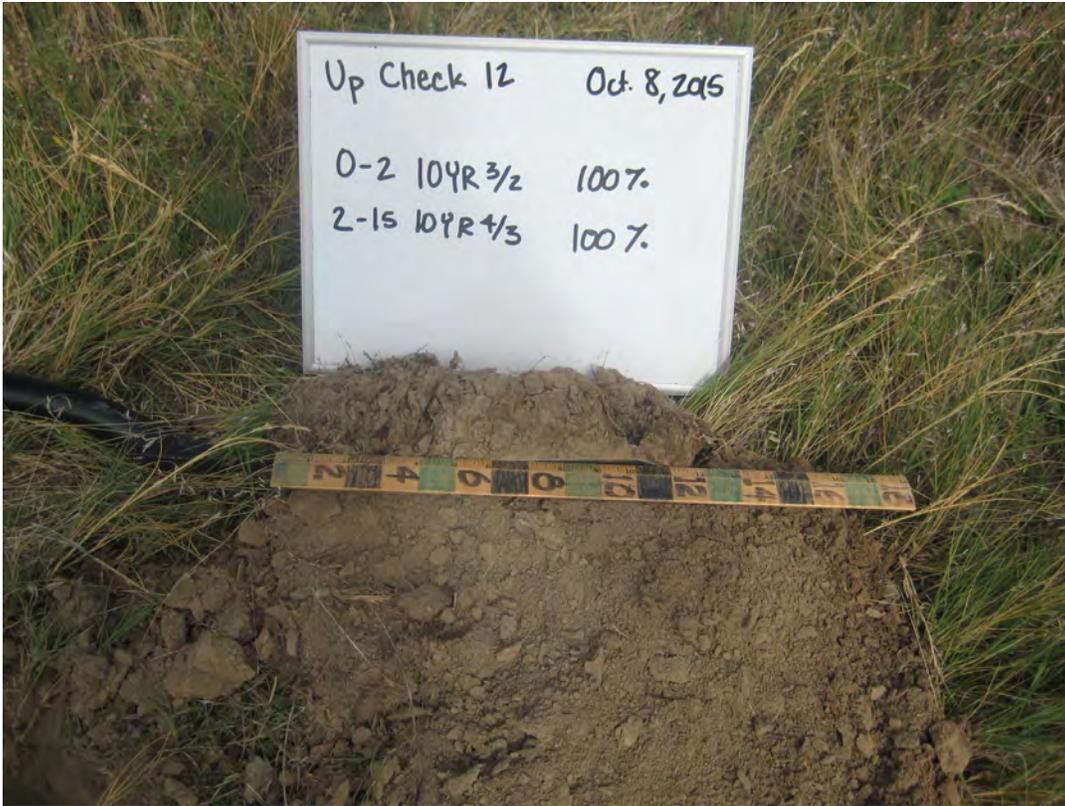
Total % Cover of:		Multiply by:		
OBL species	█	x 1 =	0	
FACW species	10	x 2 =	20	
FAC species	25	x 3 =	75	
FACU species	25	x 4 =	100	
UPL species	40	x 5 =	200	
Column Totals:	100 (A)		395 (B)	
Prevalence Index = B/A =			3.95	

Hydrophytic Vegetation Indicators:

