



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

CESPK-RDI-U

4 APRIL 2023

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Pre-2015 Regulatory Regime
Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322
(2023),¹ SPK-2004-50019-UO (MFR 1 of 1)²

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.³ AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.⁴ For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),⁵ the Clean Water Act (CWA) implementing regulations published by the Department of the Army in 1986 and amended in 1993 (references 2.a. and 2.b. respectively), the 2008 *Rapanos-Carabell* guidance (reference 2.c.), and other applicable guidance, relevant case law and longstanding practice, (collectively the pre-2015 regulatory regime), and the *Sackett* decision (reference 2.d.) in evaluating jurisdiction.

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. The features addressed in this AJD were evaluated consistent with the definition of “waters of the United States” found in the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. This

¹ While the Supreme Court's decision in *Sackett* had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.

² When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, interstate water, or territorial seas that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).

³ 33 CFR 331.2.

⁴ Regulatory Guidance Letter 05-02.

⁵ USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

Enclosure 3

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AJD did not rely on the 2023 “Revised Definition of ‘Waters of the United States,’” as amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable in Utah due to litigation.

1. SUMMARY OF CONCLUSIONS. The following is a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

- a. W1 (Surplus Canal), Jurisdictional under Section 404 of the Clean Water Act.
- b. W2, Jurisdictional under Section 404 of the Clean Water Act.
- c. W3 (Conveyance System), Jurisdictional under Section 404 of the Clean Water Act.
- d. W4A, Jurisdictional under Section 404 of the Clean Water Act.
- e. W4B-North (N), Jurisdictional under Section 404 of the Clean Water Act.
- f. W4B-South (S), Jurisdictional under Section 404 of the Clean Water Act.
- g. W4C, Jurisdictional under Section 404 of the Clean Water Act.
- h. W4D, Jurisdictional under Section 404 of the Clean Water Act.
- i. W5, Jurisdictional under Section 404 of the Clean Water Act.
- j. W6, Jurisdictional under Section 404 of the Clean Water Act.
- k. W7, Jurisdictional under Section 404 of the Clean Water Act.
- l. W8, Non-jurisdictional under Section 404 of the Clean Water Act.
- m. W9, Non-jurisdictional under Section 404 of the Clean Water Act.
- n. W10 (North Point Canal), Jurisdictional under Section 404 of the Clean Water Act.
- o. W11, Jurisdictional under Section 404 of the Clean Water Act.
- p. W12, Jurisdictional under Section 404 of the Clean Water Act.
- q. W13, Jurisdictional under Section 404 of the Clean Water Act.

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2. REFERENCES.

- a. Final Rule for Regulatory Programs of the Corps of Engineers, 51 FR 41206 (November 13, 1986).
- b. Clean Water Act Regulatory Programs, 58 FR 45008 (August 25, 1993).
- c. U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States* (December 2, 2008)
- d. *Sackett v. EPA*, 598 U.S. ___, 143 S. Ct. 1322 (2023)
- e. Memorandum on NWO-2003-60436 signed on 19 December 2023.

3. REVIEW AREA. The approximately 280-acre review area is located in Sections 31, 32, and 33 of Township 1N, and Sections 4 and 5 of Township 1S in Range 1W, Latitude 40.794679°, Longitude -111.980986°, Salt Lake City, Salt Lake County, Utah (AJD MFR Enclosure 1).

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), INTERSTATE WATER, OR THE TERRITORIAL SEAS TO WHICH THE AQUATIC RESOURCE IS CONNECTED. The nearest TNW is the Great Salt Lake (GSL). The GSL is a "navigable water" for purposes of the Clean Water Act (CWA) and is considered as "traditional navigable waters" and therefore jurisdictional under 33 C.F.R. §328.3(a)(1) and 40 C.F.R. §230.3(s)(1). Waters are traditional navigable waters if they meet one of the following criteria:

- a. Are subject to section 9 or 10 of the Rivers and Harbors Appropriations Act of 1899;
- b. Have been determined by a Federal court to be navigable-in-fact under Federal law;
- c. Are waters currently being used for commercial navigation, including commercial waterborne recreation (for example, boat rentals, guided fishing trips, or water ski tournaments);
- d. Have historically been used for commercial navigation, including commercial waterborne recreation; or
- e. Are susceptible to being used in the future for commercial navigation, including commercial waterborne recreation.

The GSL meets Criteria 2, above, having been found navigable-in-fact under Federal law in *Utah v. United States*, 403 U.S. 9 (1971). Thus, the GSL is a "traditional navigable water" and is regulated by the Corps under Section 404 of the CWA.

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5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, INTERSTATE WATER, OR THE TERRITORIAL SEAS.

The primary source of hydrology within the review area is the result of W1 (Surplus Canal), W3 (Conveyance System), and W10 (North Point Canal) plus some hydrology sourced directly from stormwater runoff. W1 (Surplus Canal) diverts water from the Jordan River and flows through the review area before it continues north of the airport and discharges into Farmington Bay of the GSL, the nearest TNW. W3 (Conveyance System) is a controlled diversion of W1 (Surplus Canal), which flows through the middle of the review area. This diversion was made to create ponded areas for the abandoned golf course. The hydrology ultimately leaves the site through two main paths, via W1 (Surplus Canal) and thru W3 (Conveyance System)/ W10 (North Point Canal).

Both of these flow paths have additional points of diversion downstream of the review area, all of which connect to the GSL as shown on the enclosed flow map (AJD MFR Enclosure 2).

6. SECTION 10 JURISDICTIONAL WATERS⁶: There are no aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899.⁷

7. SECTION 404 JURISDICTIONAL WATERS: The following aquatic resources within the review area (AJD MFR Enclosure 3) meet the definition of waters of the United States in accordance with the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*.

- a. TNWs (a)(1): None.
- b. Interstate Waters (a)(2): None.
- c. Other Waters (a)(3): None.
- d. Impoundments (a)(4): None.

⁶ 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.

⁷ This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

e. Tributaries (a)(5): There are 43.93 acres (17,361 linear feet) of tributaries that are relatively permanent waters within the review area.

The RPWs within the review area are described below based on flow entering the site from the southeast boundary and leaving the site along the northwest boundary as shown on the enclosed flow map.

W1 (Surplus Canal): This relatively permanent manmade canal meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since the canal discharges directly into the GSL. W1 (Surplus Canal) diverts from the Jordan River approximately 3.5 miles southeast of the review area and was originally constructed in 1885 to divert floodwater from the Jordan River before being upgraded in the 1950s by USACE and Salt Lake County (non-federal sponsor) to increase the carrying capacity of the canal. W1 (Surplus Canal) totals 21.13 acres (7,760 linear feet) within the review area. W1 (Surplus Canal) enters the review area in the southeast corner, flowing in a northwest direction, exiting the site along the northwest corner. W1 (Surplus Canal) continues to flow north and partially branches into the Goggin Drain near John Cannon Drive. The Goggin Drain then flows in a western direction terminating in the wetlands surrounding the GSL. Past the Goggin Drain diversion point, W1 (Surplus Canal) continues north, ending in the wetlands surrounding the GSL (AJD MFR Enclosure 2).

The North Point Canal and Conveyance System is a manmade relatively permanent system that meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime due to a continuous surface connection to the GSL. The extent of the North Point Canal and Conveyance System within the review area was separated into three aquatic resources due to the differing habitats, W3 (Conveyance System), W6 (manmade pond), and W10 (North Point Canal).

- W3 (Conveyance System) has an earthen bottom with vegetated edges and diverges from W1 (Surplus Canal) near the southeast corner of the review area at the control gate of the diversion structure, which can be opened or closed to control flows. When the diversion structure is closed, no flows from W1 (Surplus Canal) enter W3 (Conveyance System). However, the gate needs to be opened for a period of months to satisfy downstream water right holders, and thus flows at least seasonally. When the diversion structure is open, water from W1 (Surplus Canal) flows through W3 (Conveyance System), bisecting the site and expanding into a large, excavated pond before rechanneling and being culverted under a road, and then crossing over W1 (Surplus Canal) where it then becomes W10 (the North Point Canal). The earthen lined channel and ponded portion of W3 (Conveyance System) totals 17.07 acres (6,727 linear feet) within the review area. W3 (Conveyance System) converts into a concrete lined section identified as W10 (North Point Canal). Downstream of the review area, W10 (North Point Canal) branches into the Reclamation Ditch running parallel to 4000 West in a northeast direction until reaching Farmington Bay of the GSL. The Reclamation

Ditch diverts into the Rudy Drain approximately 0.2 miles west of 2200 West and continues in a northwest direction, also ending in Farmington Bay of the GSL. At the Reclamation Ditch diversion point, W10 (North Point Canal) continues west, ending in the wetlands surrounding the GSL.

W6 is a manmade pond that was created as part of the golf course which totals 3.48 acres. The pond was constructed on an old landfill, to create the greens for the golf course with topsoil and fill brought in from adjacent parcels to cover the landfill. Although W6 was constructed entirely in uplands as an ornamental feature, the pond meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since W6 has piped connections between W3 (Conveyance System) and W1 (Surplus Canal), which are both waters of the US. W6 receives water from W3 (Conveyance System) on the east side via underground pipe and then discharges to W1 (Surplus Canal). The continuous surface connection to the GSL is described above in this section for W1 (Surplus Canal) and W3 (Conveyance System).

- W10 (North Point Canal) is the concrete lined section of the canal that runs adjacent to the north bank of W1 (Surplus Canal) in the survey area, and is fed by W3 (Conveyance System). The concrete lined canal totals 1.23 acres (2,874 linear feet) within the review area. Downstream, W10 (North Point Canal) branches into the Reclamation Ditch running parallel to 4000 West in a northeast direction until reaching Farmington Bay of the GSL. The Reclamation Ditch diverts into the Rudy Drain approximately 0.2 miles west of 2200 West and continues in a northwest direction, also ending in Farmington Bay of the GSL. Past the diversion point into the Reclamation Ditch, W10 (North Point Canal) continues west, ending in the wetlands surrounding the GSL.

W5 is a ponded area adjacent to the I-80 airport exit ramp where stormwater runoff accumulates. W5 totals 0.73 acre and is surrounded by W4A (evaluated below under 7.g.) The pond shows seasonal flooding patterns. The elevation profile for W4A (wetland)/W5 (pond) and LiDAR (AJD MFR Enclosure 4) show an elevation change of approximately 1 foot. A review of records from 2019 to 2023 show indistinguishable boundaries between W4A and W5. Although the aquatic resources delineation report indicates that W5 is an isolated feature, USACE has determined that W5 is not isolated as it meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection to “waters of the United States”. W5 connects to W3 (Conveyance System). The continuous surface connection to the GSL is described in this section above for W3 (Conveyance System).

W11 is the airport stormwater detention pond created for the nearby airport infrastructure. The pond was constructed between 1977 and 1981 in what was the original footprint of W10 (North Point Canal) as shown on historic aerials. W11 totals 0.29 acre and is connected to W1 (Surplus Canal) via underground pipe. W11 meets

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the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since it connects to W1 (Surplus Canal). The continuous surface connection to the GSL is described above in this section for W1 (Surplus Canal).

f. The territorial seas (a)(6): None.

g. Adjacent wetlands (a)(7): There are 23.88 acres of adjacent wetlands having a continuous surface connection to a TNW within the review area:

W2 is a 1.71-acre emergent marsh fringe wetland adjacent to W1 (Surplus Canal). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection (directly abutting) to W1 (Surplus Canal), an (a)(5) water.

W4A is a 2.49-acre emergent marsh fringe wetland adjacent to W3 (Conveyance System). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection (directly abutting) to W3 (Conveyance System), an (a)(5) water.

