**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): January 5, 2009**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SPK-2006-50413 Mendenhall - Spanish Fork Property - Wetlands W1, W2, W3 (revised post-appeal determination)**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: UT County/parish/borough: Utah City: Spanish Fork
Center coordinates of site (lat/long in degree decimal format): Lat. 40.1262° **N**, Long. 111.6490° **W**.
Universal Transverse Mercator: 12 444699E 4441968N (NAD83)
Name of nearest waterbody: Unnamed tributary of 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): 160202020503 (Dog/Dry Creek)
☒ 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): December 12, 2006; March 30, 2007; April 6, 2007; September 6, 2007, May 14, 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 no** "*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: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not Applicable.**
      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: **Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. See discussion under Section F**.

**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: **square miles**
   Drainage area: **square miles**
   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: W1 0.06 ac. (0.02 ac open water + .04 ac wet meadow fringe)
W2 0.12 ac (.04 ac open water + .08 ace wet meadow fringe)
W3 0.10 wet meadow acres

Wetland type. Explain: W1 and W2 are open water seeps with wet meadow fringe; W3 is a wet meadow .

Wetland quality. Explain: The seeps are of moderate quality; W3 is low quality due to its proximity to the US-6 roadway. Surrounding land uses and hydrological modifications (residential/commercial development and roads) exclude these wetlands from being classified as "high" quality wetlands. During our field visits, the area appeared to be under a light grazing regime. The quality of vegetation and ratio of native to non-native species was moderate as well.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Some groundwater does contribute to flows in the ditch, however groundwater was not observed flowing into the ditch from the on-site wetlands. Groundwater monitoring reports submitted by the consultant show that groundwater levels appear to fluctuate with precipitation events and snow melt in the mountains.

Surface flow is**: Not present**

Characteristics: .

Subsurface flow: **Yes**. Explain findings: On May 14, 2008 a study was conducted to determine if there was a subsurface hydrologic connection between the wetlands and the ditch. A dam was constructed across the ditch and the remaining water was removed using a pump. The south bank of the ditch, below the seasonally ponded water in wetland W1 (4554') and the current ground water table (4553.3') elevations was observed to determine if water would seep into the ditch. No perceivable flow was observed. The Corps concluded that water flow between the wetlands and the ditch was constrained to the point where it did not meet the significant nexus definition of a physiological subsurface connection.

.

☒ Dye (or other) test performed: An investigation was conducted to determine if there were a subsurface hydrologic connection between the wetlands and the ditch. Four trenches were excavated 3-5 feet from the ditch and uranine dye was placed in the trenches. The trenches remained open for 2 weeks (March 14 to March 28, 2007) and later, on September 19, 2007, uranine dye was placed in two bore holes 650 feet west of the property and adjacent to the ditch. No confirmed dye was observed entering the ditch during the initial test; however, on May 13, 2008, a trace amount was seen and sampled. Depending on which source the dye originated, it would have taken 8 to 14 months to travel the few feet to the ditch.

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☒ Separated by berm/barrier. Explain: An old railroad berm separates the wetlands from the adjacent unnamed channel. This berm was constructed pre-CWA in uplands and wetlands on the northern portion of the parcel.

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **2-5** 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: Water in the seeps is clear, and water quality appears to be good.

Identify specific pollutants, if known: none observed.

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

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

☒ Vegetation type/percent cover. Explain:100% wet meadow vegetative cover, mostly salt grass.

☐ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☐ Aquatic/wildlife diversity. Explain findings: .

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

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

Approximately ( 10.76 ) 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* N | 0.06 | W5 N | 0.01 |
| W2* N | 0.12 | W6 N | 0.01 |
| W3 N | 0.10 | W7 N | 0.02 |
| W4 N | 10.42 | W8 N | 0.03 |

*open water seep portion included in acreage

Summarize overall biological, chemical and physical functions being performed: There is little biological function on site. No observation of wildlife use of the project site have been made and the site does not function as habitat for federally listed species. There is no riparian habitat onsite, however, there is scrub/shrub habitat located along the unnamed ditch adjacent to the site. The physical hydrologic connection is hydrologically constrained in that a shallow subsurface hydrologic connection does exist, however, the flow rate is in terms of months, rather than hours or days according to dye test conducted onsite. There is limited chemical function onsite. The wetlands on the site do filter runoff from storm events, but mainly from precipitation that falls on site. An insignificant amount of runoff from the surrounding commercial and residential properties flows into these wetlands. Utah Lake is listed on Utah's 2004 §303(d) list for exceedances of state criteria for total phosphorus (TP) and total dissolved solids (TDS) concentrations (UDWQ, 2007). However, the flows from the ditch would not significantly affect water temperature, nutrient levels, or water quality in Utah Lake since flows are less than 1/10,000 of 1% of total inflows into the lake.

