APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October 8, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SPK-2005-50437, Spanish Fork Airport, W6-W8 (adjacent)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Utah County/parish/borough: Utah City: Spanish Fork
Center coordinates of site (lat/long in degree decimal format): Lat. 40.1437° **N**, Long. -111.6636° **W**.
Universal Transverse Mercator: 12
Name of nearest waterbody: Dry Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Utah Lake
Name of watershed or Hydrologic Unit Code (HUC): 16020202
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): May 22, May 30, June 13, 2008

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: 3.536 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

   (b) General Tributary Characteristics (check all that apply):
   Tributary is: ☐ Natural
   ☐ Artificial (man-made). Explain: .
   ☐ Manipulated (man-altered). Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 3.536 acres

Wetland type. Explain: These are palustrine emergent wetlands on alkali flats mainly consisting of inland saltgrass.

Wetland quality. Explain: These wetlands are in good condition and relatively undisturbed, but hydrology has been influenced by airport runways and man altered drainages in the surrounding area.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: These wetlands collect surface runoff during storm events and snowmelt.

Surface flow is**: Overland sheetflow**

Characteristics: These wetlands collect surface runoff during storm events and snowmelt.

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: The wetland identified as W8 is connected to a RPW through a drainageway that carries runoff during storm events.

☐ Ecological connection. Explain: .

☒ Separated by berm/barrier. Explain: W6 and W7 have a manmade berm that separates the wetland from the RPW. The approximately 20-foot wide berms have been formed by material excavated from the ditches. At W6, the berm acts as a dam ponding storm water runoff. W7 is a depressed land form that is equivalent elevation with the bottom of the adjacent ditch.

(d) Proximity (Relationship) to TNW

Project wetlands are **1-2** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: The water in Dry Creek carries suspended sediments and salts making it appear brown in color. The water quality is poor as it receives runoff from agricultural fields, urban areas, and alkali flats.

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain: These wetlands constist of alkali tolerant species consisting mainly of island saltgrass, alkaligrass, and seepweed with some wetter areas containing hardstem bulrush.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: The freshwater wetlands adjacent to Utah Lake provide habitat for a variety of wildlife including numerous species of migratory birds. This wetland ecosystem is important as a breeding area and stopover for many migratory birds in the Pacific Flyway.

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **8**

Approximately (9.655) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W1 - Y	0.805	W2 - Y	0.734
W3 - Y	1.570	W4 - Y	0.935
W5 - Y	2.075	W6 - N	2.520

W7 - N	0.887	W8 - N	0.129

Summarize overall biological, chemical and physical functions being performed: These wetlands act to reduce the amount of pollutants coming from the airport runway and taxiway and pond and attenuate flood waters from entering Dry Creek. The creek is located a couple hundred yards north of the airport property. These wetlands are also in close proximity to Utah Lake, a TNW. The freshwater wetlands adjacent to Utah Lake provide habitat for a variety of wildlife including numerous species of migratory birds. This wetland ecosystem is important as a breeding area and stopover for many migratory birds in the Pacific Flyway. The wetland habitats surrounding Utah Lake are under great pressure from residential and commercial development, and many have already been lost.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands identified as W6, W7, and W8 are wetlands that are adjacent to but do not directly abut a RPW. W6 and W7 have a manmade berm that separates the wetland from the RPW. The approximately 20-foot wide berms have been formed by material excavated from the ditches. At W6, the berm acts as a dam ponding storm water runoff. W7 is a depressed land form that is equivalent elevation with the bottom of the adjacent ditch. The wetland identified as W8 is connected to a RPW through a drainageway that carries runoff during storm events. This was observed on a field visit. Wetlands W6 through W8 all act to reduce the amount of pollutants coming from the airport runway and taxiway and pond and attenuate flood waters from entering Dry Creek. The creek is located a couple hundred yards north of the airport property. These wetlands are also in close proximity to Utah Lake, a TNW. The freshwater wetlands adjacent to Utah Lake provide habitat for a variety of wildlife including numerous species of migratory birds. This wetland ecosystem is important as a breeding area and stopover for many migratory birds in the Pacific Flyway. The wetland habitats surrounding Utah Lake are under great pressure from residential and commercial development, and many have already been lost.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **3.536** acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.

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[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Delineation report provided by Natural Resources Consulting (March 2008).
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☒ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:1:24,000 Provo.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: Provo.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):several, various.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): The field visit on May 22, 2008 occurred during a significant precipitation event. Much insight was gained by witnessing drainage and ponding patterns on site.