W4B-S/W4B-N and W13 is a wetland complex totaling 15.61 acres. This wetland complex was separated in two different polygons in the AR report due to their wetland vegetative differences; however, aerial photographs, elevation profiles, LiDAR (AJD MFR Enclosure 5) and a Corps site visit on 9 January 2024 confirmed that wetlands W4B and W13 are one contiguous wetland. W4B is adjacent to W3 (Conveyance System) along the north bank of W3 (Conveyance System). On the north side of W3, W4B is separated into two wetlands (W4B-South [S] and W4B-North [N]) by an approximately 500-foot-long by 20-foot-wide contiguous artificial berm that is approximately 2-3 feet tall. This is likely a result of spoil material from the excavation/sidecast of material from W3 in the late 1940s/early 1950s. LiDAR data shows that W4B-S and W4B-N extend along both sides of the artificial berm. The W4B-S directly abuts W3 along a narrow 5-foot shelf that was documented between W3 and the artificial berm (AJD MFR Enclosure 6). W4B-N is at the same approximate elevation as W4B-S, until a drop in approximately 3 feet elevation along its northern boundary converts into Wetland 13. Based on information provided by the requestor, W13 receives hydrology from a combination of storm water and high ground water. This water moves laterally southward through the soil towards W3. This saturates the soil and provides hydrology support for W4B-N and W4B-S as the shallow subsurface water enters W3.

Topographic maps, satellite, and aerial imagery were evaluated to determine if the areas of W4B-S and W4B-N separated by the artificial berm were originally one wetland. The site was converted into the golf course sometime between 1981 and 1994 (AJD MFR Enclosure 7). Historic aeriels show wetland signatures along the north bank of the original footprint of the north point canal that are consistent with the location of

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W4B-S and W4B-N (collectively called W4B). For this reason, the Corps has determined that the sections of W4B-S and W4B-N divided by the artificial berm were originally one wetland. W4B-S and W4B-N are densely covered with *Phragmites australis* (a FACW species) in their entirety, including the artificial berm. There are no culverts or pipes that would allow for a direct hydrologic connection between W4B-S and W4B-N on either side berm. Similarities in vegetation, *Phragmites australis* (FACW), and a downward slope of approximately 4 feet from the north bank of W3 indicate a shallow subsurface movement of water along the W4B-S and W4B-N. This is further supported by the soils documented within W4B-S and W4B-N, which are classified as Deckerman Series fine sandy loam (AJD MFR Enclosure 8). These soils have moderate permeability (moderately high or high saturated hydraulic conductivity throughout the upper 40 inches and slow permeability below 40 inches). The moderate soil permeability would further support the one wetland concept for W4B-S/W4B-N and W13 via a surface shallow water connection. The W4B-S/W4B-N and W13 wetland complex meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection to (directly abutting) W3 (Conveyance System), an (a)(5) water.

W4C is a 2.89-acre emergent marsh fringe wetland adjacent to W3 (Conveyance System). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection (directly abutting) to W3 (Conveyance System), an (a)(5) water.

W4D is a 0.73-acre emergent marsh fringe wetland adjacent to W3 (Conveyance System). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection (directly abutting) to W3 (Conveyance System), an (a)(5) water.

W7 is a 0.34-acre emergent marsh fringe wetland that surrounds, and directly abuts, W6 (manmade pond). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection to (directly abutting) W6, an (a)(5) water, described above in section 7.e.

W12 is a 0.11 acre emergent marsh surrounding W11 (airport stormwater detention pond). This wetland meets the (a)(7) category “waters of the United States” in the pre-2015 regulatory regime since it has a continuous surface connection (directly abutting) to W11 an (a)(5) water.

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. There are no aquatic resources and other features within the review area identified as “generally non-jurisdictional” in the preamble to the 1986 regulations (referred to as “preamble waters”).⁸

W6 was evaluated under the preamble category "generally non-jurisdictional" for artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons. Although W6 is an artificial ornamental body of water originally created by excavating uplands as part of the previously existing golf course, the pond is currently not used to retain water for primarily aesthetic reasons. W6 meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since this pond feature and the golf course were abandoned over 7 years ago, it still retains its aquatic resource features and has piped connections between W3 (Conveyance System) and W1 (Surplus Canal), both of which are waters of the US as indicated in 7.e section above. For this reason, this W6 was not considered as a water excluded per the preamble of the 1986 regulations and the 2008 Rapanos guidance. The water level of this pond is relatively permanent, with a clear ordinary high-water mark (OHWM) identified through changes in vegetation and soil composition and connects and coveys “waters of the United States”.

W11 was evaluated under the preamble category "generally non-jurisdictional" for artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing. Although W11 is a stormwater detention pond that receives and stores stormwater runoff from the airport facility, W11 was not created by only excavating and/or diking dry land. This pond was constructed in the original footprint of W10 (North Point Canal) and is connected to W1 (Surplus Canal) via an underground pipe. W11 meets the (a)(5) category “waters of the United States” in the pre-2015 regulatory regime since this pond feature was constructed in the original alignment of W10 (North Point Canal) and has a piped connection to W1 (Surplus Canal), a water of the US as indicated in 7.e section above. For this reason, W11 was not considered as a water excluded per the preamble of the 1986 regulations and the Pre-2015 guidance, consistent with the Supreme Court’s decision in *Sackett*. The water level of this pond is relatively permanent, with a clear OHWM identified through changes in vegetation and soil composition and connects and coveys “waters of the United States”.

⁸ 51 FR 41217, November 13, 1986.

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b. There are no aquatic resources and features within the review area identified as “generally not jurisdictional” in the *Rapanos* guidance.

c. There are no aquatic resources and features identified within the review area as waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA.

d. There are no aquatic resources and features within the review area determined to be prior converted cropland in accordance with the 1993 regulations (reference 2.b.).

e. There are no aquatic resources (i.e. lakes and ponds) within the review area, which do not have a nexus to interstate or foreign commerce, and prior to the January 2001 Supreme Court decision in “*SWANCC*,” would have been jurisdictional based solely on the “Migratory Bird Rule.”

f. There are aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the pre-2015 regulatory regime consistent with the Supreme Court’s decision in *Sackett* (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

W8 is a 0.2-acre ponded open water area adjacent to the I-80 airport exit ramp where stormwater runoff accumulates. A potential connection between W8 with W6, which is the closest jurisdictional water, was evaluated under the one wetland concept but dismissed. The aerial review of the site revealed no continuous surface connection to W6, which is the closest jurisdictional water. This is confirmed by LiDAR showing an elevation difference of approximately 4 feet elevation gain between the ponded area and the adjacent upland (AJD MFR Enclosure 9). W8 does not directly abut, have a subsurface connection, nor is it connected via discrete feature to the W6 or any other relatively permanent tributary or other jurisdictional water and there is no apparent connection to interstate or foreign commerce. Therefore, W8 is not jurisdictional under Section 404 of the Clean Water Act.

W9 is a 0.31-acre emergent marsh surrounding W8. While W9 is adjacent (directly abuts) W8, W8 is not a water of the U.S. since it does not directly abut, have a subsurface connection, nor is it connected via discrete feature to the W6 or any other relatively permanent tributary or other jurisdictional water and there is no apparent connection to interstate or foreign commerce. In addition, W9 was evaluated under the one wetland concept but was found to be separated from any nearby waters of the U.S. by uplands. Therefore, W9 is not jurisdictional under Section 404 of the Clean Water Act.

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9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

- a. The office evaluation was finalized on 4 April 2024.
- b. USACE visited the site on 9 January 2024 to confirm the finding of the aquatic resources delineation report. The office evaluation was finalized on 1 April 2024.
- c. Aquatic Resources Delineation Report, Airport Surplus Canal Relocation Aquatic Resources Report dated June 2023 prepared by Bowen Collins & Associates. The consultant prepared the wetland delineation report in accordance with the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual and the USACE Regional Supplement for the Arid West Region.
- c. The requestor's June 2023 Aquatic Resources Delineation Report was relied upon, with the exception of the suggested federal jurisdictional status of W3, W4 (W4A, W4B-N, W4B-S, W4C, and W4D), W5, W6, and W10. The report indicates that W3, W4 (W4A, W4B-N, W4B-S, W4C, and W4D), W5, W6, and W10 may not be considered jurisdictional due to a lack of connection to waters of the U.S. SPK did not agree with the determination of no connection to waters of the U.S. for these aquatic resources. Evaluation of a connection of waters of the U.S. is included in the evaluation of these aquatic resources in Sections 7.e. and 7.g. of this MFR.
- d. SPK also disagreed with the original depiction of aquatic resources as shown on the plans dated 15 December 2022 of the requestor's June 2023 Aquatic Resources Delineation Report. In particular, W4A, W4B-N, W4B-S, W4C, and W4D were depicted as one wetland polygon, labeled as W4 in the report map. In addition, W13 was originally depicted as two separate polygons, labeled as W13 and 14 in the report map. SPK requested revisions to the aquatic resources delineation map. Revised plans and additional information with historic aeriels was provided by Bowen Collins & Associates on 22 March 2024.
- e. Photographs: Photos included in the Bowen Collins & Associates Aquatic Resources Delineation Report.
- f. Aerial Records: GoogleEarth 7.3.3.7692. (30 December 1985, 14 August 1994, 7 October 1998, 3 May 2002, 17 July 2003, 18 August 2003, 24 August 2004, 30 December 2004, 23 June 2005, 3 July 2005, 12 July 2006, 31 July 2006, 29 October 2006, 30 December 2006, 27 April 2007, 22 June 2009, 17 June 2010, 14 September 2011, 4 June 2013, 16 June 2015, 21 November 2015, 22 November 2015, 4 December 2015, 5 December 2015, 30 December 2015, 12 January 2016, 5 February 2016, 24 February 2016, 25 February 2016, 9 March

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2016, 2 April 2016, 15 April 2016, 30 May 2016, 18 June 2016, 24 June 2016, 8 July 2016, 31 July 2016, 1 August 2016, 13 August 2016, 25 September 2016, 20 October 2016, 1 November 2016, 7 November 2016, 13 November 2016, 01 December 2016, 14 February 2017, 15 June 2017, 17 June 2017, 8 July 2017, 19 August 2017, 26 August 2017, 1 September 2017, 8 October 2017, 15 October 2017, 21 November 2017, 27 November 2017, 4 December 2017, 4 January 2018, 16 January 2018, 17 January 2018, 10 February 2018, 8 March 2018, 2 April 2018, 20 April 2018, 21 April 2018, 27 April 2018, 3 May 2018, 23 June 2018, 5 July 2018, 17 July 2018, 18 July 2018, 23 July 2018, 24 July 2018, 5 August 2018, 10 September 2018, 19 October 2018, 16 February 2019, 2 May 2019, 8 June 2019, 9 June 2019, 4 July 2019, 16 July 2019, 18 July 2019, 29 July 2019, 10 August 2019, 23 August 2019, 11 September 2019, 17 September 2019, 23 September 2019, 10 October 2019, 12 October 2019, 31 October 2019, 13 November 2019, 22 February 2020, 11 March 2020, 19 April 2020, 31 May 2020, 1 June 2020, 8 June 2020, 13 June 2020, 11 September 2020, 11 August 2021, 28 August 2021, 8 September 2021, 24 May 2022, 14 June 2022, 20 June 2022, 1 July 2022, 6 July 2022, and 29 May 2023). Salt Lake City, Utah, Latitude 40.769529°N, Longitude -111.978195°W, eye alt 8150 ft. Retrieved 27 November 2023, from <http://earth.google.com>

- g. Historic Aerial Imagery, 1943-2021. Accessed 22 February 2024.
- h. LiDAR - National Layer in the National Regulatory Viewer for the South Pacific Division. Retrieved 22 November 2023.
- i. National Hydrography Dataset Flowlines – Large Scale from National Layers in the National Regulatory Viewer for the South Pacific Division. Retrieved 22 November 2023.
- j. USDA Natural Resources Conservation Service Soil Survey: Included in the Bowen Collins & Associates, Inc. Aquatic Resources Delineation Report and map and soil series retrieved on 22 February 2024.
- k. Topographic Map - National Layer in the National Regulatory Viewer for the South Pacific Division. Retrieved 22 November 2023.
- l. Flow Map: Surplus Canal and North Point Canal Flow Path Map included in the Bowen Collins & Associates aquatic resources report.

