

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): September 30, 2010

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Duck Creek Channel Improvements - Robindale Road to I-215, SPK-2010-01147-SG

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **Nevada** County/parish/borough: **Clark** City: **Las Vegas**
Center coordinates of site (lat/long in degree decimal format): Lat. **36.049°**, Long. **-115.13069°**
Universal Transverse Mercator: **11 668380.49 3991028.36**

Name of nearest waterbody: **Duck Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Lake Mead/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: **September 30, 2010**

Field Determination. Date(s): **September 15, 2010**

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 waters² (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 **1.1** 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. 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 waterbody⁴ 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: 132 square miles
Drainage area: 132 square miles
Average annual rainfall: 4.35 inches
Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through 1 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 15-20 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Duck Creek flows into Las Vegas Wash, which flows into the Colorado River/Lake Mead

Tributary stream order, if known: 3rd order

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: uck Creek is a cement lined channel within the project area. It is, however, the remnants of a natural, seasonal drainage and a major tributary of Las Vegas Wash.

Tributary properties with respect to top of bank (estimate):

Average width: 20 feet
Average depth: 1 feet

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.

Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

- Silts
- Cobbles
- Bedrock
- Other. Explain: **Riprapped lining**
- Sands
- Gravel
- Vegetation. Type/% cover:
- Concrete
- Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:
 Presence of run/riffle/pool complexes. Explain: **Stable because of concrete lining**
 Tributary geometry: **Relatively straight**
 Tributary gradient (approximate average slope): **1 %**

(c) Flow:

Tributary provides for: **Seasonal flow**
 Estimate average number of flow events in review area/year: **2-5**
 Describe flow regime:
 Other information on duration and volume:

Surface flow is: **Confined**. Characteristics:

Subsurface flow: **Unknown**. Explain findings:
 Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
 - clear, natural line impressed on the bank
 - changes in the character of soil
 - shelving
 - vegetation matted down, bent, or absent
 - leaf litter disturbed or washed away
 - sediment deposition
 - water staining
 - other (list):
- Discontinuous OHWM.⁷ Explain:
- the presence of litter and debris
- destruction of terrestrial vegetation
- the presence of wrack line
- sediment sorting
- scour
- multiple observed or predicted flow events
- abrupt change in plant community

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

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

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: **uck Creek is known to contain high TDS due to high evaporation rates in the Las Vegas Valley watershed and groundwater inputs**

Identify specific pollutants, if known: **Duck Creek is known to be high in selenium. Detailed investigations of Se in tributaries suggest that there is a source of elevated Se levels in groundwater seeps located within a relatively narrow band on the southeast side of the Las Vegas Valley**

(iv) **Biological Characteristics. Channel supports (check all that apply): NA**

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

⁶A 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.

⁷Ibid.

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. NA

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-RPWs⁸ that flow directly or indirectly into TNWs.** NA
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.⁹** 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):¹⁰ 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.
 - 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.

⁸See Footnote # 3.

⁹To 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.

- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; NV-LAS VEGAS SW**
- 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 Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):
or Other (Name & Date):
- Previous determination(s). File no. and date of response letter:

DA Number	Project Name	Date
SPK-1992-00865	DUCK CREEK WASH	January 11, 1993
SPK-1998-25061	PIPELINE XING DUCK CREEK - CLARK CO	April 7, 1998
SPK-1999-25097	LOWER DUCK CREEK DETENTION BASIN	April 23, 1999
SPK-2000-25083	DUCK CREEK STEPHANIE TO EMERALD	June 12, 2000
SPK-2000-25147	CCPW DUCK CREEK PITTMAN ATF PERMIT	October 5, 2000
SPK-2000-25165	DUCK CREEK AT US 95 STORM DRAIN	January 1, 2001
SPK-2000-50022	HALVERSON, GARY - DUCK CREEK VIOLATION	September 3, 2003
SPK-2003-50069	DUCK CREEK FLOOD CONTROL CHANNEL	July 19, 2007
SPK-2004-50060	BEAZER HOMES FAIRFAX VILLAGE DUCK CREEK	March 23, 2004
SPK-2004-50063	DUCK CREEK GP7 TOPAZ TO WARM SPRINGS	March 9, 2004
SPK-2006-50371	DUCK CREEK CHANNEL IMPROVE SPENCER ELDOR	November 17, 2006
SPK-2006-50422	DUCK CREEK DETENTION BASIN	June 23, 2006
SPK-2007-00238	GP7 CCPW Duck Creek Wash work G V Pkwy	August 19, 2008
SPK-2007-00406	SNWA 840G Duck Creek S bank NW13	March 20, 2007
SPK-2007-00606	Duck Creek Railroad Detention Basin JD	April 16, 2007
SPK-2009-00042	SNWA 810G Duck Creek Confluence Weir and Upper Narrows	February 23, 2009
SPK-2010-00549	Duck Creek Drop Structure	May 3, 2010

- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Duck Creek is part of the Clark County Flood Control District and is a major tributary of the Las Vegas Wash. It currently is classified as a seasonal, relatively permanent water.