## 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: **The support for making this determination comes from several field visits, several reports and rebuttal letters submitted on behalf of the consultant and a District-level appeals process all occurring over a two-year period. On the approximately 21-acre property being considered, 8 wetland polygons (W1-W8) have been identified totaling 10.76 acres of wetlands. Along the northern property boundary, is a manmade ditch that has been determined to be a perennial relatively permanent waterway (See SPK-2007-01135). A 2 to 3-foot high berm exists between the ditch and wetlands occurring on the**

**site. The nearest wetland (W8) to the ditch is 20 feet away and the nearest seasonally ponded water (W1) is 97 feet from the ditch. No surface flow or pipes convey water from these wetlands to the ditch.**

**An investigation was conducted to determine if there was a subsurface hydrologic connection between the wetlands and the ditch. Four trenches were excavated 3-5 feet from the ditch and uranine dye was placed in the trenches. The trenches remained open for 2 weeks (March 14 to March 28, 2007) and later, on September 19, 2007, uranine dye was placed in two bore holes 650 feet west of the property and adjacent to the ditch. No confirmed dye was observed entering the ditch during the initial test; however, on May 13, 2008, a trace amount was seen and sampled. Depending on which source the dye originated, it would have taken 8 to 14 months to travel the few feet to the ditch.**

**On May 14, 2008 another study was conducted to determine if there was a subsurface hydrologic connection between the wetlands and the ditch. A dam was constructed across the ditch and the remaining water was removed using a pump. The south bank of the ditch, below the seasonally ponded water in wetland W1 (4554') and the current ground water table (4553.3') elevations was observed to determine if water would seep into the ditch. No perceivable flow was observed. The Corps concluded that water flow between the wetlands and the ditch was constrained to the point where it did not meet the significant nexus definition of a physiological subsurface connection.**

**The site was studied to see if a chemical significant nexus could be established between the wetlands and the ditch. The wetlands on the site do filter runoff from storm events, but mainly from precipitation that falls on site. An insignificant amount of runoff from the surrounding commercial and residential properties flows into these wetlands. Utah Lake is listed on Utah's 2004 §303(d) list for exceedances of state criteria for total phosphorus (TP) and total dissolved solids (TDS) concentrations (UDWQ, 2007). However, the flows from the ditch would not significantly affect water temperature, nutrient levels, or water quality in Utah Lake since flows are less than 1/10,000 of 1% of total inflows into the lake.**

**A significant biological connection between the wetlands and the RPW could not be established. The 21-acre site is bordered by commercial and residential developments and an Interstate freeway. These surrounding land uses curtail wildlife from utilizing the site and no sightings of wildlife have been observed during site visits. No observation of wildlife use of the project site have been made and the site does not function as habitat for federally listed species. There is no riparian habitat onsite, however, there is scrub/shrub habitat located along the unnamed ditch adjacent to the site. Also, no fish species have been observed in the ditch**.

**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: The tributary was observed flowing during five site visits conducted at different times of the year and the applicant's reports also document flow during their site visits. The ditch flow leaves the site and is piped under the US-6/I-15 interchange and contines northeast for 2 miles where in converges with Dry Creek. From this point, Dry Creek continus to flow westerly another 3.5 miles where it empties into Utah Lake, a TNW. The jurisdictional determination for this unnamed channel was made under SPK-2007-01135.
- ☐ 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: **1,500** linear feet **6** 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: **.**

[8]See Footnote # 3.

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: 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.
- ☐ 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: **The support for making this determination comes from several field visits, several reports and rebuttal letters submitted on behalf of the consultant and a District-level appeals process all occurring over a two-year period. On the approximately 21-acre property being considered, 8 wetland polygons (W1-W8) have been identified totaling 10.76 acres of wetlands. Along the**

[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.***

**northern property boundary, is a manmade ditch that has been determined to be a perennial relatively permanent waterway (See SPK-2007-01135). A 2 to 3-foot high berm exists between the ditch and wetlands occurring on the site. The nearest wetland (W8) to the ditch is 20 feet away and the nearest seasonally ponded water (W1) is 97 feet from the ditch. No surface flow or pipes convey water from these wetlands to the ditch.**

**An investigation was conducted to determine if there was a subsurface hydrologic connection between the wetlands and the ditch. Four trenches were excavated 3-5 feet from the ditch and uranine dye was placed in the trenches. The trenches remained open for 2 weeks (March 14 to March 28, 2007) and later, on September 19, 2007, uranine dye was placed in two bore holes 650 feet west of the property and adjacent to the ditch. No confirmed dye was observed entering the ditch during the initial test; however, on May 13, 2008, a trace amount was seen and sampled. Depending on which source the dye originated, it would have taken 8 to 14 months to travel the few feet to the ditch.**