10. OTHER SUPPORTING INFORMATION.

This request for an AJD verification was originally submitted to the Corps on 21 March 2023. On 14 July 2023, the requestor, Salt Lake City Department of Airports (SLCDA) was notified of a nationwide pause on the review of AJDs. The SLCDA modified the

CESPK-RDI-N

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), [SPK-2004-50019-UO]

request to a Preliminary Jurisdictional Determination (PJD) on 1 August 2023. The PJD was verified on 28 August 2023 for 25.46 acres of wetlands, 21.13 acres (7,760 linear feet) of Surplus Canal, 17.07 acres of the North Point Canal Conveyance System, and 1.23 acres (2,874 linear feet) of the North Point Canal present within the review area are potential jurisdictional aquatic resources ("waters of the United States"). On 5 September 2023, the SLCD submitted a new request for the subject AJD.

The review area was previously the Wingpointe Golf Course. This golf course was constructed on the remnants of a landfill, with topsoil and fill material brought in from adjacent properties to cover the landfill. The golf course has been closed/abandoned since 2015 and is currently overgrown with grasses and noxious weeds.

The aquatic resources delineated by Bowen Collins & Associates were evaluated for hydrologic connections between the review area and the nearest TNW, in this case, the GSL using NHD, aerial records, LiDAR, and topographic maps. Based on this analysis, USACE determined that the review area supports approximately 68.32 acres of aquatic resources. Of these aquatic resources, 67.81 acres are waters of the U.S. including:

- a. 43.93 acres (17,361 linear feet) of (a)(5) tributaries, consisting of W1 (Surplus Canal), W3 (Conveyance System), W5, W6, W10 (North Point Canal), and W11.
- b. 23.88 acres of (a)(7) adjacent wetlands, consisting of W2, W4A, W4B-N, W4B-S, W4C, W4D, W7, W12, and W13.

W8 and W9 totaling 0.51 acre are non-jurisdictional aquatic resources under Section 404 of the Clean Water Act since they do not meet the definition of waters of the U.S. in any category under 33 CFR §328.3(a).

A review of agency records revealed that a section of W2 was designated as mitigation wetlands to compensate for unavoidable wetland impacts associated with SPK-1901-09958.

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

9 ENCL
Encl 1 Location Map

NICOLE D. FRESARD
Senior Regulatory Project Manager

CESPK-RDI-N

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), [SPK-2004-50019-UO]

Encl 2 Flow Map

Encl 3 Aquatic Resources Map

Encl 4 Elevation Profile for W4A and W5.

Encl 5 Aerials, Elevation Profiles W3 And W4B

Encl 6 W4B and W13 Map

Encl 7 Historic Aerials

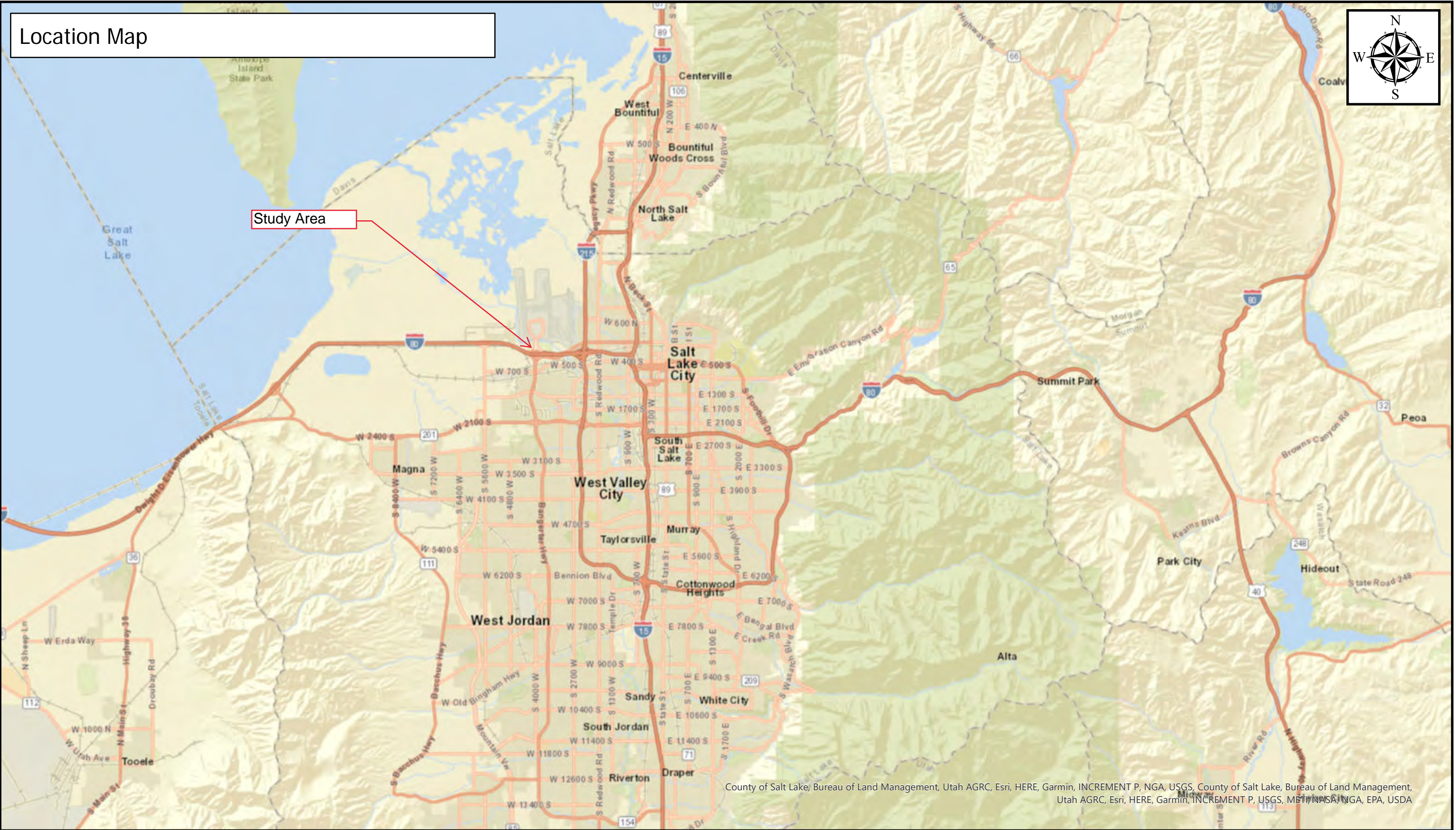
Encl 8 Soil Profile

Encl 9 Elevation Lidar W8 and W9 Profile

Location Map



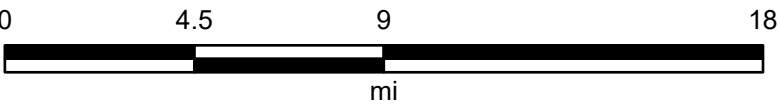
Study Area



County of Salt Lake, Bureau of Land Management, Utah AGRC, Esri, HERE, Garmin, INCREMENT P, NGA, USGS, County of Salt Lake, Bureau of Land Management, Utah AGRC, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



SPK-2004-50019



Map Center: 111.84331°W 40.729529°N

Map Created by: N. Fresard

Date: 8/28/2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere

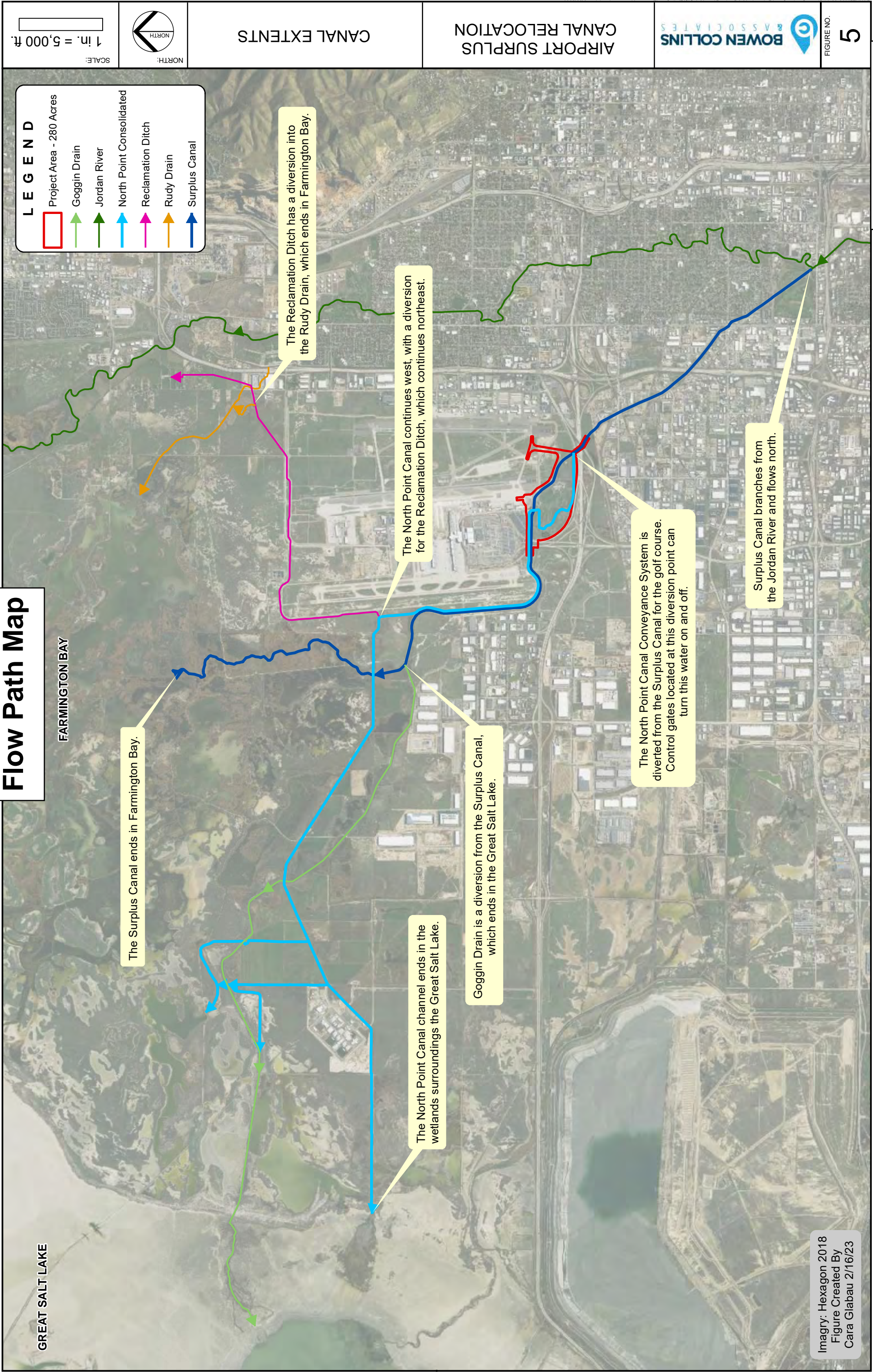
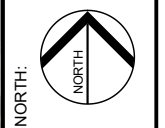


FIGURE 4B

Imagry: Hexagon 2021
Figure Created By
Cara Glabau 2/16/23
Updated 6/6/2023
and 02/26/2024

SCALE:
1 in. = 500 ft.



