

**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 12, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Mesquite Wetlands, SPK-2015-00117-SG

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **Nevada** County/parish/borough: **Clark** City: **Mesquite**
Center coordinates of site (lat/long in degree decimal format): Lat. **36.7896°**, Long. **-114.1148°**
Universal Transverse Mercator: **11 757448.93 4075416.87**

Name of nearest waterbody: **Virgin River**

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, Arizona, Nevada, Utah, 15010010**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., onsite 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 12, 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 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 acres.

Wetlands: **21.16** acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

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

1. **TNW**

Identify TNW:

Summarize rationale supporting determination:

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the 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: **2,063 square miles**

Drainage area: **7656 acres**

Average annual rainfall: **5.85 inches**

Average annual snowfall: **0 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 **25-30** river miles from TNW.

Project waters are **1 (or less)** river miles from RPW.

Project waters are **25-30** 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: **The wetlands assessed on this form do not serve as or cross a state boundary. However, the Virgin River is an interstate water that has been determined to be Navigable-in-Fact from approximately the Man 'O War Bridge in Saint George, Utah to Lake Mead.**

Identify flow route to TNW⁵: **Wetlands are directly abutting the Virgin River that flows directly into Lake Mead.**

Tributary stream order, if known: **2**

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.

(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: **1324.94** feet
 Average depth: **2.0** feet
 Average side slopes: **4:1 (or greater)**.

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input checked="" type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Relatively stable, has very broad floodplain in this location.**

Presence of run/riffle/pool complexes. Explain: **No run/riffle/pool complexes are known to occur adjacent to the project area.**

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): **1 %**

(c) Flow:

Tributary provides for: **Perennial**

Estimate average number of flow events in review area/year: **2-5**

Describe flow regime: **The Virgin River is unique in the fact that it is still mostly unregulated except for a few irrigation diversion structures. There are no large scale reservoirs or dams along the mainstem of the Virgin River. The highest flows occur in winter and spring resulting from upstream rainstorms and snowmelt. Annual peak flows occur in summer-fall with monsoon-type thunderstorms. The largest floods on record are typically in winter months.**

Other information on duration and volume: **Average annual flows are approximately 200-240 CFS with a record 37,000 cfs at Littlefield, AZ in January of 2005. The Virgin River experiences a wide variation in flows that is defined by short-duration, high intensity flood events.**

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
- OHWM⁶ (check all indicators that apply):

<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> 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):

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

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.

other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: **During high water events, the water is sediment laden.**

Identify specific pollutants, if known: **Boron concentrations exceed water quality standards. Boron levels increase as streamflow decreases during summer months.**

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

Riparian corridor. Characteristics (type, average width): **Although significantly altered in the December 2010 and the January 2005 flood event, the riparian corridor is up to 500-ft wide in some areas. These areas are dominated by tamarisk, although there has been a significant contribution by the Walton Foundation to provide funding for removal of tamarisk and restoration of native habitats along the Virgin River.**

Wetland fringe. Characteristics:

Habitat for:

Federally Listed species. Explain findings: **Southwestern Willow flycatcher is found throughout the Lower Virgin River corridor. Virgin River chub and woundfin may be present within the Virgin River adjacent to the project area. However, woundfin are believed to be extirpated from the Lower Virgin River area due to the presence of red shiner.**

Fish/spawn areas. Explain findings: **Woundfin may be found seasonally from Beaver Dam Wash to Lake Mead, although very few fish have been found over the past 10 years. Adjacent riverine habitat may have suitable spawning areas.**

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: **21.16** acres

Wetland type. Explain: **The wetlands associated with this form are palustrine emergent wetlands and are dominated by Phragmites and Typha.**

Wetland quality. Explain: **For the area, the wetlands are of relatively high quality and contain limited numbers of tamarisk, which is abundant throughout the Lower Virgin River to Lake Mead.**

Project wetlands cross or serve as state boundaries. Explain: **Wetlands do not serve or cross a state boundary.**

(b) General Flow Relationship with Non-TNW:

Flow is: **Perennial flow**. Explain: **The wetlands are abutting the Virgin River and receive floodwaters on a regular basis. The Virgin River is a tributary to Lake Mead.**

Surface flow is: **Discrete and confined**

Characteristics:

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

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **25-30** river miles from TNW.

Project waters are **25-30** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **20 - 50-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **The general watershed condition is good with water being sediment laden**

during storm events. The Lower Virgin River is a 303(d) listed water for Boron from irrigation withdrawals during the summer months.

Identify specific pollutants, if known: Urban run-off from Saint George and Mesquite, boron from irrigation withdrawals.

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

- Riparian buffer. Characteristics (type, average width): **The riparian buffer can extend up to 500-ft. It is dominated by tamarisk with some native willows.**
- Vegetation type/percent cover. Explain: **Approximately 70% cover by Typha and Phragmites**
- Habitat for:
 - Federally Listed species. Explain findings: **Southwestern Willow flycatcher is found throughout the Lower Virgin River corridor. Virgin River chub and woundfin may be present within the Virgin River adjacent to the project area. However, woundfin are believed to be extirpated from the Lower Virgin River area due to the presence of red shiner.**
 - Fish/spawn areas. Explain findings: **The wetland habitat may provide some refugia during flood events but does not support spawning habitat.**
 - 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: **1**

Approximately **21.16** acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
SPK-2015-00117 (1)	Y	21.16

Summarize overall biological, chemical and physical functions being performed: **This wetland has the potential to reduce flood flows and provide water storage, remove sediments, remove nutrients and toxicants from the Virgin River, and provide inputs of nutrients; produces and exports organic matter, and has some general habitat suitability for birds, invertebrates and small mammals;**

C. SIGNIFICANT NEXUS DETERMINATION: NA

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

1. TNWs and Adjacent Wetlands. NA
2. RPWs that flow directly or indirectly into TNWs.
3. Non-RPWs⁸ that flow directly or indirectly into TNWs. NA
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: **The wetland is directly abutting the Virgin River and receives floodwaters on a regular basis.**

Provide acreage estimates for jurisdictional wetlands in the review area: **21.16** acres.

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

⁸See Footnote # 3.

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: **Newfields, 2015.** Jurisdictional Delineation for the Mesquite Wetlands.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant. **Newfields, 2015.** Jurisdictional Delineation for the Mesquite Wetlands.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; NV-MESQUITE**
- 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:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: The wetlands associated with this jurisdictional determination are directly abutting the Virgin River and receive floodwaters on a regular basis. They were originally part of a mitigation site for impacts from the Casa Blanca Hotel and Casino. The required wetland compensatory mitigation was 2.0 acres. The site now has 21.16 acres of wetlands. The area meets all three parameters and is considered to be a jurisdictional wetland.