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): February 20, 2015**
Washes 1-12 are assessed on this form

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Pittman Horizon Ridge Detention Basin, SPK-2015-00091-SG

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: **Nevada** County/parish/borough: **Clark** City:
Center coordinates of site (lat/long in degree decimal format): Lat. **36.01143°**, Long. **-115.0220°**
Universal Transverse Mercator: **11 678249.15 3987026.39**
Name of nearest waterbody: **Pittman Wash**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Colorado River**
Name of watershed or Hydrologic Unit Code (HUC): **Las Vegas Wash. Nevada, 15010015**
☒ 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: **February 20, 2015**
☐ Field Determination. Date(s):

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: **6959** linear feet, wide, and/or **2.146** acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Established by OHWM.**
      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: NA

2. Wetland adjacent to TNW: NA

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: **156 square miles**
Drainage area: **855 acres**
Average annual rainfall: **4.15** inches
Average annual snowfall: **0.9** inches

(ii) Physical Characteristics:

(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **3** tributaries before entering TNW.

Project waters are **10-15** river miles from TNW.
Project waters are **5-10** river miles from RPW.
Project waters are **10-15** aerial (straight) miles from TNW.
Project waters are **5-10** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **The project waters do not cross or serve as a state boundary**

Identify flow route to TNW[5]: **This wash appears to flow from the McCullough Range joining with several other ephemeral washes before flowing directly into the Las Vegas Wash and then into the Colorado River/Lake Mead.**
Tributary stream order, if known: **4th order - this is a headwater stream**

(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: **13.08** feet
Average depth: **0.50** feet
Average side slopes: **4:1 (or greater).**

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: **Relatively stable**
Presence of run/riffle/pool complexes. Explain: **None present - these are dry washes**
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): **3** %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: **These ephemeral washes flow in response to rainfall events.**
Other information on duration and volume: **There is a rain gauge maintained by the Clark County Regional Flood Control District downstream of the proposed project area that has been in service since 1994. Events producing in excess of 0.50" in a day are rare but have occurred on February 23, 2015; August 21, 2014; September 10, 2013; August 22, 2012; September 12, 2012; December 15, 2012; September 13, 2011; January 21 and 22, 2010; and December 22, 2010. Since drought conditions have existed over the past several years; rainfall events may be less frequent. This is reporting localized events specific to the Mission Hills rain gauge.**

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

Subsurface flow: **Unknown**. 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: **When water is present, it is usually sediment laden.**
Identify specific pollutants, if known: **Specific pollutants are naturally occurring minerals in sediment. There is no development in the watershed above the proposed project area.**

[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.

(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: **The area is not within designated critical habitat for the Desert tortoise but the species could occur within the proposed project area.**
☐ 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: NA

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

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: **Water from this drainage area has the potential during storm events to carry pollutants downstream into the Pioneer Detention Basin, which has low-flow drainage structures. The water enters the existing stormwater facilities for the City of Henderson and ultimately drain into the Las Vegas Wash and then into the Colorado River/Lake Mead. The proposed project is for a flood detention basin, so there is a need to retain floodwaters temporarily to prevent damage to downstream infrastructure. The waters within the project area have the ability to carry pollutant or flood waters downstream and into the Las Vegas Wash and into the Colorado River/Lake Mead. In addition, the soil is an extremely stony sandy loam which is well drained allowing for some potential to reduce the amount of flood waters reaching the Colorado River/Lake Mead. The watershed associated with this project area provides some transfer of nutrients and organic material to the Colorado River/Lake Mead during storm events, although much of the material may be captured in the Pioneer Detention Basin downstream. These washes provide sediment transport to downstream areas, along with organic material that have the potential to enter the Colorado River through the Las Vegas Wash.**

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: NA

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

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: **6959** linear 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. NA**

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

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

7. **Impoundments of jurisdictional waters. NA**

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): NA

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): NA

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:
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report. The data sheets are accurate – however – the Corps does not agree that the waters are non-jurisdictional because they drain into the existing flood control facilities.
  - ☐ 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: **1:24K; NV-LAS VEGAS SE**
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:
- ☐ 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: **SPK-2006-00319_NWP 39 - June 21, 2006; SPK-2010-00886 - Preliminary JD - August 23, 2010; SPK-2009-01611 - Preliminary JD - December 4, 2009; SPK-2008-01261 - Preliminary JD - December 18, 2008; SPK-2010-00234 - Preliminary JD - January 4, 2012**
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☒ Other information (please specify): **PBS and J. 1998. Pre-Design Report: Pioneer Detention Basin. Victory Valley Land Company, Henderson, Nevada. http://gustfront.ccrfcd.org/pdf_arch3/Henderson/HEN05%20-%20Sunset%20(Pioneer)%20Detention%20Basin/HEN05C01%20-%20Pioneer%20Detention%20Basin%20-%20Pre-Design%20Report.pdf. Clark County Regional Flood Control District. 2015. FloodView. http://gustfront.ccrfcd.org/fvjs/fvjs.html (Accessed 2/24/2015)**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

[8]See Footnote # 3.

The washes assessed on this form flow indirectly into Lake Mead through an unnamed tributary of the Las Vegas Wash that drains from the McCullough Range north slope into the southeastern end of the Las Vegas Valley. These washes are headwater drainages from a relatively steep and inaccessible area. The downstream connections have been compromised through development activities, but the washes eventually drain into the Pioneer Detention Basin which has low flow drainage pipes and then into the existing stormwater facilities and then ultimately into the Colorado River/Lake Mead through the Las Vegas Wash. Some of the stormwater system between Pioneer Detention Basin and the Las Vegas Wash is piped, but much of it remains open concrete channels. The inflow into the Pioneer Detention Basin was designed for 4550 CFS, of which approximately 25% would come from the washes associated with this JD. The outlet for the detention basin consists of a 72" reinforced concrete pipe (RCP) and a higher level 60" RCP resulting in a peak flow of 550 cfs. The 72" RCP extends approximately 2030-ft downstream and joins with the upper 60" RCP to merge with an 84" RCP for an additional 620-ft. From there, the water flows into a 96"-RCP for 1260-ft before flowing into an open channel that flows directly into the Las Vegas Wash. In accordance with the 5 June 2007 U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook, page 35, surface water flow through pipes maintains jurisdiction as long as the pipes do not sever jurisdiction with upstream waters.. The Corps believes that the tributaries assessed on this form have the capacity to carry and also reduce pollutants and flood waters into Lake Mead. These tributaries may also provide habitat and lifecycle support functions for a variety of species that live downstream and have the capacity to transfer nutrients and organic carbon in support of downstream foodwebs. The tributaries assessed on this form, therefore, have more than just a speculative connection to Lake Mead and are jurisdictional waters of the U.S.