DELINEATION RESULTS

AIRPORT SURPLUS
CANAL RELOCATION



FIGURE NO.
4A

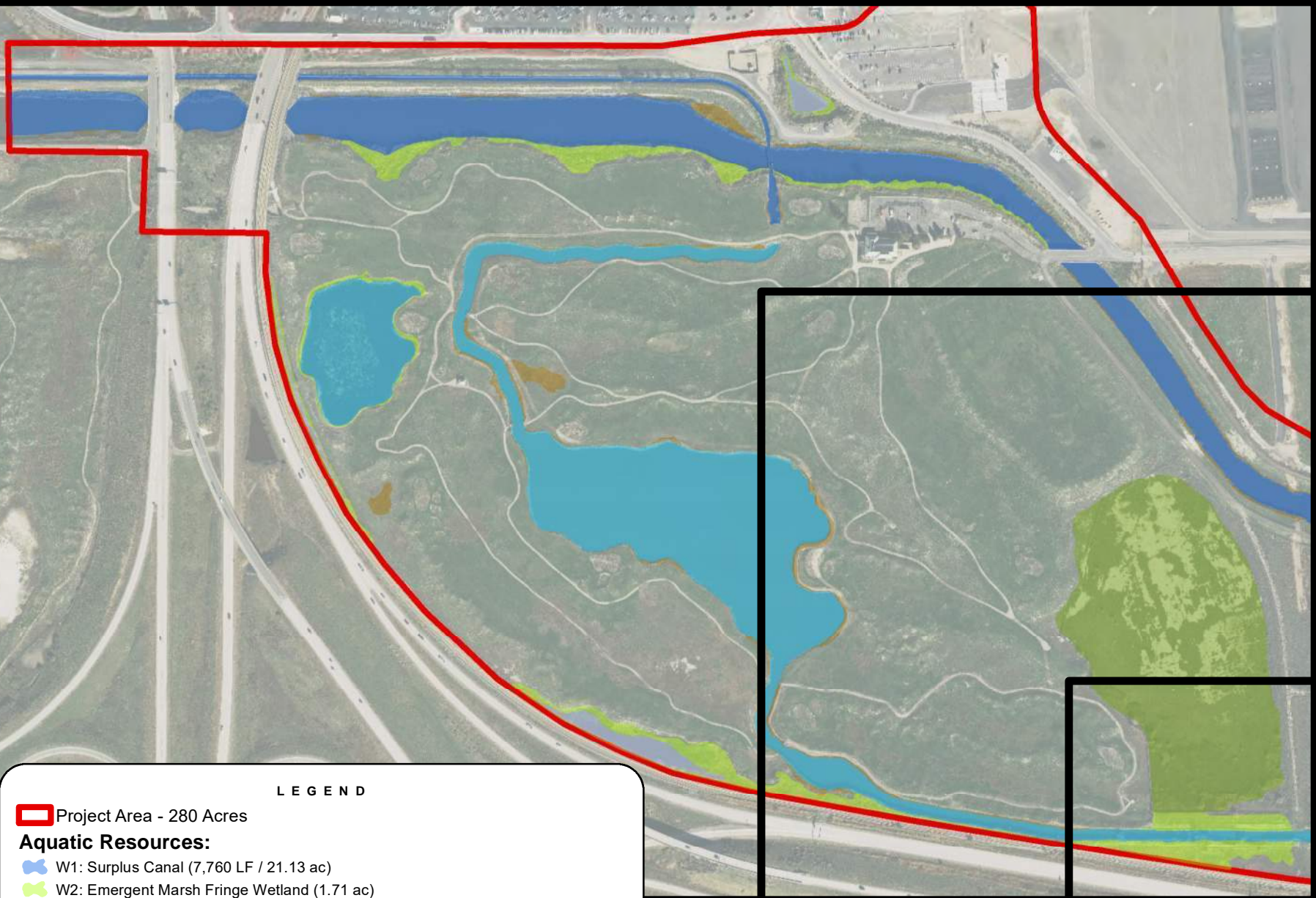


FIGURE 4C

LEGEND

Project Area - 280 Acres

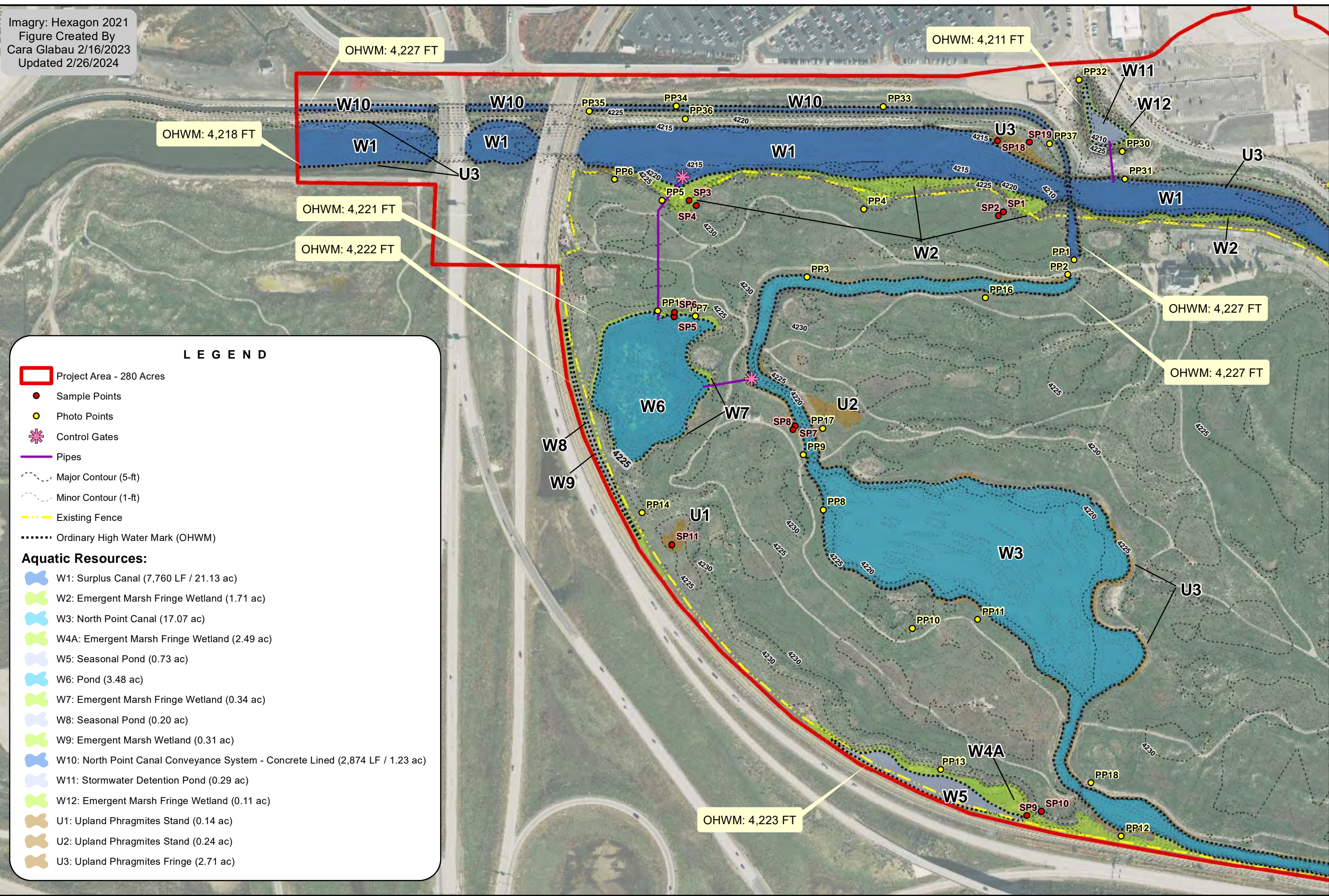
Aquatic Resources:

- W1: Surplus Canal (7,760 LF / 21.13 ac)
- W2: Emergent Marsh Fringe Wetland (1.71 ac)
- W3: North Point Canal (17.07 ac)
- W4A: Emergent Marsh Fringe Wetland (2.49 ac)
- W4B: Emergent Marsh Fringe Wetland (0.66 ac)
- W4C: Emergent Marsh Fringe Wetland (2.89 ac)
- W4D: Emergent Marsh Fringe Wetland (0.73 ac)
- W5: Seasonal Pond (0.73 ac)
- W6: Pond (3.48 ac)
- W7: Emergent Marsh Fringe Wetland (0.34 ac)
- W8: Seasonal Pond (0.20 ac)
- W9: Emergent Marsh Wetland (0.31 ac)
- W10: North Point Canal Conveyance System - Concrete Lined (2,874 LF / 1.23 ac)
- W11: Stormwater Detention Pond (0.29 ac)
- W12: Emergent Marsh Fringe Wetland (0.11 ac)
- W13: Emergent Marsh Wetland (14.95 ac)
- U1: Upland Phragmites Stand (0.14 ac)
- U2: Upland Phragmites Stand (0.24 ac)
- U3: Upland Phragmites Fringe (2.71 ac)



FIGURE 4D

Imagry: Hexagon 2021
Figure Created By
Cara Glabau 2/16/2023
Updated 2/26/2024



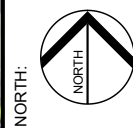
LEGEND

- Project Area - 280 Acres
- Sample Points
- Photo Points
- Control Gates
- Pipes
- Major Contour (5-ft)
- Minor Contour (1-ft)
- Existing Fence
- Ordinary High Water Mark (OHWM)

Aquatic Resources:

- W1: Surplus Canal (7,760 LF / 21.13 ac)
- W2: Emergent Marsh Fringe Wetland (1.71 ac)
- W3: North Point Canal (17.07 ac)
- W4A: Emergent Marsh Fringe Wetland (2.49 ac)
- W5: Seasonal Pond (0.73 ac)
- W6: Pond (3.48 ac)
- W7: Emergent Marsh Fringe Wetland (0.34 ac)
- W8: Seasonal Pond (0.20 ac)
- W9: Emergent Marsh Wetland (0.31 ac)
- W10: North Point Canal Conveyance System - Concrete Lined (2,874 LF / 1.23 ac)
- W11: Stormwater Detention Pond (0.29 ac)
- W12: Emergent Marsh Fringe Wetland (0.11 ac)
- U1: Upland Phragmites Stand (0.14 ac)
- U2: Upland Phragmites Stand (0.24 ac)
- U3: Upland Phragmites Fringe (2.71 ac)

SCALE:
1 in. = 300 ft.