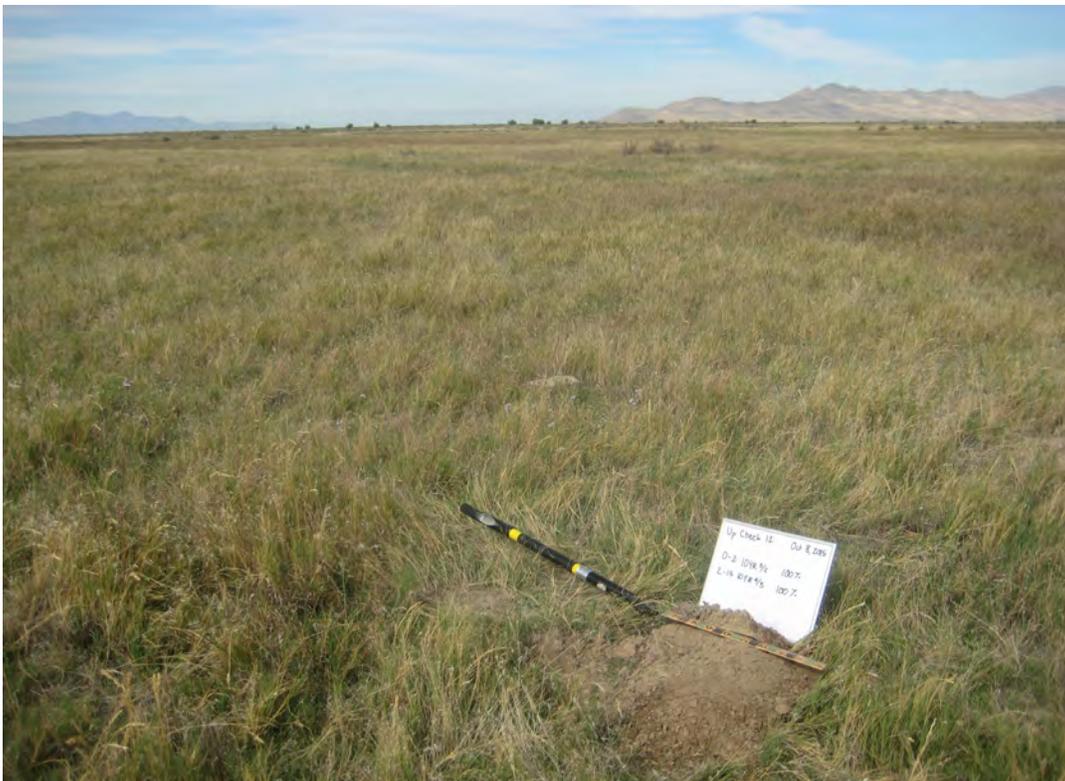
- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 12 – Soil Profile



Up Check 12 – General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Ck 13
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.475586 Long: 112.050915 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	█ %			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	█ %			
Herb Stratum				
1. <i>Bromus tectorum</i>	10		UPL	
2. <i>Distichlis spicata</i>	50	Yes	FAC	
3. <i>Hordeum pusillum</i>	10		FACU	
4. <i>Polygonum aviculare</i>	5		FACW	
5. <i>Poa secunda</i>	15		FACU	
6.				
7.				
8.				
Total Cover:	90 %			
Woody Vine Stratum				
1.				
2.				
Total Cover:	█ %			
% Bare Ground in Herb Stratum	10 %	% Cover of Biotic Crust	█ %	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	█	x 1 = 0
FACW species	5	x 2 = 10
FAC species	50	x 3 = 150
FACU species	25	x 4 = 100
UPL species	10	x 5 = 50
Column Totals:	90 (A)	310 (B)
Prevalence Index = B/A =		3.44

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 13 - Soil Profile



Up Check 13 - General Conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Prison Site #1 City/County: Salt Lake County Sampling Date: 10/8/2015
 Applicant/Owner: DFCM State: UT Sampling Point: Up Ck 14
 Investigator(s): T. Johnson, M. Haupt Section, Township, Range: 20, T1N, R2W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D - Interior Deserts Lat: 40.475785 Long: 112.052213 Datum: NAD27
 Soil Map Unit Name: Lasil silt loam, 0 to 2% slopes NWI classification: PEMC

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
Total Cover:	█ %			
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:	█ %			
Herb Stratum				
1. <i>Malvella leprosa</i>	5		FACU	
2. <i>Distichlis spicata</i>	45	Yes	FAC	
3. <i>Hordeum pusillum</i>	33	Yes	FACU	
4. <i>Polygonum aviculare</i>	5		FACW	
5. <i>Poa secunda</i>	10		FACU	
6. <i>Atriplex patula</i>	2		FACW	
7.				
8.				
Total Cover:	100%			
Woody Vine Stratum				
1.				
2.				
Total Cover:	█ %			
% Bare Ground in Herb Stratum	0 %	% Cover of Biotic Crust	█ %	
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	14
FAC species	x 3 =	135
FACU species	x 4 =	192
UPL species	x 5 =	0
Column Totals:		100 (A) 341 (B)
Prevalence Index = B/A =		3.41