**On May 14, 2008 another study was conducted to determine if there was a subsurface hydrologic connection between the wetlands and the ditch. A dam was constructed across the ditch and the remaining water was removed using a pump. The south bank of the ditch, below the seasonally ponded water in wetland W1 (4554') and the current ground water table (4553.3') elevations was observed to determine if water would seep into the ditch. No perceivable flow was observed. The Corps concluded that water flow between the wetlands and the ditch was constrained to the point where it did not meet the significant nexus definition of a physiological subsurface connection.**

**The site was studied to see if a chemical significant nexus could be established between the wetlands and the ditch. The wetlands on the site do filter runoff from storm events, but mainly from precipitation that falls on site. An insignificant amount of runoff from the surrounding commercial and residential properties flows into these wetlands. Utah Lake is listed on Utah's 2004 §303(d) list for exceedances of state criteria for total phosphorus (TP) and total dissolved solids (TDS) concentrations (UDWQ, 2007). However, the flows from the ditch would not significantly affect water temperature, nutrient levels, or water quality in Utah Lake since flows are less than 1/10,000 of 1% of total inflows into the lake.**

**A significant biological connection between the wetlands and the RPW could not be established. The 21-acre site is bordered by commercial and residential developments and an Interstate freeway. These surrounding land uses curtail wildlife from utilizing the site and no sightings of wildlife have been observed during site visits. No observation of wildlife use of the project site have been made and the site does not function as habitat for federally listed species. There is no riparian habitat onsite, however, there is scrub/shrub habitat located along the unnamed ditch adjacent to the site. Also, no fish species have been observed in the ditch.**

☐ 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: 10.76 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: Dec 7, 2006 Delineation Report, Jan 17, 2007 Groundwater study, May 29, 2008 Surface Flow Summary and ancillary data.
☒ 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: The Corps May 2, 2007 Technical Memorandum to the file.
☐ 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: Provo, UT Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Utah County, Central Part (SCS 1972).
☒ National wetlands inventory map(s). Cite name:Provo Quad NWI mapping.

☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): various.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature: Utah Division of Water Quality. 2007. Utah Lake TMDL: Pollutant Loading Assessment & Designated Beneficial Use Impairment Assessment FINAL DRAFT (August 1, 2007). Prepared by Psomas and SWCA Environmental Consultants.
☐ Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

In most mountain-valley fill systems, groundwater recharge areas occur at joints and fractures in the bedrock and in the alluvial deposits which apron the mountains. Groundwater discharge in mountain-valley fill systems tends to occur at the toe of the alluvial deposits abutting the mountains, along watercourses stemming from the mountains, and in the lowest lying areas of the valley fill deposits. In this case, the site is situated at the toe of the Provo bench of ancient Lake Bonneville in Quaternary lacustrine sediments (Currey et al., 1984; Davis, 1983). The hydraulic gradient trends from the southeast to the northwest, toward Utah Lake. At the site, the potentiometric (groundwater) surface is approximately equal to the ground elevation (~4555 ft throughout most of the property), hence the occurrence of wetlands (Brooks and Stolp, 1995).

The unnamed channel bottom adjacent to the wetlands (at ~4551.5 feet elevation) is topographically inferior to the adjacent wetlands (~4555 feet in the north portion of the delineated parcels up to ~4558 feet in the south portion). The Corps maintains that there is an inhibited shallow subsurface hydrologic connection between the wetlands on the Tenedor property and the unnamed channel, but not to the point that would constitute a significant nexus. Even though sandy soil strata were found onsite and thought to convey water to the ditch, specific observations of a subsurface flow could not be documented.

**Other adjacent wetlands:**
Wetlands (W4 and W5-W8) are documented on separate forms because they are disimilarly situated in the landscape, however, they retain the same significant nexus characteristics of all wetlands on site

EPA Questions and Corps' Responses (EPA requested to be added to this JD):
Question 1: Based on the new guidance, do you think that all wetlands on the project site should be considered as "similarly situated" since they are all on the same tributary?