DELINEATION RESULTS

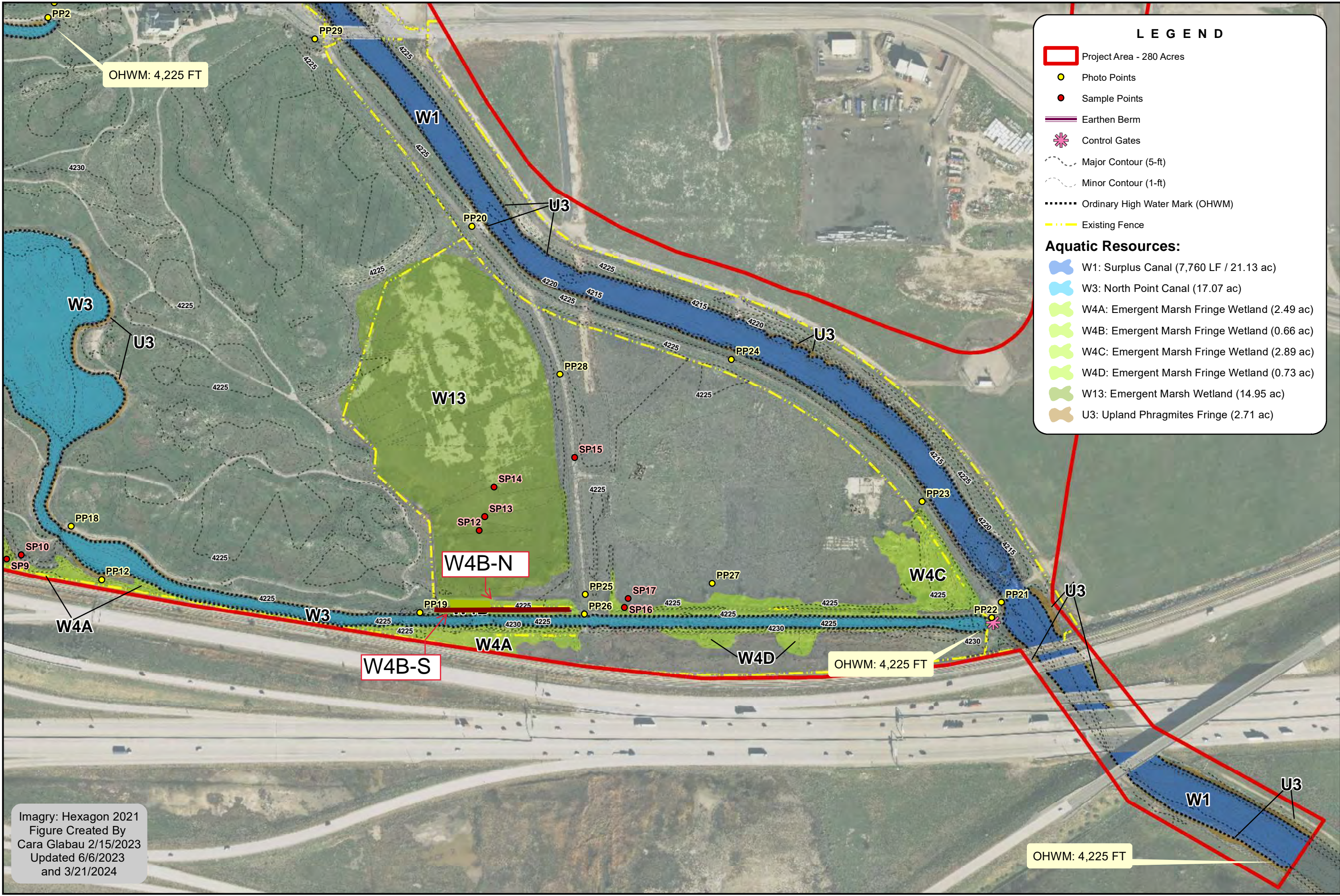
AIRPORT SURPLUS
CANAL RELOCATION



FIGURE NO.

4B

P:\HN\B\22201 Airport Surplus Canal Relocation\2.0 Design Phase\2.9 GIS\Fig4B_DelineationResults_Airport.mxd glabau 2/27/2024



LEGEND

Project Area - 280 Acres

Photo Points

Sample Points

Earthen Berm

Control Gates

Major Contour (5-ft)

Minor Contour (1-ft)

Ordinary High Water Mark (OHWM)

Existing Fence

Aquatic Resources:

W1: Surplus Canal (7,760 LF / 21.13 ac)

W3: North Point Canal (17.07 ac)

W4A: Emergent Marsh Fringe Wetland (2.49 ac)

W4B: Emergent Marsh Fringe Wetland (0.66 ac)

W4C: Emergent Marsh Fringe Wetland (2.89 ac)

W4D: Emergent Marsh Fringe Wetland (0.73 ac)

W13: Emergent Marsh Wetland (14.95 ac)

U3: Upland Phragmites Fringe (2.71 ac)

Imagry: Hexagon 2021
Figure Created By
Cara Glabau 2/15/2023
Updated 6/6/2023
and 3/21/2024

SCALE:
1 in. = 300 ft.

NORTH:

DELINEATION RESULTS

AIRPORT SURPLUS
CANAL RELOCATION

FIGURE NO.
4C

P:\HN\B\22201 Airport Surplus Canal Relocation\2.0 Design Phase\4C_DelineationResults_Airport.mxd oglabau 3/21/2024



W4A and W location

Study Area

The elevation profile for W4A (pond) and W5 (wetland) and LiDAR data show an elevation change of approximately 1 foot. A review of records from 2019 to 2023 show indistinguishable boundaries between W4A and W5. Although the AR report indicates that W5 is an isolated feature, USACE has determined that W5 is not an isolated feature as it has a direct surface water connection with W4A.

Image © 2023 Airbus

Google Earth
AJD MFR Enclosure 4

Find address or place



W4 boundary

W5 boundary

Elevation Profile

Message

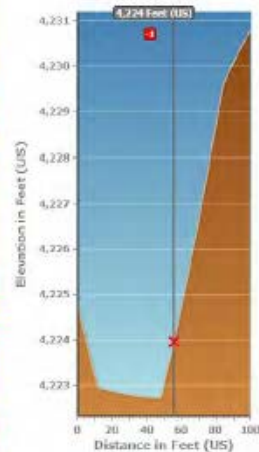
Profile Result

Hover over or touch the Elevations Profile chart to display elevations and show location on map.

1 Profile Information

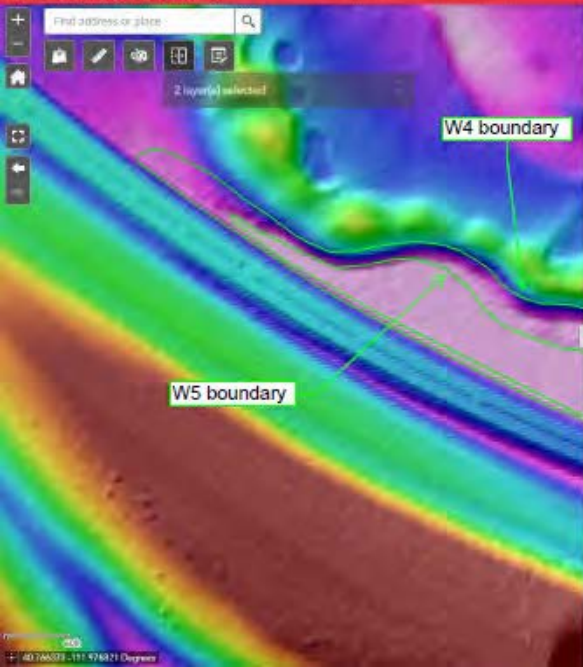
Clear

Elevation Profile



Utah Regulatory Viewer

IWC: DigitalGlobe 6SSS Stream State



Elevation Profile

Map View

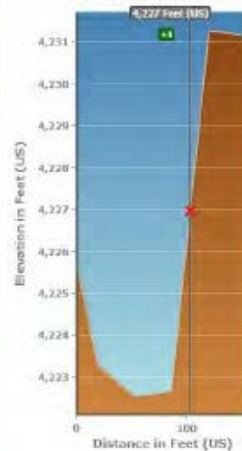
Profile Results

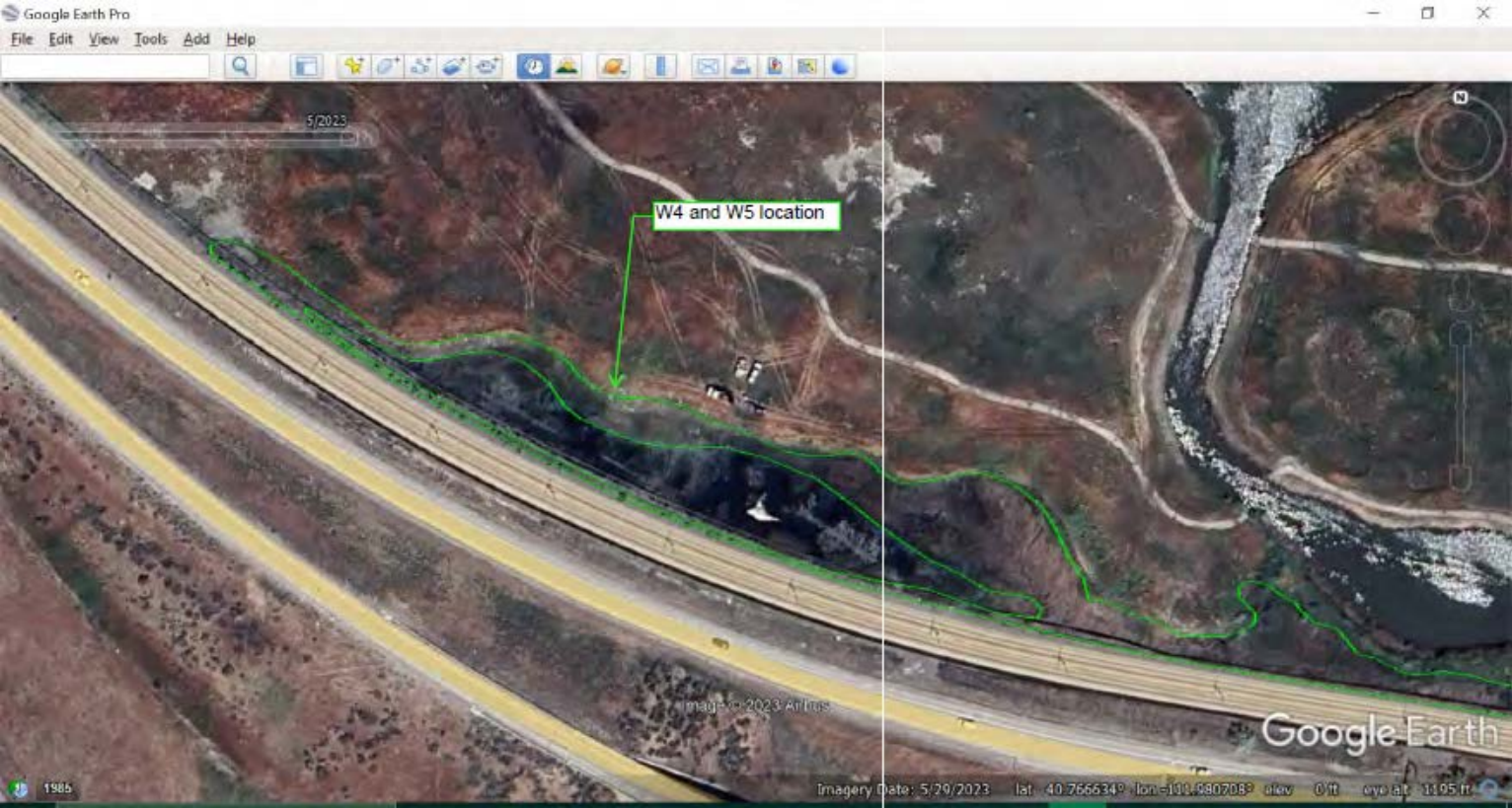
Hover over or touch the Elevation Profile chart to display elevations and show location on map.

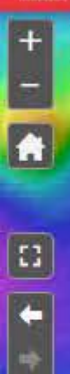
Profile Information

Clear

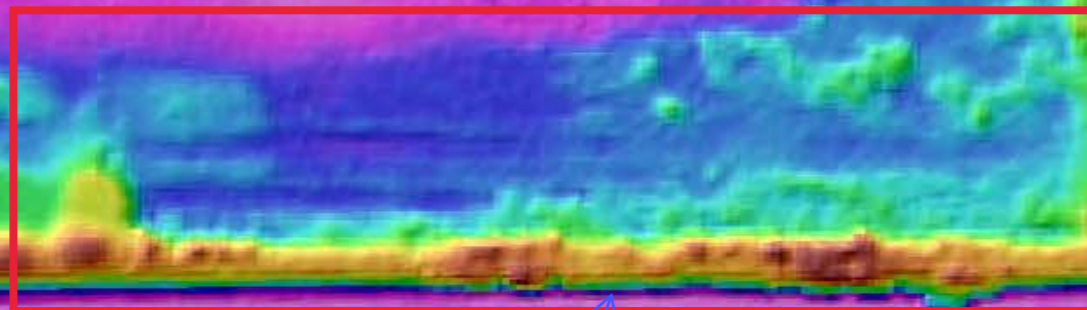
Elevation Profile







Find address or place



General W4 area

approx 5-foot
wetland shelf
between W3 and
artificial berm.

