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 15, 2010

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, UDOT Southern Parkway, SPK-2000-50443, Segment 3A-2, Unnamed Ephemeral Wash A through J, M, and N

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **Utah** County/parish/borough: **Washington** City: **St. George**
Center coordinates of site (lat/long in degree decimal format): Lat. **37.0486°**, Long. **-113.4853°**
Universal Transverse Mercator: **12**
Name of nearest waterbody: **Fort Pearce Wash**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Lake Mead**
Name of watershed or Hydrologic Unit Code (HUC): **Lower Virgin - Utah, Nevada, Arizona. 15010010**
☒ 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: **Unnamed Ephemeral Wash K, L, O, P, and Q**

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: **October 7, 2010**
☒ Field Determination. Date(s): **January 20, September 2, 2010**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Pick List** *"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, wide, and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Pick List**
      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: **Unnamed Ephemeral Wash A through J are non-jurisdictional because they are intrastate, isolated, non-navigable waters with no interstate commerce connection, that do not meet the significant nexus standard as described in the Rapanos guidance.**

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: **2063 square miles**
   Drainage area: **14.6 square miles**
   Average annual rainfall: **8.25** inches
   Average annual snowfall: **3.2** inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **30 (or more)** river miles from TNW.
   Project waters are **2-5** river miles from RPW.
   Project waters are **30 (or more)** aerial (straight) miles from TNW.
   Project waters are **2-5** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain:

   Identify flow route to TNW[5]: **Unnamed Ephemeral Wash A through J flow to Stucki Debris Basin, an impoundment designed to collect sediment and provide protection from floodwaters. Stucki Debris Basin is connected to the Warner Draw Disposal System. Unnamed Ephemeral Wash M flows into Wash N, which flows to the Warner Draw Disposal System. The Warner Draw Disposal System collects storm water from the Stucki, Warner Valley, and Gypsum Debris Basins into approximately 4 miles of underground piping which outflows to the St George/Washington Canal. This canal flows approximately 2,200 feet before entering Fort Pearce Wash**

[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.

(intermittent intrastate RPW), which flows about 3 miles to the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW). About 84 miles downstream from the Fort Pearce Wash/Virgin River confluence, surface flows enter Lake Mead (TNW, Section 10 RHA).

Tributary stream order, if known:

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

Tributary properties with respect to top of bank (estimate):
Average width: **1 to 8** feet
Average depth: **2 to 4** feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☒ Other. Explain: **Fine and very fine sands**

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

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: **Significant rain events.**
Other information on duration and volume:

Surface flow is: **Discrete and confined.** Characteristics:

Subsurface flow: **No**. 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): **Ripples, surface relief**
☐ 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:

[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.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: **When water is present in Wash M and N, it carries a significant sediment load to the St. George/Washington Canal and Fort Pearce Wash (intermittent intrastate RPW).**
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:
☐ 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: acres
Wetland type. Explain:
Wetland quality. Explain:
Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain:

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

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

(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:

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** 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:
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:
☐ 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: **Pick List**
Approximately 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)

Summarize overall biological, chemical and physical functions being performed:

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: **Wash A through J and their associated tributaries all flow to Stucki Debris Basin, a dry dam only storing water during flood events. Although an overflow structure is constructed in the basin, siltation has left the overflow structure almost three feet higher in elevation than the low point in the basin. The lowest part of the debris basin has a capacity of 8.35 acre-feet before water flows over a sediment ridge to the overflow structure. Based on the hydrology study, a 2-year 24-hour storm event would result in 5.82 acre-feet of water flowing, from Unnamed Wash A through J, into the low point in the basin. Therefore, during an assumed 2-year 24-hour storm event, a rare possibility in the St George desert enviroment, discharge from Stucki Debris Basin to the Warner Draw Disposal System would still not occur. Based on the above, Washes A though J do not have a significant nexus to Fort Pearce Wash (intermittent intrastate RPW) or the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW).**

   Wash M and its associated tributaries originate on the Warner Ridge and are primarily south of Warner Valley Road. The wash crosses below the road in a culvert prior to joining Wash N, which is the outflow from Warner Valley Debris Basin. As it travels west, other smaller washes converge into Wash N. Prior to reaching Washington Fields Road, Wash N flows into a pipe which is part of the Warner Draw Disposal System. Hydraulic analysis shows that 12.7 cfs of water flows from Wash N to the Warner Draw Disposal System during a 2-year 24-hour storm event. Flows are contained for approximately 4 miles in the Warner Draw Disposal System piping which outflows to the St George/Washington Canal. This canal flows approximately 2,200 feet before entering Fort Pearce Wash. Between Wash N and Fort Pearce Wash, infiltration and evaporation of surface flows are minimal. Therefore, sediment carried with Wash M and N flows have a more than speculative or insignificant affect on Fort Pearce Wash (intermittent intrastate RPW) and the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW).