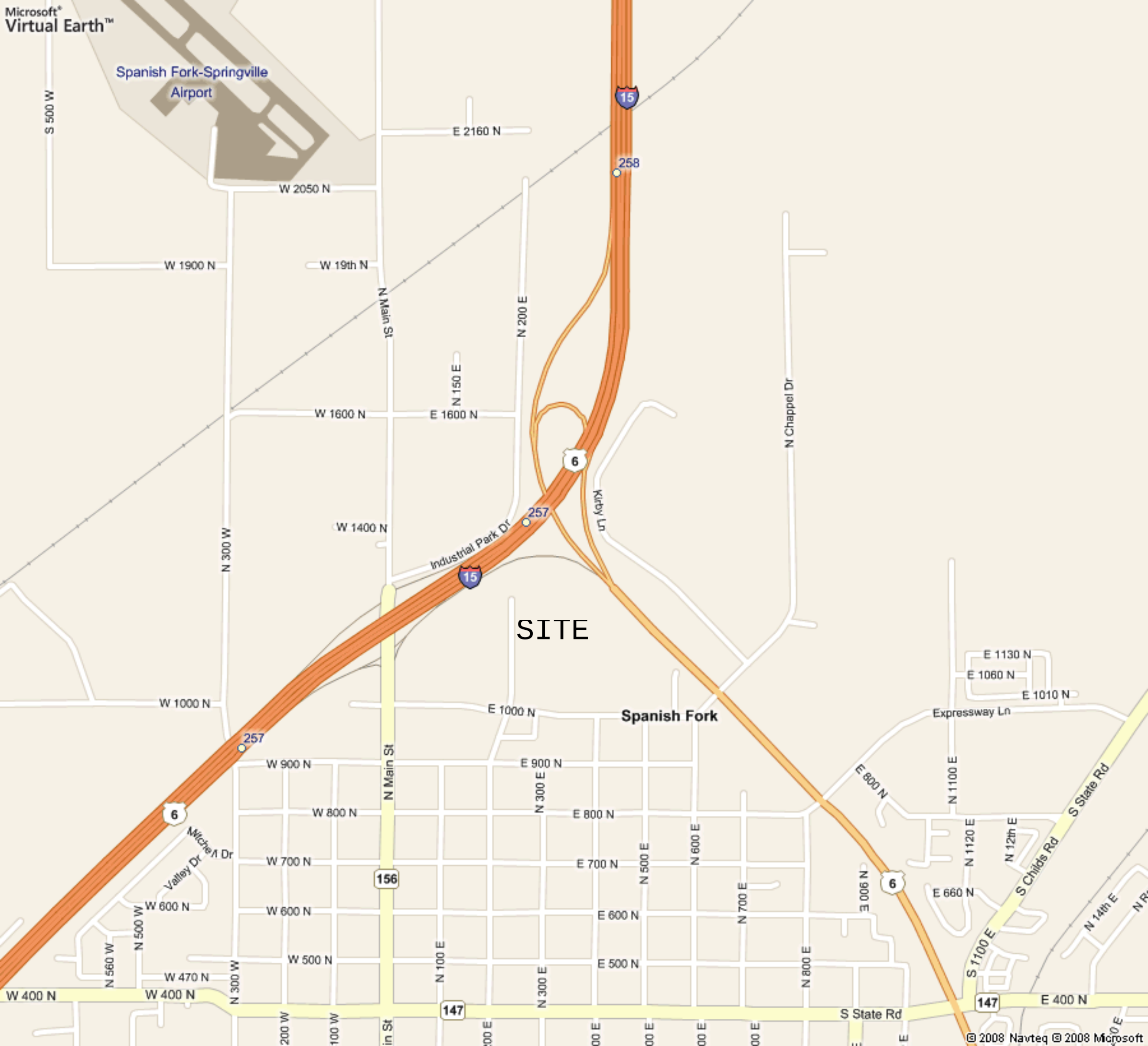
Response: I feel they are similarly situated in relation with this tributary. The only difference I see is the additional dirt road that separates Wetlands W5, W6, W7, and W8 from wetlands W1, W2, and W4.

Additional Information: Since the delineation was submitted for verification two years ago, upland vegetation (agropyron elongatum) is increasing in wetlands identified as W3, W6, W7, and W8 to the point where they would no longer meet the hydrophytic vegegetation parameter. This leaves W1, W2, W4, and W5 which are all situated further from the ditch.

Question 2: How would you define the relevant reach?
If the relevant reach is just the small section on the south side of the highway, then the nexus would be much less significant than if the relevant reach was the entire length of the Unnamed Tributary feeding Dry Creek.

A small, yet higher order tributary enters the unnamed ditch on the eastern side of US-6 just before the ditch crosses under Chappel Drive (This tributary was not identified on your map). The Corps has made recent RPW calls on two upstream properties through which this tributary flows. I feel the relevant reach would end where this higher order stream enters the unnamed ditch..

.