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No



Up Check 14 – Soil Profile



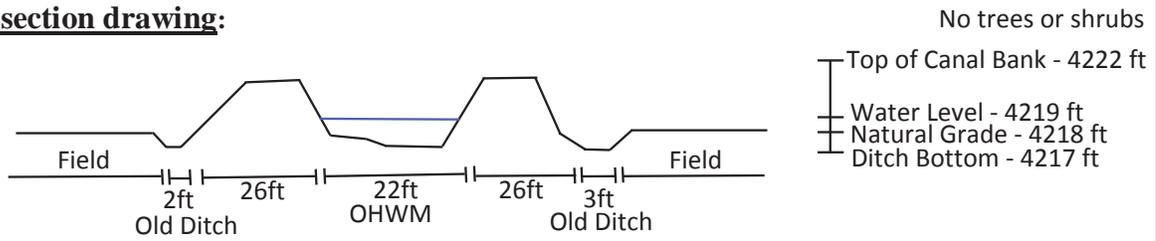
Up Check 14 – General Conditions

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: DFCM Prison Site #1 Project Number: Stream: North Point Consolidated Canal Investigator(s): T. Johnson, M. Haupt	Date: 10/8/2015 Time: 1100 Town: Salt Lake County State: Utah Photo begin file#: Photo end file#:
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	Location Details: Projection: Datum: NAD 27 Coordinates: 40.481437N 112.050312W
Potential anthropogenic influences on the channel system: Man made canal	
Brief site description: Flat, alkali grazed rangeland. Canal was flowing full at the time of the field visit.	
Checklist of resources (if available): <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data Dates: Gage number: <input checked="" type="checkbox"/> Topographic maps Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other:	

Project ID: **Cross section ID:** **Date:** 10/8/2015 **Time:** 1100

Cross section drawing:



OHWM

GPS point: North Point Consolidated Canal

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments:

Water level in canal appears to be higher than surrounding land.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____
 Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

- Community successional stage:
- | | |
|---|--|
| <input type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|---|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:

No active floodplain.



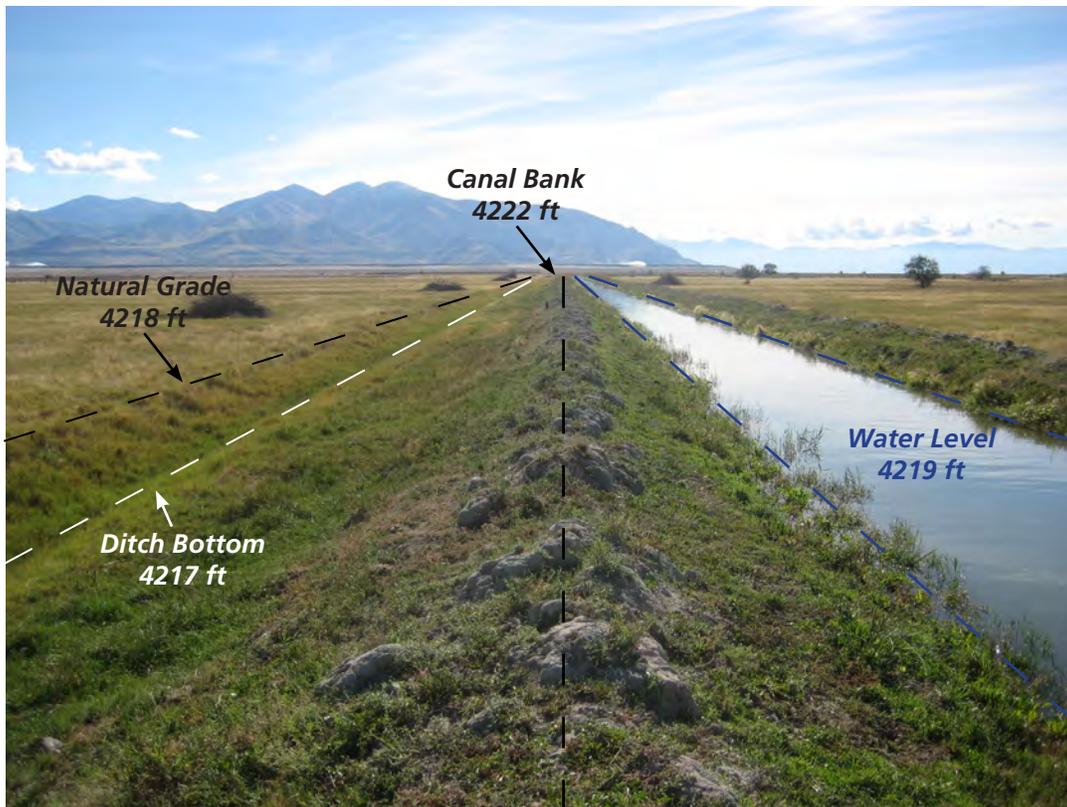
North Point Consolidated Canal – Southwest Corner of Delineation Study Area Looking East