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:

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, wide, 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 wide.
☐ 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: **4,412** linear feet, **2 to 4 feet** wide.
☐ 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: 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).

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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, wide.
☐ 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: **Unnamed Ephemeral Wash A through J do not convey sufficient flows to have a significant effect on the physical, chemical, and/or biological integrity of Fort Pearce Wash (intermittent intrastate RPW) or the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW).**
☐ 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, wide.
☐ 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): **44,258** linear feet, **2 to 4 feet** wide.
☐ 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 of Waters of the U.S., Southern Parkway-Segment 3A, Utah Department of Transportation, UDOT Project No. S-LC53(45), prepared by Horrocks Engineers, September 27, 2010.**
☒ 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:
☐ USDA Natural Resources Conservation Service Soil Survey. Citation:

[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.*

- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date):
  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): **Stucki Debris Basin Contours, Figure 6**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Southern Parkway project, as approved in the Federal Highway Administration's October 2005 Record of Decision, consists of an interchange at Reference Post 2 on Interstate 15 in St. George, Utah, and an associated 26-mile, four-lane, limited-access highway that connects to State Route 9 in Hurricane, Utah. Utah Department of Transportation (UDOT) has constructed Southern Parkway Segments 1 and 2 and planning to construct portions of Segment 3A. On January 22, 2010, a field visit was conducted to identify streams (unnamed ephemeral washes) in the proposed 245 acre study area and discuss the project. On September 2, 2010, a follow-up field visit was conducted to verify the draft delineation report before submittal. On September 27, 2010, UDOT submitted the Delineation of Waters of the U.S., Southern Parkway-Segment 3A prepared by Horrocks Engineers.

General plant communities in the delineation study area include the following upland species: Creosote Bush (Larrea tridentata), Big Sagebrush (Artemisia tridentata), Range Ratany (Krameria parvifolia), Bur Sage (Ambrosia dumosa), Shadscale (Atriplex confertifolia), Mormon Tea (Ephedra torreyana), Big Rabbitbrush (chrysothamnus nauseosus), and Winterfat (Ceratoides lantana). No wetland species were found.

The delineation study area includes the following soil mapping units: Badland (BA), Badland, very steep (BB), Gullied Land (GA), Harrisburg fine sandy loam, 1 to 5% slopes (HbC), Junction fine sandy loam, 1 to 2% slopes (JaB), Nikey sandy loam, 3 to 15% slopes (NLE), and Tobler fine sandy loam (Tc). These soils are not found on the Utah Hydric Soil List.

Precipitation in St George, Utah, mainly falls as rain, but snowfall is possible. The average annual total precipitation is 8.25 inches, evenly spread throughout the year. The average seasonal precipitation is; Winter 2.86 inches, Spring 1.85 inches, Summer 1.62 inches, and Fall 1.93 inches. The average total snowfall is 3.2 inches; Winter 2.8 inches, Spring and Fall 0.2 inches, respectively. If conditions are optimal, ephemeral drainages within the project area can have surface water flow in response to snow melt and rain events.

The waters identified in Southern Parkway Segment 3A-2, Unnamed Ephemeral Wash A through J, M and N , are described as follows:

Waters	Length (linear feet)	Width (feet)	Waters Reference
Unnamed Ephemeral Wash A	7,790	0.5 (photo 1); 3 (photo 2)	Figures 4b, 4c, 5a, 5b
Unnamed Ephemeral Wash B	7,395	3 (photo 3)	Figures 4b, 4c, 5a, 5b
Unnamed Ephemeral Wash C	879	1 (photo 4)	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash D	2,717	2 (photo 5)	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash E	4,526	12 (photo 6)	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash F	1,360	2 (photo 7)	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash G	2,448	no photo	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash H	2,726	3 (photo 8)	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash I	3,435	no photo	Figures 4c, 5a, 5b
Unnamed Ephemeral Wash J	1,925	no photo	Figures 4c, 4d, 5a, 5b
Unnamed Ephemeral Wash M	2,954	5 (photo 9)	Figures 4d, 4e, 5a, 5b
Unnamed Ephemeral Wash N	1,458	9 (photo 10)	Figures 4e, 5a, 5b