Microsoft® Virtual Earth™
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W 19th N
N Main St
N 200 E
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E 1600 N
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Industrial Park Dr
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Expressway Ln
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N 500 E
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Valley Dr
Mitchell Dr
N 1120 E
N 12th E
S State Rd
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BERM
DIRT ROAD
SITE
AREA UNDER
DEVELOPMENT
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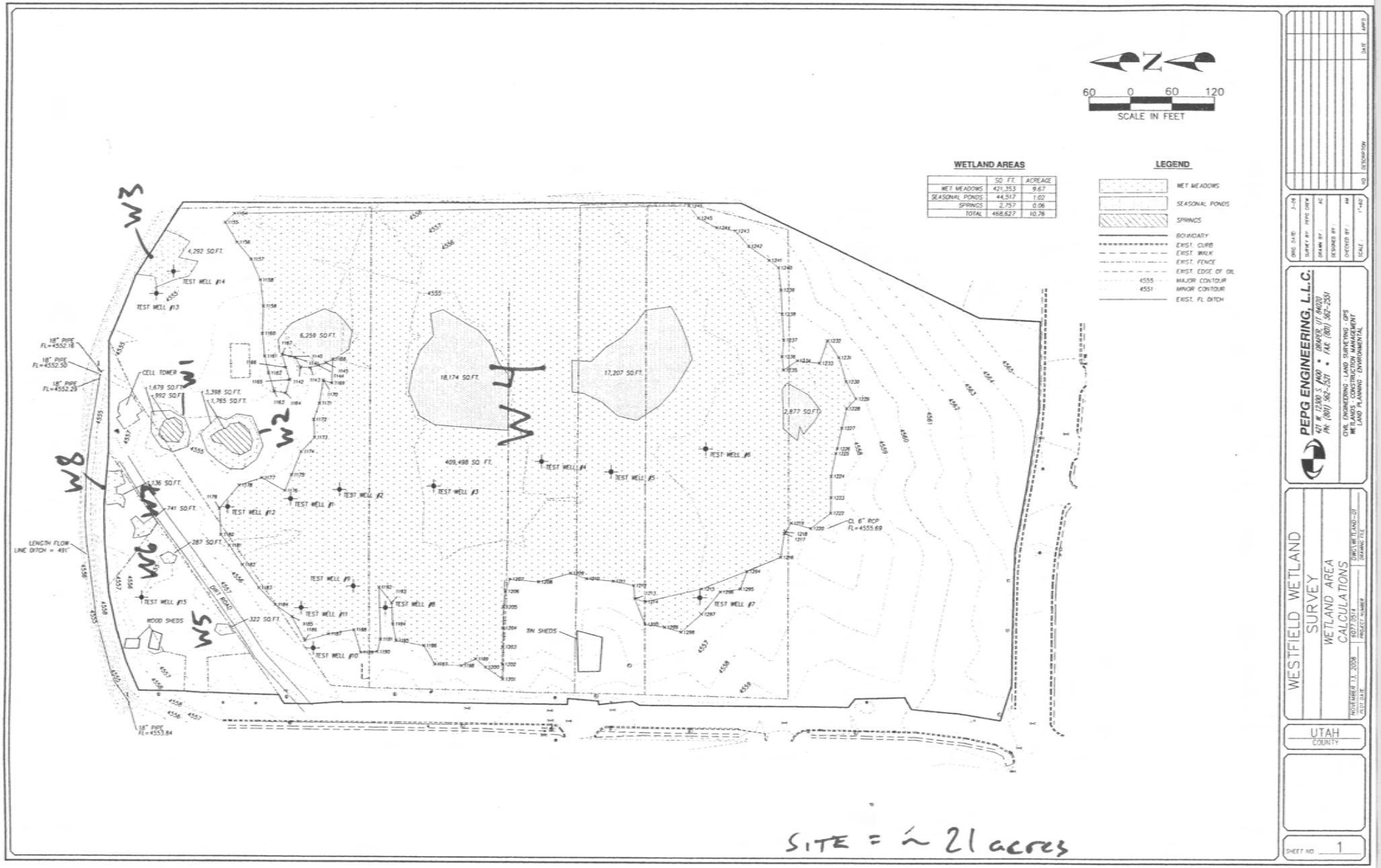


SITE = ~ 21 acres

PEPG ENGINEERING, L.L.C.
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WESTFIELD WETLAND
SURVEY
WETLAND AREA
CALCULATIONS