North Point Consolidated Canal - South of Access Road Looking Southwest



North Point Consolidated Canal – North of Access Road Looking Northeast



North Point Consolidated Canal – Water Level and Elevation Changes

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: DFCM Prison Site #1		Date: 10/8/2015	Time: 1500
Project Number:		Town: Salt Lake County	State: Utah
Stream: Unnamed Canal		Photo begin file#:	Photo end file#:
Investigator(s): T. Johnson, M. Haupt			
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details:	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		Projection:	Datum: NAD27
Coordinates: 40.480948N 112.045651W			
Potential anthropogenic influences on the channel system: Man made ditch			
Brief site description: Flat, alkali grazed rangeland. Canal was flowing full at the time of the field visit.			
Checklist of resources (if available):			
<input checked="" type="checkbox"/> Aerial photography Dates:		<input type="checkbox"/> Stream gage data Gage number:	
<input checked="" type="checkbox"/> Topographic maps		Period of record:	
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges	
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis	
<input type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating	
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
<input type="checkbox"/> Existing delineation(s) for site			
<input checked="" type="checkbox"/> Global positioning system (GPS)			
<input type="checkbox"/> Other studies			
<p>Hydrogeomorphic Floodplain Units</p>			
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:			
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.			
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.			
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.			
a) Record the floodplain unit and GPS position.			
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.			
c) Identify any indicators present at the location.			
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.			
5. Identify the OHWM and record the indicators. Record the OHWM position via:			
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS	
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:	

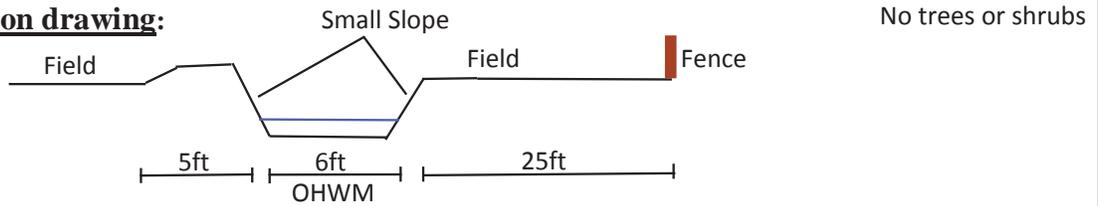
Project ID:

Cross section ID:

Date: 10/8/2015

Time: 1500

Cross section drawing:



OHWM

GPS point: Canal _____

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments:

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|---|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:

No active floodplain.