AJD MFR Enclosure 5



Legend

- Photo Location
- Field of View

Coordinate System: GCS WGS 1984
Photo Coordinates: -111.972478 40.765827
Upper Left Corner: -111.973709 40.766688
Lower Right Corner: -111.971247 40.764965
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap

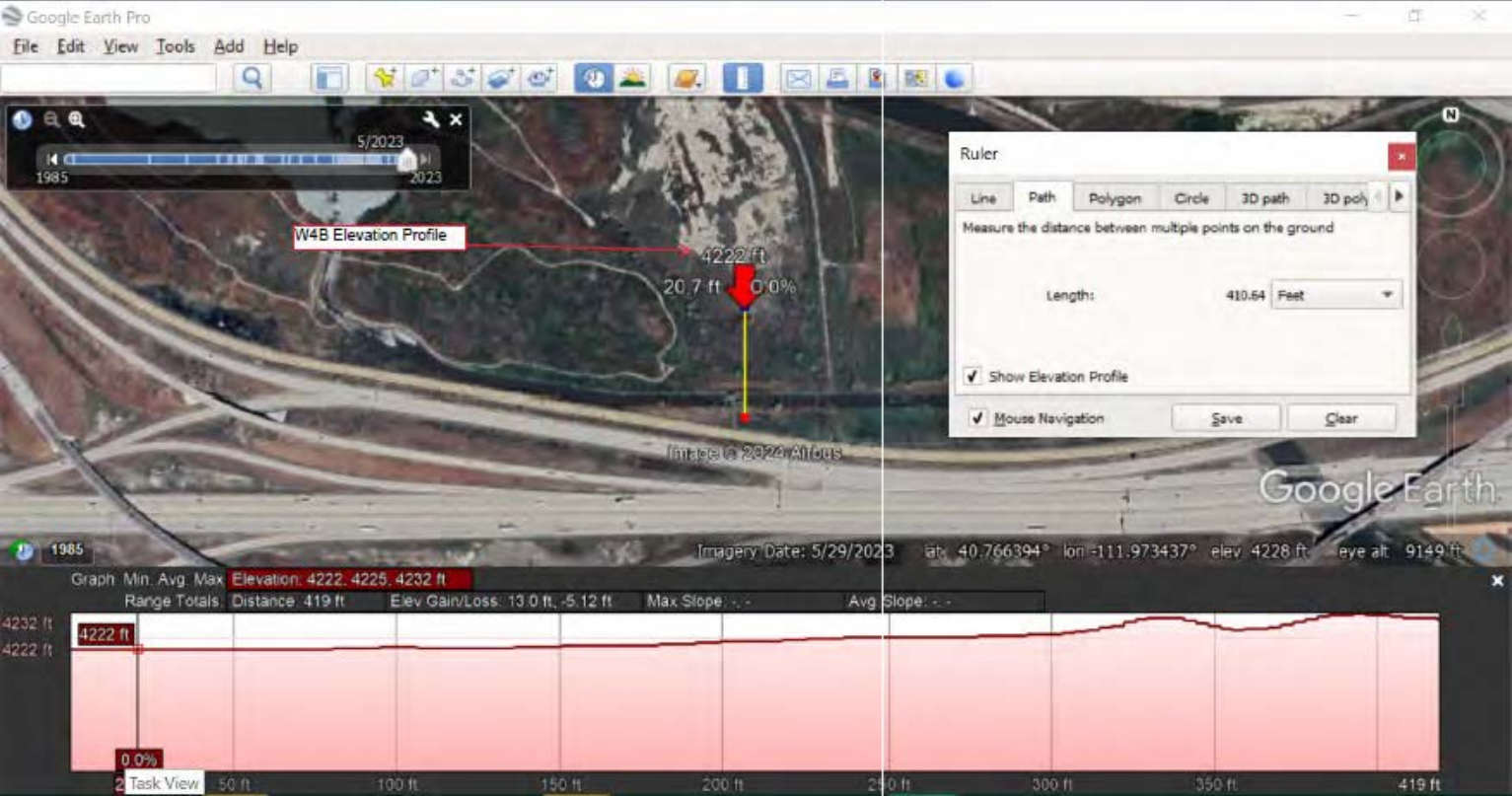
0 40 80 160
Feet

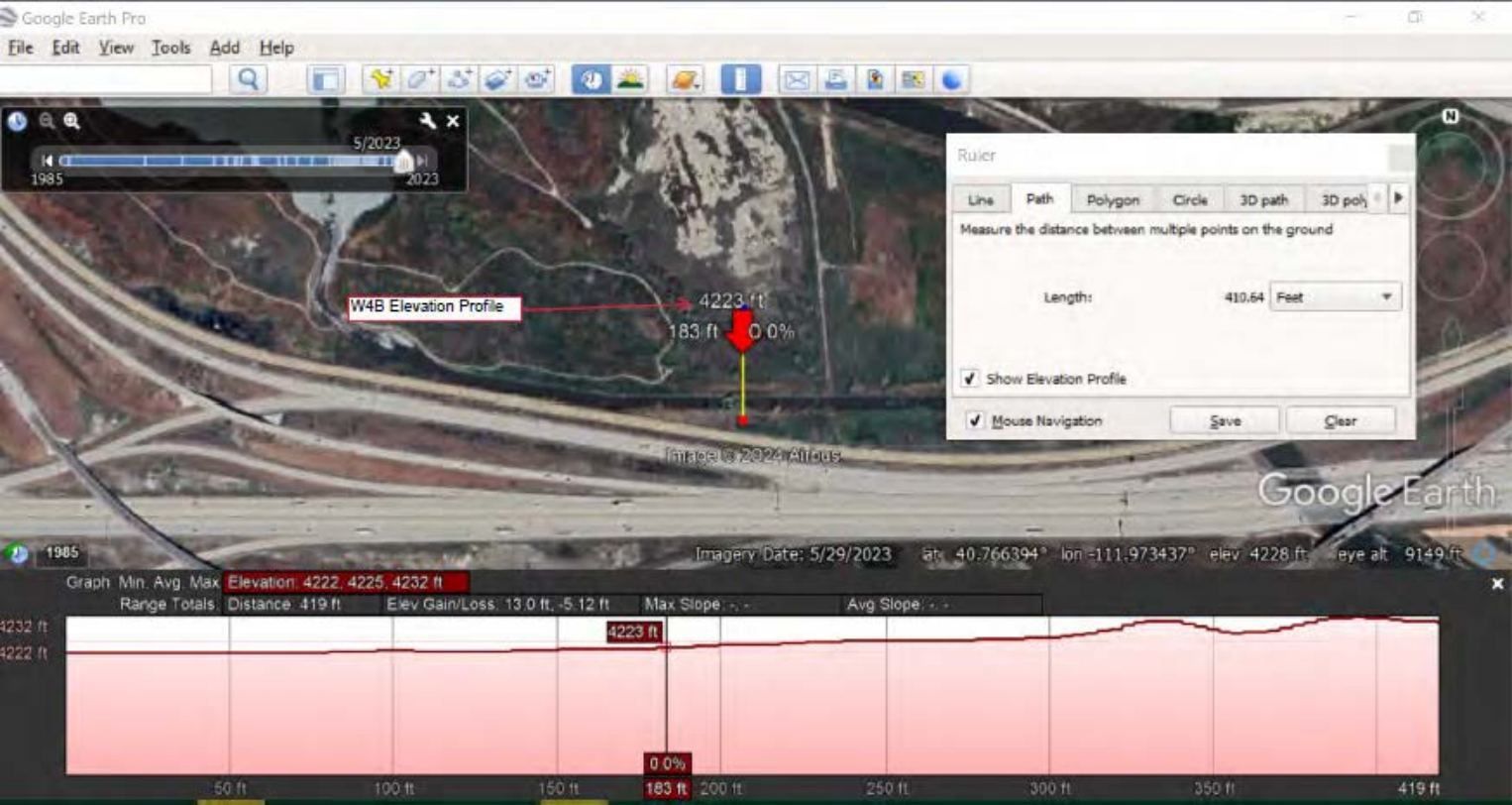


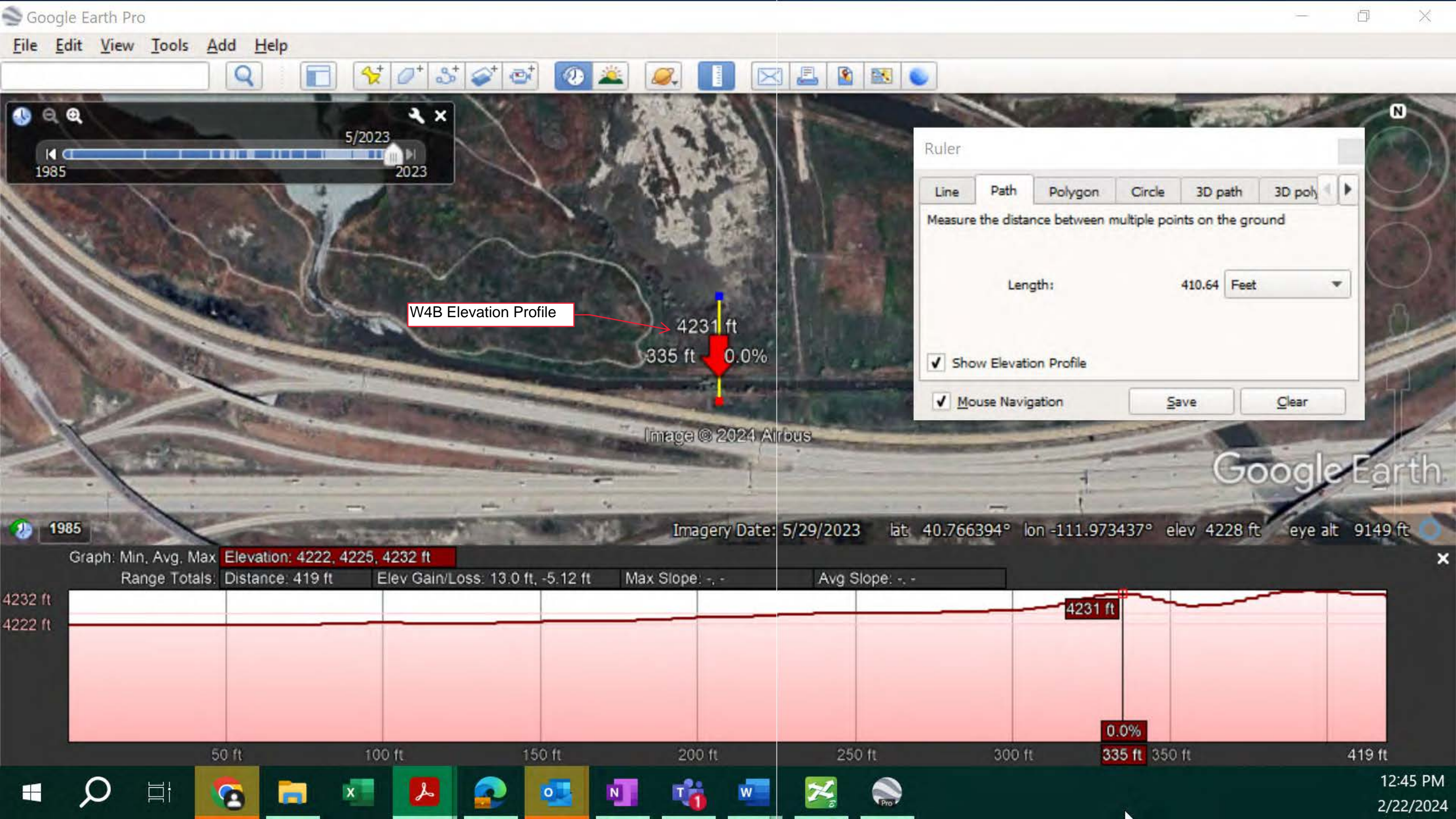
**Mapped Photo Log
for SLC Airport AJD
SPK-2004-050019**