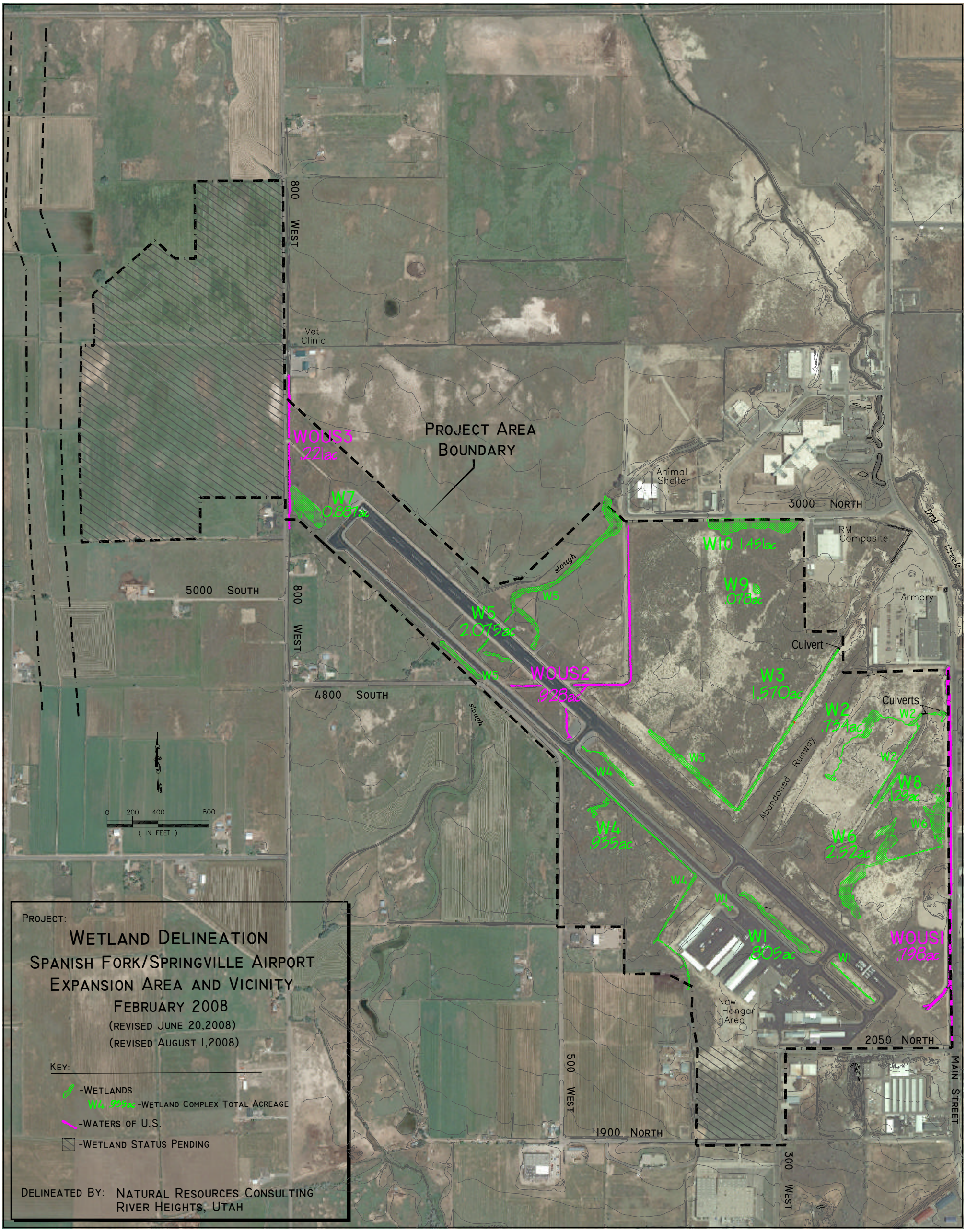
B. ADDITIONAL COMMENTS TO SUPPORT JD:

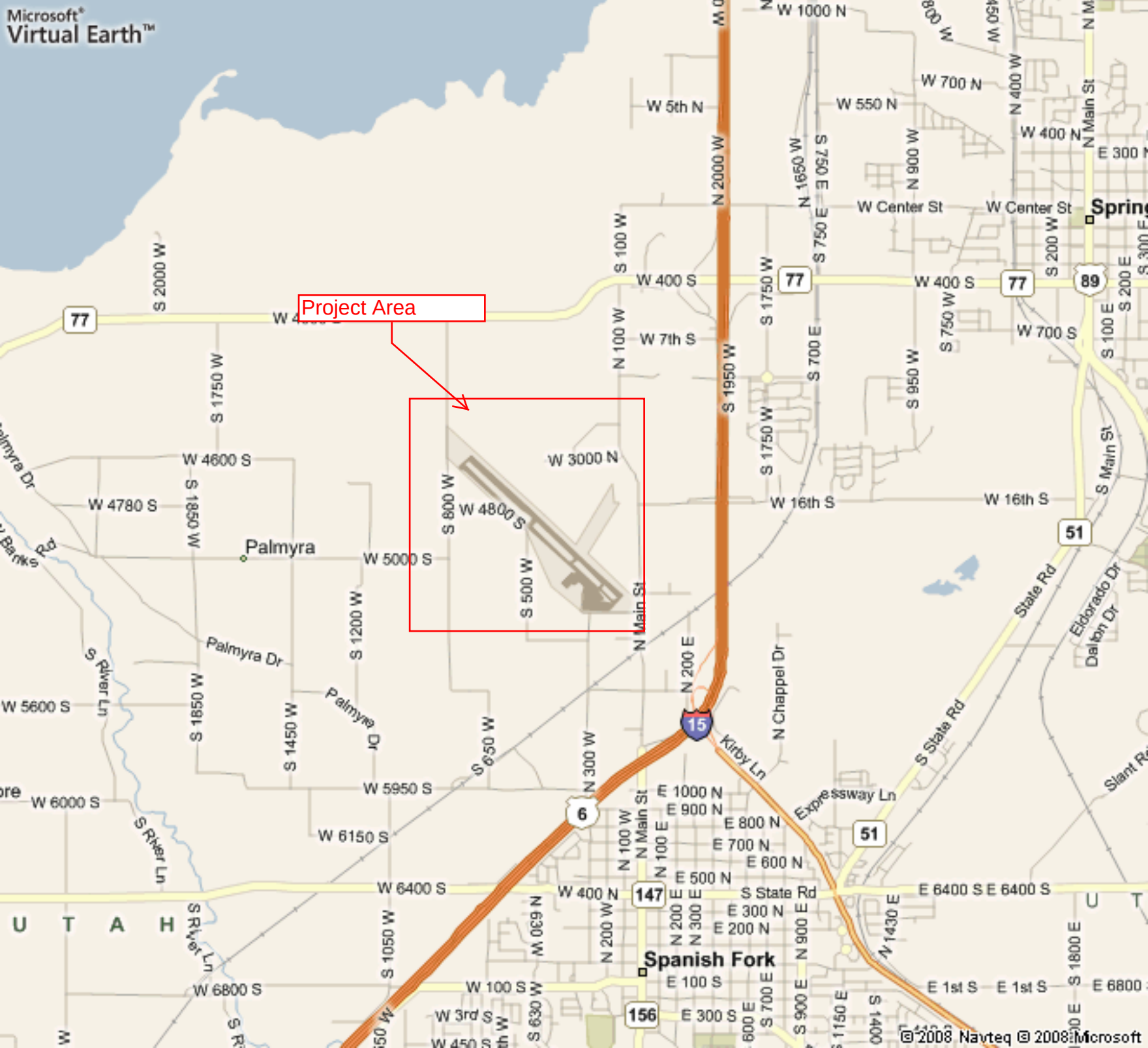
Adjacent wetlands information: Wetlands identified as W6, W7, and W8 are wetlands that are adjacent to but do not directly abut a RPW. W6 and W7 have a manmade berm that separates the wetland from the RPW. The approximately 20-foot wide berms have been formed by material excavated from the ditches. At W6, the berm acts as a dam ponding storm water runoff. W7 is a depressed land form that is equivalent elevation with the bottom of the adjacent ditch. The wetland identified as W8 is connected to a RPW through a drainageway that carries runoff during storm events. This was observed on a field visit. Wetlands W6 through W8 all act to reduce the amount of pollutants coming from the airport runway and taxiway and pond and attenuate flood waters from entering Dry Creek. The creek is located a couple hundred yards north of the airport property. These wetlands are in close proximity to Utah Lake a TNW. The freshwater wetlands adjacent to Utah Lake provide habitat for a variety of wildlife including numerous species of migratory birds. This wetland ecosystem is important as a breeding area and stopover for many migratory birds in the Pacific Flyway. The wetland habitats surrounding Utah Lake are under great pressure from residential and commercial development, and many have already been lost.

Isolate wetland information: Isolate calls were made on two wetland polygons (W9, W10). The wetlands are located in closed contour depressions. W10 developed into a salt grass meadow after 3000 North Street was constructed. The roadway acts as a dam thereby ponding sheet flow runoff coming from a portion of the airport property. Water levels would need to pond to approximately 2 feet to overflow the depression and flow into a catch basin on 3000 North Street. After a significant storm event for the area on May 22, 2008, the Corps observed only a couple inches of ponding water in W10, thereby concluding a surface connection between W10 and the catch basin is unlikely to exist. W9 is a depression up-gradient from W10 and is enclosed by uplands. In the unlikely event it were to overflow, the overflow would be be captured in W10.