Wash A through J and their associated tributaries all flow to Stucki Debris Basin, which is connected to Fort Pearce Wash, tributary to the Virgin River, tributary to Lake Mead, by the Warner Draw Disposal System (see Figures 4a, 4B, 4C, 4d, 5a, and 5b). The Warner Draw Disposal System collects storm water from Stucki, Warner Valley, and Gypsum Debris Basins into approximately 4 miles of underground piping. The piping outflows at the St George/Washington Canal, approximately 2,200 feet above Fort Pearce Wash. Fort Pearce Wash (an intermittent RPW), flows about 3 miles to the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW). About 84 miles downstream, from the Fort Pearce Wash/Virgin River confluence surface flows enter Lake Mead (TNW, Section 10 RHA).

The Stucki Debris Basin dam, currently owned and maintained by the St. George and Washington Canal Company, was designed by the Natural Resources Conservation Service (NRCS) and constructed in 1974. The primary purpose of the dam is to provide protection from floodwaters up to and beyond the 100-year event and to contain up to 100 years of sediment accumulation. The Stucki Debris Basin is a dry dam, only storing water during flood events. Although an overflow structure is constructed in the basin,

siltation has left the overflow structure almost three feet higher in elevation than the low point in the basin (Figure 6). The lowest part of the debris basin has a capacity of 8.35 acre-feet before water flows over a sediment ridge to the overflow structure.

The delineation study includes a hydrology study for Segment 3A, modeled using the U.S. Army Corps of Engineers' HEC-HMS version 3.3 software program and based on the NRCS curve number and unit hydrograph methods. Watershed Modeling System version 8.2 was used to delineate drainage basins and calculate composite curve numbers. Based on the hydrology study, a 2-year 24-hour storm event would result in 5.82 acre-feet of water flowing, from Unnamed Wash A through J, into the low point in the basin. During an assumed 2-year 24-hour storm event, a rare possibility in the St George desert enviroment, discharge from Stucki Debris Basin to the Warner Draw Disposal System would still not occur. Based on the above, Wash A though J do not have a significant nexus to Fort Pearce Wash (intermittent intrastate RPW), the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW), or Lake Mead (TNW, Section 10 RHA).

The primary land use in the project area is undeveloped open space. Two basins constructed in Unnamed Ephemeral Wash A (Figure 4b) may have supplied water to livestock that no longer graze in the open space. No other documented or observed interstate or foreign commerce connections were found for Unnamed Ephemeral Wash A through J.

The waters identified as Unnamed Ephemeral Wash A through J flow into Stucki Debris Basin where surface waters are impounded, do not support recreation, fishery, commercial, or industrial uses, or have a significant nexus to Fort Pearce Wash (an intermittent intrastate RPW), the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW), or Lake Mead (TNW, Section 10 RHA). No interstate commerce connections were found that would be adversely affected as a result of degradation or destruction of these waters.

Therefore, the Corps has determined that Unnamed Ephemeral Wash A through J are non-jurisdictional because they are intrastate, isolated, non-navigable waters with no interstate commerce connection, that do not meet the significant nexus standard as described in the Rapanos guidance.

Wash M and its associated tributaries originate on the Warner Ridge and are primarily south of Warner Valley Road. Wash M crosses below the road in a culvert prior to joining Wash N, the outflow from Warner Valley Debris Basin. As it travels west, other smaller washes converge into Wash N. Prior to reaching Washington Fields Road, Wash N flows into a 24" concrete pipe which is part of the Warner Draw Disposal System. Hydraulic analysis shows that 12.7 cfs of water flows from Wash N to the Warner Draw Disposal System during a 2-year 24-hour storm event. Flows are contained for approximately 4 miles in the Warner Draw Disposal System piping which outflows to the St George/Washington Canal. This canal flows approximately 2,200 feet before entering Fort Pearce Wash. Between Wash N and Fort Pearce Wash, infiltration and evaporation of surface flows are minimal. Therefore, sediment from Wash M and N have a significant affect on the chemical, physical, and biological integrity of St George/Washington Canal, Fort Pearce Wash (intermittent intrastate RPW), the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW), and Lake Mead (TNW, Section 10 RHA).

Therefore, the Corps has determined that Unnamed Ephemeral Wash M and N are jurisdictional because they are intrastate, non-navigable waters, that have a significant nexus to St George/Washington Canal, Fort Pearce Wash (an intermittent intrastate RPW), the Virgin River (a perennial interstate[33 C.F.R. section 328.3(a)(2)] RPW), or Lake Mead (TNW, Section 10 RHA).