NOVEMBER 13, 2008 | 6077.0514 | DWG\WETLAND.DGN
PLOT DATE | PROJECT NUMBER | DRAWING FILE

UTAH
COUNTY

SHEET NO. 1

NO. DESCRIPTION DATE APP'D
DWG. DATE: J.H.B.
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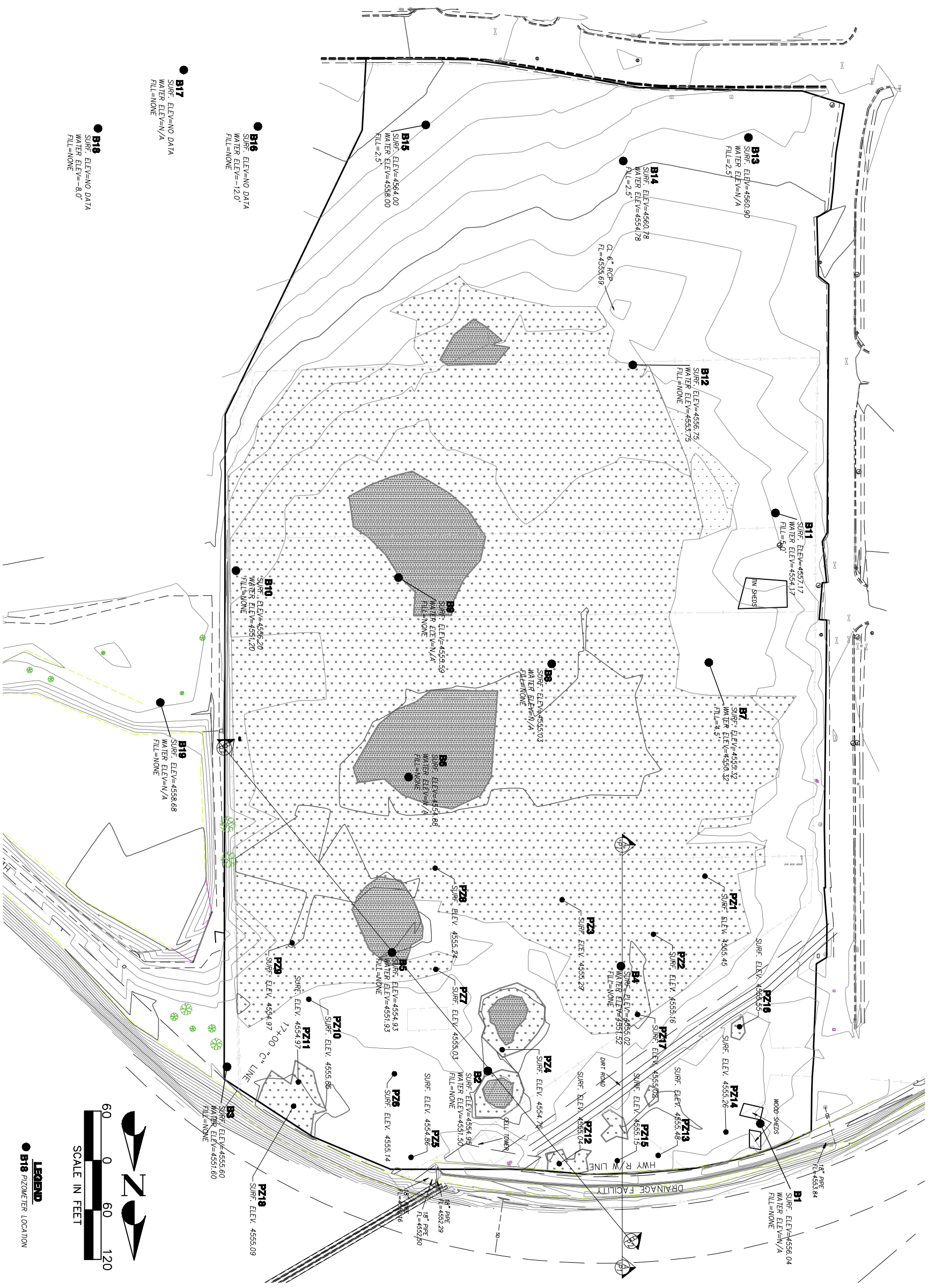
DRAWN BY: AC
DESIGNED BY: AM
CHECKED BY:
SCALE: 1"=60'




SHEET NO. 1

SP. FORK CITY

# TENEDOR PROPERTY
## GROUND WATER SURFACE
### OVERALL SITE PLAN

| | | |
|---|---|---|
| FEBRUARY 5, 2007 | 6077.0514 | DWG\SITE-OV |
| PLOT DATE: | PROJECT NUMBER | DRAWING FILE |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| | |
|---|---|
| ORIG. DATE: | 1/2007 |
| SURVEY BY: | PEPG CREW |
| DRAWN BY : | RSL |
| DESIGNED BY : | |
| CHECKED BY : | |
| SCALE : | 1"=60' |