RPW information: Waters of the U.S. identified as WoUS1, WoUS2, and WoUS3 are perennial waterways that flow to Dry Creek just north of the airport property. Dry Creek is a RPW that flows to Utah Lake a TNW aprroximately 2 miles northwest of the airport. WoUS1 parallels Main Street and the airport's eastern boundary and is a ditch receiving water from Spanish Fork's storm drains, agriculture tail water, and groundwater seeps and springs. WoUS2 is a perennial slough flowing through the airport site. WoUS3, running along 800 West Street, is an irrigation canal with perennial flows connecting to Dry Creek through a series of ditches. The consulant's delineation report identified the three waterways as being perennial and having a direct connection to Dry Creek.

Wetlands directly abutting information: Wetlands identified as W1 through W5 are directly abutting a RPW. These wetlands have either a portion of their defined boundary directly abutting a RPW or are directly connected to the RPW through a pipe culvert.


800 WEST
Vet Clinic
PROJECT AREA BOUNDARY
WOUS3 .22ac
W7 0.887ac
Animal Shelter
3000 NORTH
RM Composite
W10 1.451ac
W9 .078ac
Armory
Dry Creek
slough
W5
W5 2.079ac
5000 SOUTH
800 WEST
Culvert
W3 1.570ac
WOUS2 .928ac
4800 SOUTH
Culverts
W2
W2 .134ac
W3
Abandoned Runway
W4
W8 .129ac
W6
W6 2.52ac
W4 .955ac
W1
W1 .805ac
WOUS1 .798ac
New Hangar Area
2050 NORTH
500 WEST
1900 NORTH
300 WEST
MAIN STREET
0 200 400 800
(IN FEET)
PROJECT:
WETLAND DELINEATION
SPANISH FORK/SPRINGVILLE AIRPORT
EXPANSION AREA AND VICINITY
FEBRUARY 2008
(REVISED JUNE 20,2008)
(REVISED AUGUST 1,2008)
KEY:
-WETLANDS
W4 .955ac -WETLAND COMPLEX TOTAL ACREAGE
-WATERS OF U.S.
-WETLAND STATUS PENDING
DELINEATED BY: NATURAL RESOURCES CONSULTING
RIVER HEIGHTS, UTAH


Microsoft
Virtual Earth™
Project Area
Palmyra
Spanish Fork
W 1000 N
W 700 N
W 550 N
W 400 N
W 5th N
W Center St
W 400 S
W 7th S
W 700 S
W 3000 N
W 4600 S
W 4780 S
W 4800 S
W 5000 S
W 16th S
W 5600 S
W 5950 S
W 6000 S
W 6150 S
W 6400 S
W 6800 S
W 100 S
W 3rd S
E 1000 N
E 900 N
E 800 N
E 700 N
E 600 N
E 500 N
E 300 N
E 200 N
E 100 S
E 300 S
E 1st S
E 6400 S
S State Rd
Kirby Ln
Expressway Ln
Palmyra Dr
N Main St
S Main St
N Chappel Dr
State Rd
Eldorado Dr
Dalton Dr
S River Ln
U T A H
77
89
51
6
15
147
156
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W6 (Significant Nexus) - Standing on the manmade berm between W6 (left) and WOUS1 (right) looking north.

W6 (Significant Nexus) WOUS1 looking south. WOUS1 is highly excavated to approximately 6 feet with nearly vertical banks. Over the years, excavated material from the ditch has been side cast creating a berm that severed the connection between the ditch and W6.

W6 (Significant Nexus) – Standing in W6 looking east across the berm, WOUS1, and Main Street.

W6 (Significant Nexus) – Material excavated from WOUS 1 to create the berm.

W7 (Significant Nexus) – Standing on the manmade berm between W7 (left) and WOUS3 (right) looking south. The elevation of the wetland is equivalent to the elevation of the ditch bottom. It appears material from past ditch excavations have been side cast dividing the W7 and WOUS3.

W7 (Significant nexus) – WOUS3 flowing along 800 West Street looking south. W7 is the dark patch in the distance on the left side of the ditch.

W8 (Significant Nexus) – South end of wetland looking northeast. Wetland is in a defined drainage channel that flows in a northeast direction to W2 which connects to WOUS1.

W8 (Significant Nexus) – The northern end of W8 is located approximately 300 feet up this drainage channel.