Unnamed Canal - North of Road Looking North



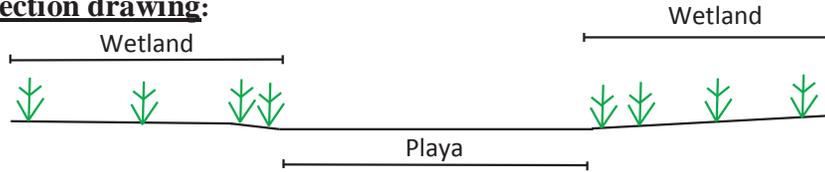
Unnamed Canal - South of Road Looking South

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: DFCM - Prison Site #1		Date: 10/6/2015	Time: 1100
Project Number:		Town: Salt Lake County	State: Utah
Stream: Playa #1 and Playa #2		Photo begin file#:	Photo end file#:
Investigator(s): T. Johnson, M. Haupt, R. Pitts			
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details:	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		Projection:	Datum: NAD 27
Coordinates: 40.484286N 112.054777W			
Potential anthropogenic influences on the channel system: Multiple canals in the area. Canals on adjacent property provide hydrology for adjacent playas.			
Brief site description: Unvegetated playa contiguous with playa on adjacent property to the west.			
Checklist of resources (if available):			
<input checked="" type="checkbox"/> Aerial photography Dates:		<input type="checkbox"/> Stream gage data Gage number:	
<input checked="" type="checkbox"/> Topographic maps		Period of record:	
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges	
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis	
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating	
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
<input type="checkbox"/> Existing delineation(s) for site			
<input checked="" type="checkbox"/> Global positioning system (GPS)			
<input type="checkbox"/> Other studies			
<p>Hydrogeomorphic Floodplain Units</p>			
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:			
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.			
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.			
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.			
a) Record the floodplain unit and GPS position.			
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.			
c) Identify any indicators present at the location.			
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.			
5. Identify the OHWM and record the indicators. Record the OHWM position via:			
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS	
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:	

Project ID: _____ **Cross section ID:** _____ **Date:** 10/6/2015 **Time:** 1100

Cross section drawing:



OHWM

GPS point: Playa #1 and Playa #2 _____

Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments: Playas 1 and 2 are part of a larger playa system located on the adjacent property. The boundaries only include areas with less than 5% ground cover of living vegetation. These playas were not ponding water at the time of the delineation. However, it is anticipated that they site could pond water.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____
 Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|---|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:



Playa 1 - General Conditions



Playa 2 - General Conditions



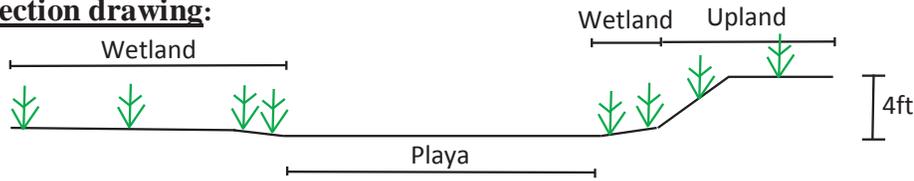
Playa 1 - Evidence of OHWM Rust on Adjacent Fence

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: DFCM - Prison Site #1 Project Number: Stream: Playa #3 Investigator(s): T. Johnson, M. Haupt	Date: 10/5/2015 Time: 1310 Town: State: Utah Photo begin file#: Photo end file#:
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	Location Details: Projection: Datum: NAD 27 Coordinates: 40.483233N 112.060114W
Potential anthropogenic influences on the channel system: Multiple canals in the area. Canals on adjacent property provide hydrology for adjacent playas.	
Brief site description: Unvegetated playa within a concave basin adjacent to a steep slope	
Checklist of resources (if available): <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data Dates: Gage number: <input checked="" type="checkbox"/> Topographic maps Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the <input type="checkbox"/> Existing delineation(s) for site most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other:	

Project ID: _____ **Cross section ID:** _____ **Date:** 10/5/2015 **Time:** 1310

Cross section drawing:



OHWM

GPS point: Playa #3 _____

Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments: Playa 3 is part of a larger playa system located on the adjacent property. The playa boundary only includes areas with less than 5% ground cover of living vegetation. The playa was not ponding water at the time of the delineation. However, it is anticipated that the site could pond water.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____
 Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|---|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:



Playa 3 - General Conditions



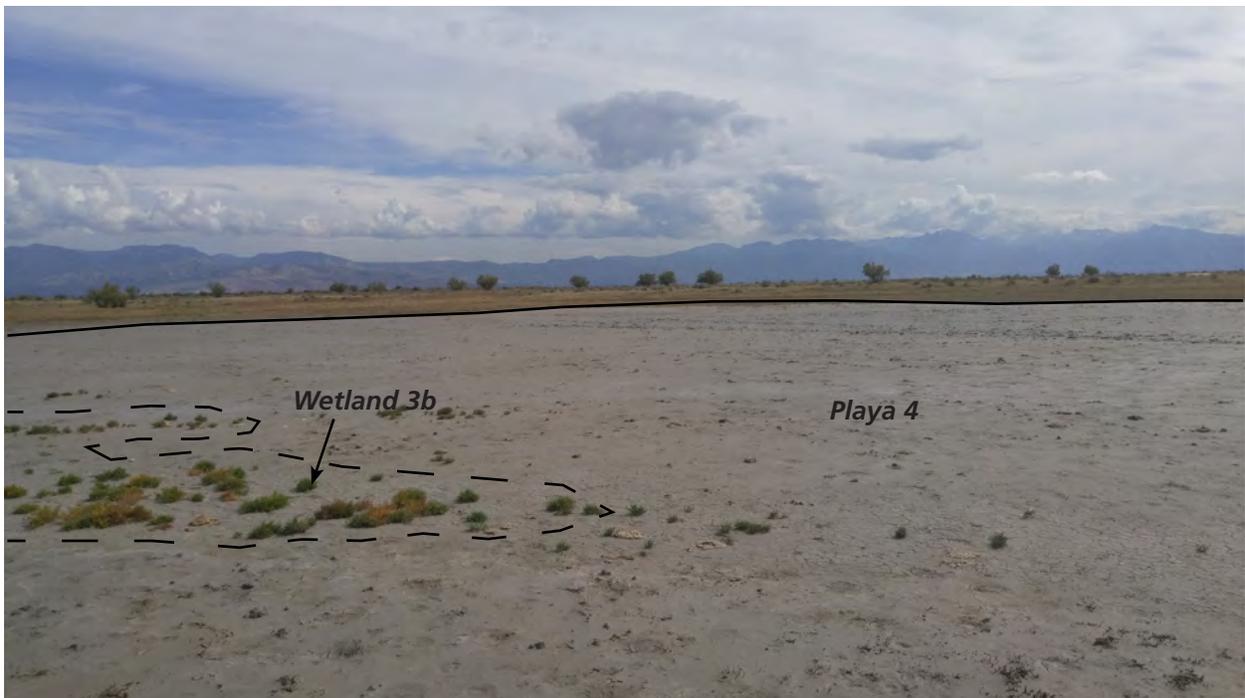
Playa 3 - Evidence of OHWM Rust on Adjacent Fence

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: DFCM - Prison Site #1 Project Number: Stream: Playa #4 Investigator(s): T. Johnson, M. Haupt	Date: 10/5/2015 Time: 1240 Town: Salt Lake County State: Utah Photo begin file#: Photo end file#:				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	Location Details: Projection: Datum: NAD 27 Coordinates: 40.483233N 112.060114W				
Potential anthropogenic influences on the channel system: Multiple canals in the area. Canals on adjacent property provide hydrology for adjacent playas.					
Brief site description: Unvegetated playa within a concave basin					
Checklist of resources (if available): <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"> <input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width:50%; border: none;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>		<input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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<p>Hydrogeomorphic Floodplain Units</p>					
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<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS				
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:				



Playa 4 - General Conditions Looking Northwest



Playa 4 - General Conditions Looking Southeast