| NO. | DESCRIPTION | DATE | APP'D |
|---|---|---|---|
| | | | |

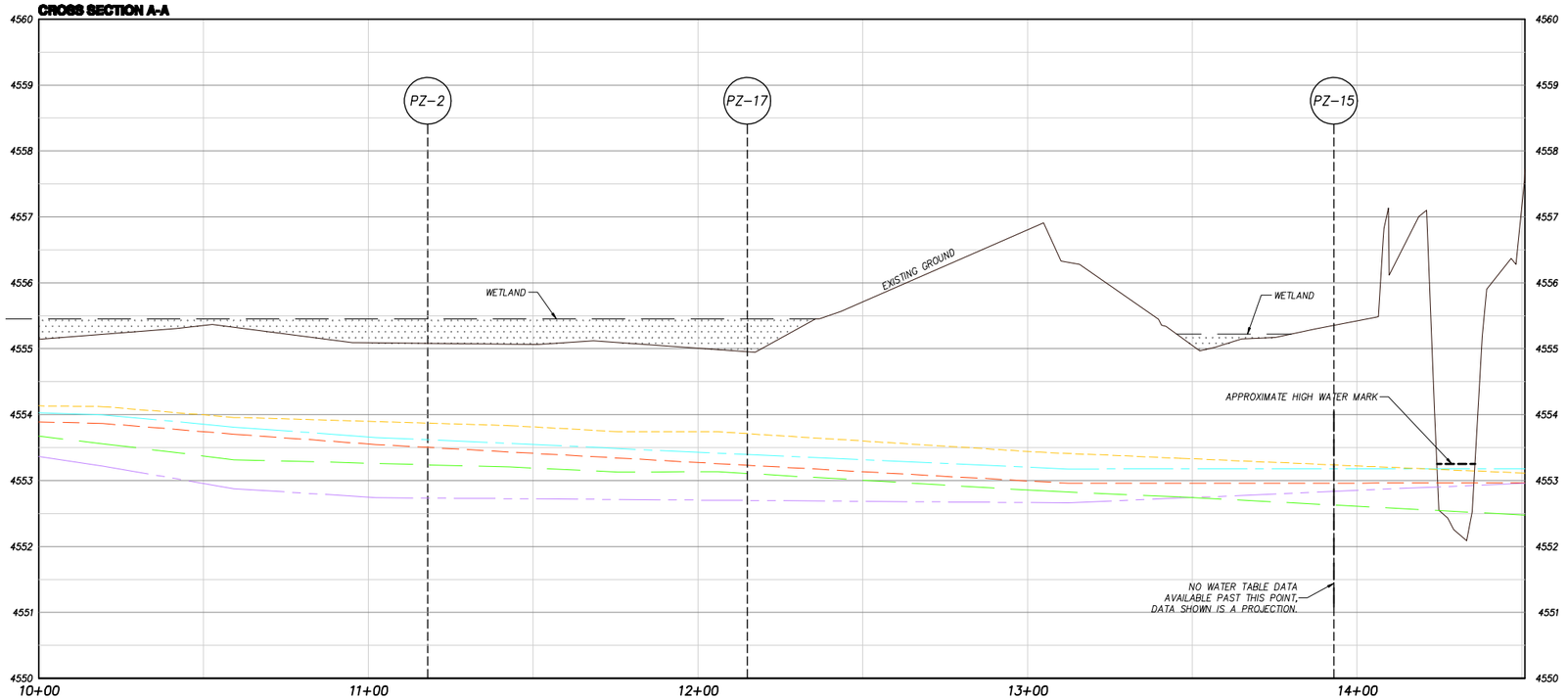
20 0 20 40

SCALE IN FEET
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=1'
(24X36 ONLY)
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=2'
(11X17 ONLY)

**LEGEND**

- EXISTING GROUND
- MARCH 28, 2007
- APRIL 3, 2007
- MAY 25, 2007
- APRIL 17, 2008
- MAY 19, 2008
- APPROXIMATE HIGH WATER MARK
- WETLAND AREA

## CROSS SECTION A-A




| NO. | DESCRIPTION | DATE | APP'D |
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ORIG. DATE: 2-5-07
SURVEY BY: PEPG CREW
DRAWN BY: CRH
DESIGNED BY: AU
CHECKED BY:
SCALE: 1"=20'


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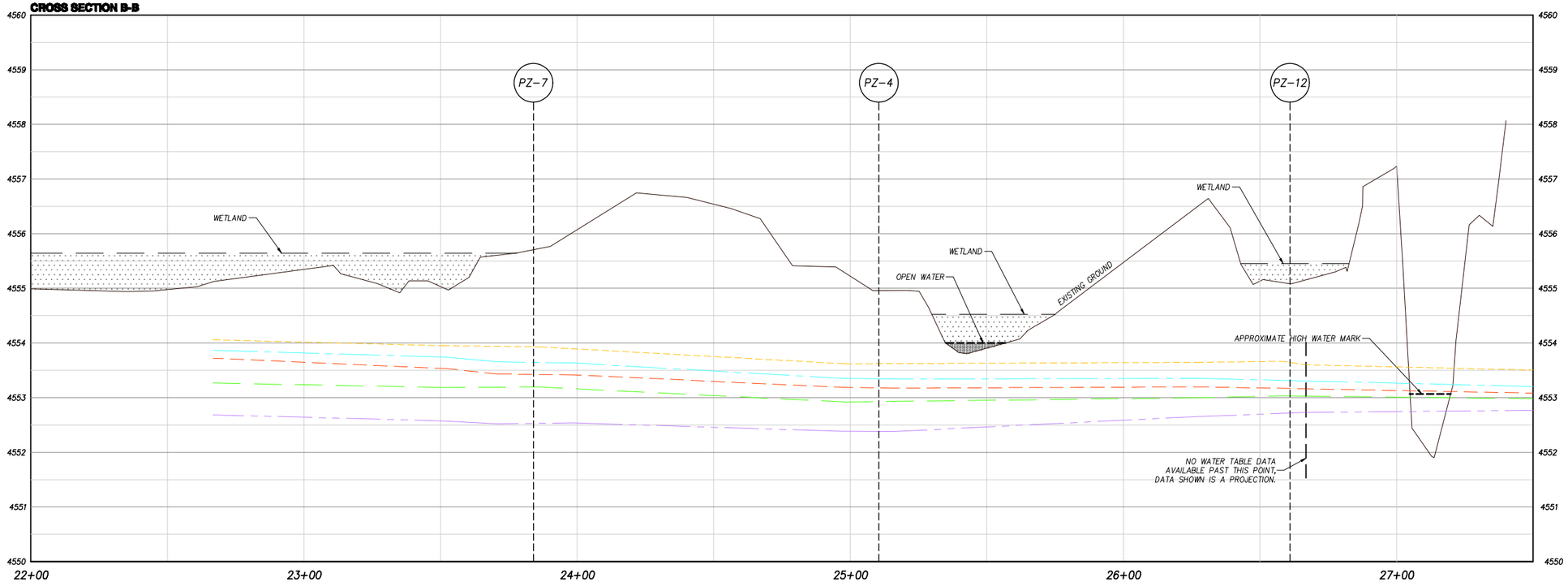
TENEDOR PROPERTY
GROUND WATER
CROSS SECTION
A-A