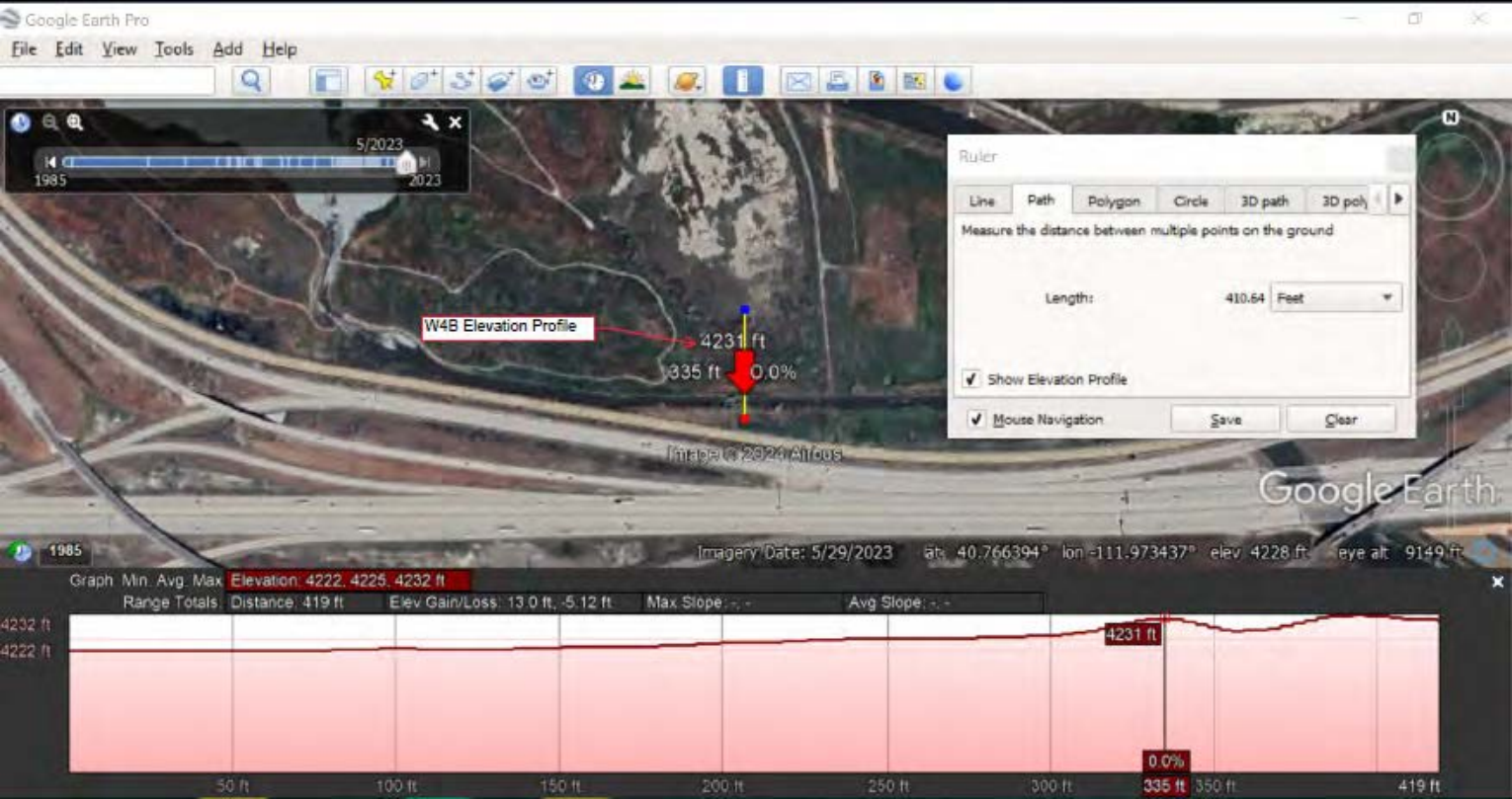
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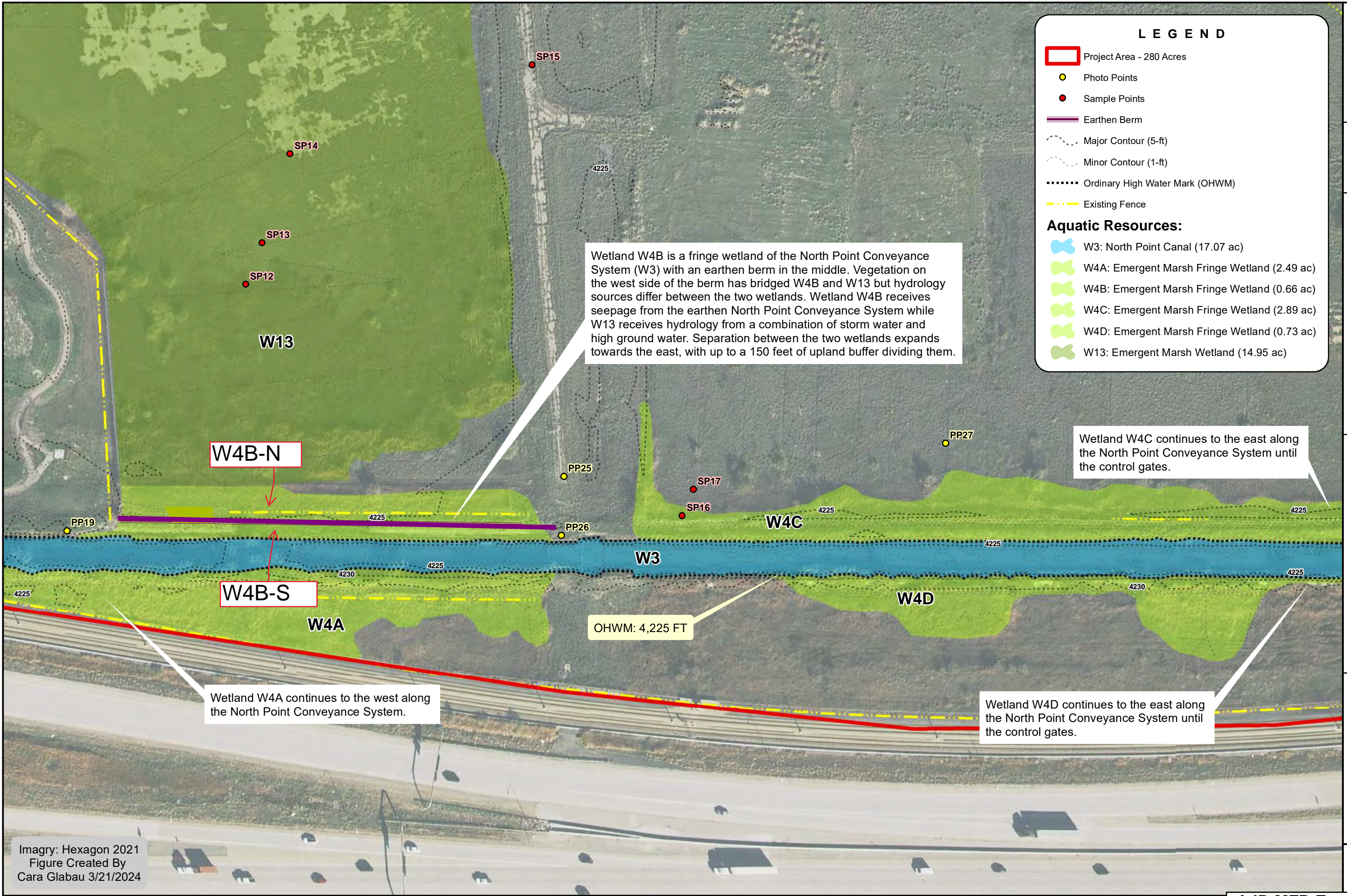
Photographed by N. Fresard
on 1/9/2024 at 11:29:51 AM MST
Camera: NIKON CORPORATION COOLPIX W300
Location Source: Camera's internal GPS
Heading Source: Camera's internal compass
Map generated on 1/10/2024 using the
Photo Log Toolbar, written by Jason C. Deters











Wetland W4B is a fringe wetland of the North Point Conveyance System (W3) with an earthen berm in the middle. Vegetation on the west side of the berm has bridged W4B and W13 but hydrology sources differ between the two wetlands. Wetland W4B receives seepage from the earthen North Point Conveyance System while W13 receives hydrology from a combination of storm water and high ground water. Separation between the two wetlands expands towards the east, with up to a 150 feet of upland buffer dividing them.

Wetland W4C continues to the east along the North Point Conveyance System until the control gates.

Wetland W4A continues to the west along the North Point Conveyance System.

Wetland W4D continues to the east along the North Point Conveyance System until the control gates.

LEGEND

Project Area - 280 Acres

Photo Points

Sample Points

Earthen Berm

Major Contour (5-ft)

Minor Contour (1-ft)

Ordinary High Water Mark (OHWM)

Existing Fence

Aquatic Resources:

W3: North Point Canal (17.07 ac)

W4A: Emergent Marsh Fringe Wetland (2.49 ac)

W4B: Emergent Marsh Fringe Wetland (0.66 ac)

W4C: Emergent Marsh Fringe Wetland (2.89 ac)

W4D: Emergent Marsh Fringe Wetland (0.73 ac)

W13: Emergent Marsh Wetland (14.95 ac)

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+ salt lake city airp go purchase image and/or print

aerials	2021
1994	2018
topos	2016
atlases	2014
	2011
compare	2009
overlays	2006
measure	2004
	1998
	1994
	1981
	1980
	1977



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9-15-88

SLCI AIRPORT

1:25200



10-17-91 SLC-INTE

221-04



Established Series
KMD-JVC
03/2006

DECKERMAN SERIES

The Deckerman series consists of very deep, somewhat poorly drained soils that formed in alluvium and lacustrine deposits derived from sedimentary and igneous rocks. Deckerman soils are on lake plains and flood plains. Slopes are 0 to 1 percent. The mean annual precipitation is about 15 inches and the mean annual temperature is about 52 degrees F.

TAXONOMIC CLASS: Fine-loamy, mixed, superactive, mesic Sodic Calcixerepts

TYPICAL PEDON: Deckerman loam--rangeland. (Colors are for dry soil unless otherwise noted.)