PROJECT NUMBER: 6077.0514
DRAWING FILE: DWG\WET_PRO-01
PLOT DATE: OCT. 2, 2008

SP. FORK
CITY

SHEET NO. 2

## CROSS SECTION B-B




| NO. | DESCRIPTION | DATE | APP'D |
|---|---|---|---|
| | | | |

ORIG. DATE: 2-5-07
SURVEY BY: PEPG CREW
DRAWN BY: CRH
DESIGNED BY: AW
CHECKED BY:
SCALE: 1"=20'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TENEDOR PROPERTY
GROUND WATER
CROSS SECTION
B-B

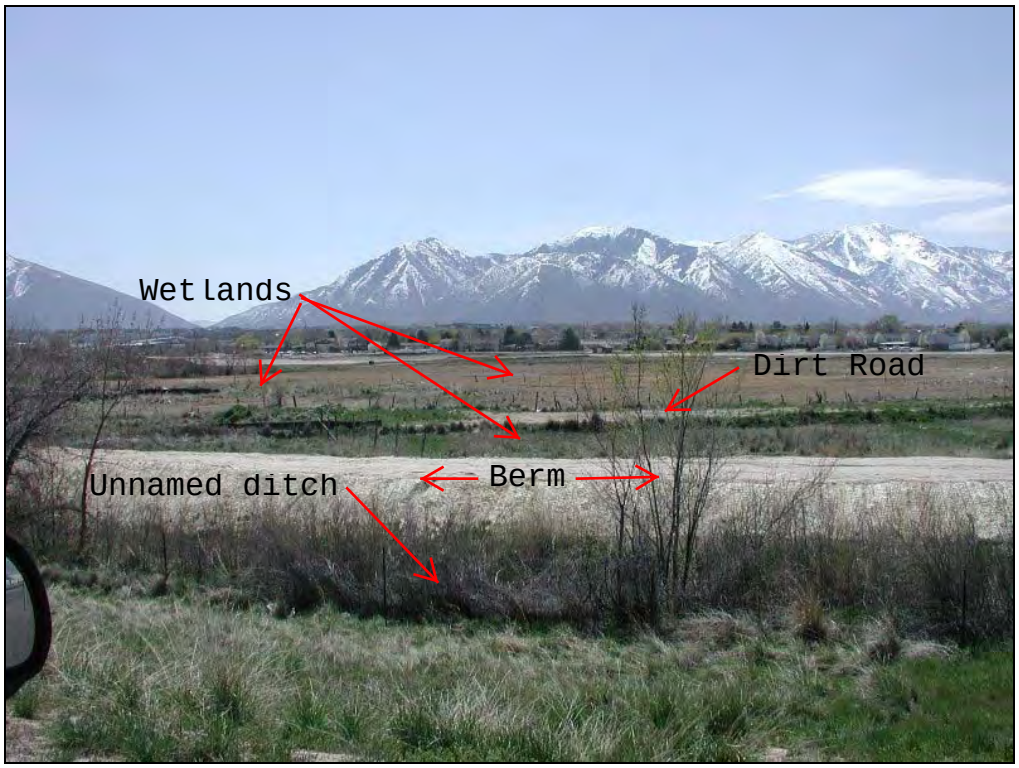
DWG \WET_PRO-01
DRAWING FILE

6077.0514
PROJECT NUMBER

OCT. 2, 2008
PLOT DATE:

SP. FORK
CITY

SHEET NO. 3




**Overall photo of site standing on freeway shoulder looking south**


**Wetland W2 looking north toward the freeway**


**Unnamed Ditch (RPW) looking west (before water was removed)**


**Unnamed Ditch after water was removed to determine presence of water seepage from adjacent wetlands**

**Dam constructed across the unnamed ditch (RPW) to remove water.**

**Test hole in ditch bank to determine presence of a hydrologic connection. Finger pointing to saturation line on bank of ditch. Approximately 12 inches above the bottom of the ditch.**