Az--0 to 0.5 inch; dark gray (10YR 4/1) loam, black (10YR 2/1) moist; weak thin and medium platy structure; slightly brittle, friable, nonsticky and slightly plastic; common soluble salt crystals; strongly effervescent; strongly alkaline; abrupt smooth boundary. (0 to 1 inch thick)

An--0.5 to 6 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly brittle, friable, slightly sticky and slightly plastic; common medium and many fine roots; strongly effervescent; very strongly alkaline (pH 9.4); 26 percent exchangeable sodium; clear smooth boundary. (4 to 10 inches thick)

Bn--6 to 12 inches; pale brown (10YR 6/3) loam, dark grayish brown (10YR 4/2) moist; weak medium prismatic structure parting to weak coarse and medium angular blocky; slightly brittle, friable, slightly sticky and slightly plastic; many very fine and few medium roots; violently effervescent; very strongly alkaline (pH 9.4); 18 percent exchangeable sodium; clear wavy boundary. (5 to 10 inches thick)

Bkn1--12 to 17 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; weak coarse prismatic structure; very hard and brittle, friable, slightly sticky and slightly plastic; few to common large and fine roots; many fine, very fine and few medium and large pores; violently effervescent; very strongly alkaline (pH 9.4); 21 percent exchangeable sodium; clear wavy boundary. (5 to 10 inches thick)

Bkn2--17 to 20 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; massive; hard, friable, slightly sticky and slightly plastic; common fine and few medium roots; common fine pores; violently effervescent; very strongly alkaline (pH 9.2); 21 percent exchangeable sodium; abrupt wavy boundary. (3 to 7 inches thick)

Bkn3--20 to 35 inches; light gray (10YR 7/2) sandy loam, light olive brown (2.5Y 5/3) moist; massive; hard and brittle, friable, nonsticky and nonplastic; few fine roots; common fine pores; strongly effervescent; very strongly alkaline (pH 9.4); 27 percent exchangeable sodium; abrupt wavy boundary. (0 to 21 inches thick)

Bkn4--35 to 43 inches; light gray (5Y 7/2) loam, light olive gray (5Y 6/2) moist; massive; hard, friable, moderately sticky and slightly plastic; few fine roots; common fine pores; common fine distinct masses of iron accumulation; strongly effervescent; very strongly alkaline (pH 9.4); 27 percent exchangeable sodium; abrupt wavy boundary. (0 to 21 inches thick)

2BCkn--43 to 52 inches; light gray (5Y 7/2) silty clay loam, light olive gray (5Y 6/2) moist; massive; hard, firm, moderately sticky and moderately plastic; few fine roots; common fine pores; many fine distinct masses of iron accumulation; violently effervescent; common fine carbonate concretions; very strongly alkaline (pH 9.3); 46 percent exchangeable sodium; abrupt wavy boundary. (0 to 15 inches thick)

2Cn--52 to 60 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; weak coarse platy rock structure; very hard, firm, moderately sticky and moderately plastic; few fine roots; common fine and medium pores; common fine distinct masses of iron accumulation; violently effervescent; very strongly alkaline (pH 9.3); 37 percent exchangeable sodium.

TYPE LOCATION: Salt Lake County, Utah; about 2.5 miles west-southwest of the Salt Lake City International airport; approximately 400 feet west and 2,200 feet north of the southeast corner of section 2, T. 1 S., R. 2 W.; USGS Saltair 7.5 minute topographic quadrangle; 40 degrees 45 minutes 39 seconds north latitude and 112 degrees 01 minutes 33 seconds west longitude, NAD27; UTM zone 12N 413361E, 4512705N, NAD83.

RANGE IN CHARACTERISTICS:

Soil moisture - Typically moist in winter and spring, dry in summer and fall; the soils are dry in all parts of the moisture control section for more than 60 consecutive days following the winter solstice; Xeric moisture regime that borders on aridic.

Mean annual soil temperature - 54 to 56 degrees F.

Mean summer soil temperature - 65 to 75 degrees F.

Depth to calcic horizon - 11 to 20 inches.

Depth to lithologic discontinuity of lacustrine deposits - 35 to 50 inches.

Depth to redoximorphic features - 25 to 40 inches.

Particle-size control section - Clay content: Averages 18 to 25 percent.

Az, An, and Ap horizons - Value: 4 through 6 dry, 2 through 4 moist; where color values are 2 or 3 moist and 4 or 5 dry, the dark colors in the epipedon are less than 6 inches thick.

Chroma: 1 through 3, dry or moist.

Consistence: Soft or slightly hard, nonbrittle or slightly brittle.

Reaction: Moderately alkaline to very strongly alkaline.

Calcium carbonate equivalent: 3 to 15 percent.

Sodicity (SAR): 13 to 30.

Bn horizon - Chroma: 2 or 3 moist.

Clay content: 18 to 27 percent.

Reaction: Moderately alkaline to very strongly alkaline.

Calcium carbonate equivalent: 3 to 15 percent.

Sodicity (SAR): 13 to 30.

Bkn horizons - Hue: 10YR through 5Y.
Value: 6 through 8 dry, 4 through 6 moist.
Chroma: 2 or 3, dry or moist.
Texture: Loam or sandy loam.
Clay content: 10 to 27 percent.
Reaction: Moderately alkaline to very strongly alkaline.
Calcium carbonate equivalent: 15 to 30 percent.
Sodicity (SAR): 13 to 30.

2BCkn and 2Cn horizons - Hue: 10YR through 5Y.
Value: 6 through 8 dry, 4 through 6 moist.
Chroma: 2 or 3, dry or moist.
Clay content: 30 to 40 percent.
Calcium carbonate equivalent: 15 to 30 percent.
Sodicity (SAR): 13 to 30.

COMPETING SERIES: There are currently no other series in this family.

GEOGRAPHIC SETTING: Deckerman soils are on lake plains and flood plains. They formed in alluvium and lacustrine deposits derived from sedimentary and igneous rocks. Slopes are 0 to 1 percent. Elevations range from 4,200 to 4,300 feet. The climate is dry subhumid with a mean annual precipitation of 13 to 15 inches. The mean annual temperature is 51 to 53 degrees F. and the mean summer temperature is 65 to 79 degrees F. The frost-free period is 160 to 180 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the [Saltair](#) and [Lasil](#) soils. Lasil soils are fine-silty and have natric horizons. Saltair soils are fine-silty and have salic horizons.

DRAINAGE AND PERMEABILITY: Somewhat poorly drained; low surface runoff; moderate permeability (moderately high or high saturated hydraulic conductivity) throughout the upper 40 inches and slow permeability (moderately low or moderately high saturated hydraulic conductivity) below a depth of 40 inches. Endosaturation is present with an apparent seasonal high water table between 2 and 5 feet (moderately deep to deep free water

occurrence classes) between April and September. Cumulative annual duration class is Common. One phase has been drained and reclaimed of salts and sodium.

USE AND VEGETATION: Deckerman soils are used mostly for rangeland. Small areas have been drained, reclaimed, and are used for irrigated cropland. Some areas are used industrial sites and urban development. The native vegetation in rangeland is mainly inland saltgrass, alkali sacaton, black greasewood, and basin wildrye.

DISTRIBUTION AND EXTENT: Northwestern Utah. These soils are not extensive with about 8,700 acres of the series mapped to date. MLRA 28A.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Phoenix, Arizona.

SERIES ESTABLISHED: Salt Lake Area, Utah, 2006.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon - The zone from the soil surface to 7 inches (Az and An horizons and part of the Bn horizon).

Cambic horizon - The zone from 6 to 12 inches (Bn horizon).

Calcic horizon - The zone from 12 to 43 inches (Bkn1, Bkn2, Bkn3, and Bkn4 horizons).

Sodic subgroup feature - The zone from the soil surface to 60 inches (Az, An, Bn, Bkn1, Bkn2, Bkn3, Bkn4, 2BCkn, and 2Cn horizons).

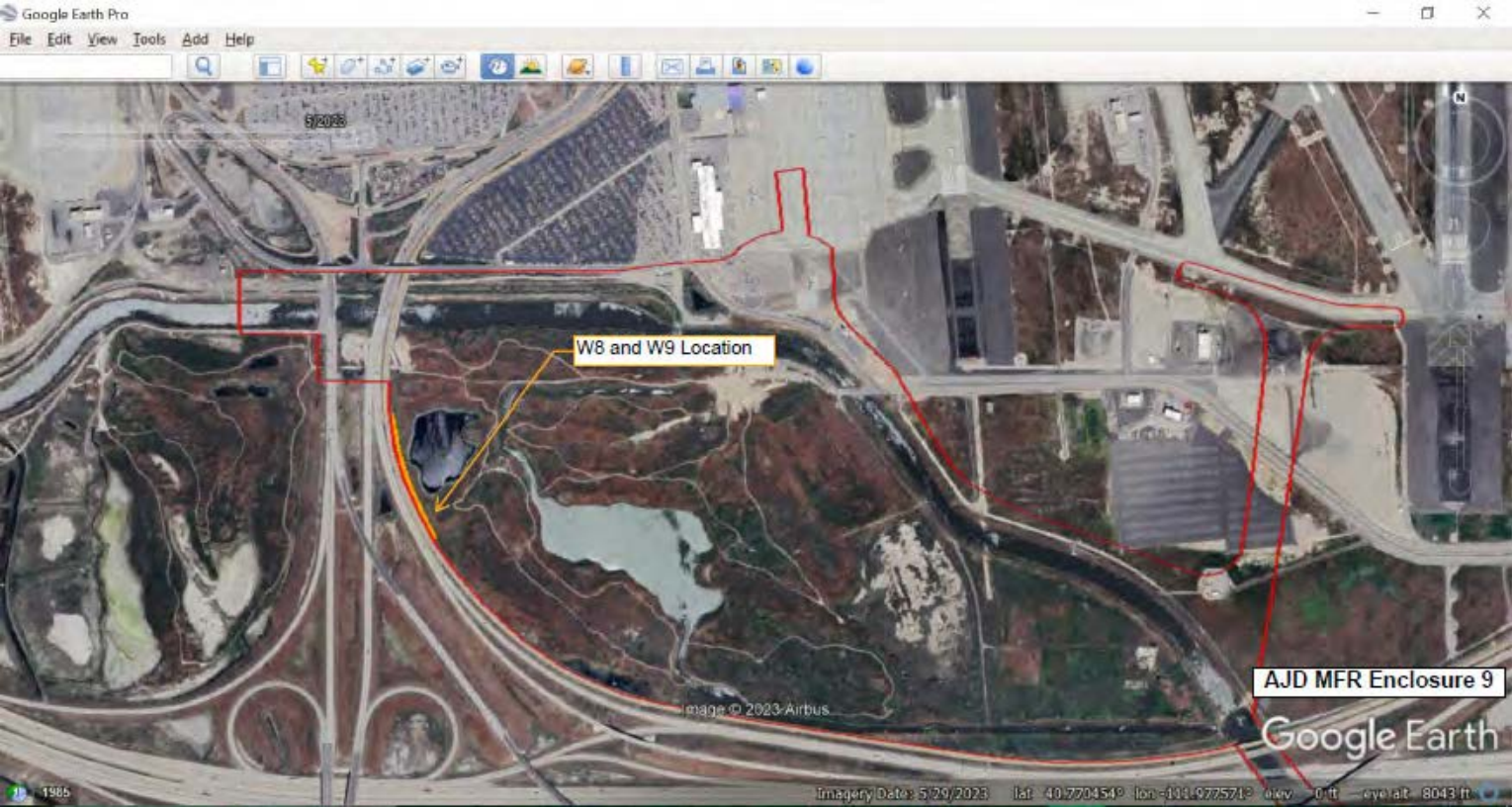
Endosaturation feature - The condition of ground water with an upper boundary between 24 and 60 inches at certain times during normal years (parts of the Bkn3, Bkn4, 2BCkn, and 2Cn horizons).

Particle-size control section - The zone from 10 to 40 inches (Bkn1, Bkn2, and Bkn3 horizons and parts of the Bn and Bkn4 horizons).

This series correlates soils previously named as Decker in the Soil Survey of Salt Lake Area, Utah (UT612).

ADDITIONAL DATA: The typical pedon at the series type location has partial characterization data by the Soils Laboratory from Utah State University (USU) Logan, UT and is published on pages 120-121, Table 7 of the Soil Survey of Salt Lake Area, Utah. The pH values in the typical pedon are from saturated paste.

National Cooperative Soil Survey
U.S.A.



5/2023

W8 and W9 Location

Image © 2023 Airbus

AJD MFR Enclosure 9

Google Earth

1985

Imagery Date: 5/29/2023 lat: 40.770454° lon: -111.977571° elev: 0 ft eye alt: 8043 ft

Utah Regulatory Viewer

IPaC DigitalGlobe USGS Stream Stats

Find address or place

2 layer(s) selected

W8 and W9 Location

W6

The elevation profile shows an elevation difference of approximately 4 feet between the ponded area and the adjacent upland. An review of this area revealed no ponding on connection to W6, which is the closes jurisdictional water.

Elevation Profile

Measure

Profile Result

Hover over or touch the Elevation Profile chart to display elevations and show location on map.

Profile Information

Clear

Elevation Profile

