

**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): 29 September 2017**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston District, SWG-2015-00630, Martin Marietta Materials Southwest LLC, Tributary JD-3, Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E

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

State: Texas County/Parish: Colorado City: near Garwood  
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Table ° N, Long. ° W;  
Universal Transverse Mercator: UTM: 15, N., E., NAD: 83  
Name of nearest water body: Unnamed tributary to the Colorado River  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Colorado River  
Name of watershed or Hydrologic Unit Code (HUC): Lower Colorado - 12090302  
 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: 19 July 2017
- Field Determination. Date(s): 11 July 2017

**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):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (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: 4,109 linear feet: 6 width (ft) and/or 0.566 acres  
Wetlands: appx. 0.0051 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):<sup>3</sup>**

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

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.

- 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

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, fill out Section III.D.2 and 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 water body<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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: 60 square miles

Drainage area: 0.7 square miles

Average annual rainfall: 47.57 inches

Average annual snowfall: 0.20 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 1 (or less) river miles from TNW.

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

Project waters are 1 (or less) 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:

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<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW<sup>5</sup>: Unnamed tributary to the Colorado River - Colorado River  
Tributary stream order, if known: First Order

(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: 6 feet  
Average depth: 1 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:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The unnamed tributary to the Colorado River is sinuous.

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Meandering

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Intermittent but not seasonal flow

Estimate average number of flow events in review area/year: Pick List

Describe flow regime: The unnamed tributary to the Colorado River is an intermittent tributary that flows into a TNW.

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  
 OHWM<sup>6</sup> (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.<sup>7</sup> 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:**

<sup>5</sup> 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.

<sup>6</sup> 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 water body'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.

<sup>7</sup>Ibid.

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

Explain: **Water color is discolored.**

Identify specific pollutants, if known: **The unnamed tributary to the Colorado River is not on the 303 (d) list. The downstream TNW, the Colorado River, is also not on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County is on the 303(d) list for bacteria.**

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: **Emergent wetlands within the tributary channel.**
- 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: **approximately 0.0051** acres

Wetland type. Explain: **Herbaceous**

Wetland quality. Explain: **Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E are located within the tributary channel.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E are located within the tributary channel. Therefore they are abutting and receive hydrology from the unnamed tributary to the Colorado River.**

Surface flow is: **Confined**

Characteristics: **Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E are located within the tributary channel. Therefore, they share confined flows with the unnamed tributary to the Colorado River.**

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: **Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E are located within the tributary channel. Therefore, they are abutting the unnamed tributary to the Colorado River.**

- Ecological connection. Explain:
- Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **1 (or less)** river miles from TNW.

Project waters are **1 (or less)** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2-year or less** 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: **Unknown**

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: **Herbaceous**
- 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: **5**

Approximately (0.0051) 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>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
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Summarize overall biological, chemical and physical functions being performed: Based on our analysis, we determined there are approximately a total of 5 adjacent wetlands (appx. 0.0051 acres) located within the 0.78-mile reach of the unnamed tributary to the Colorado River. Of the 0.0051 acres of wetlands being evaluated along this relevant reach, all are abutting the relevant reach of the unnamed tributary to the Colorado River.

The wetlands have a direct hydrologic connection to the unnamed tributary and provide for the removal of pollutants (phytosequestration) from the waters as they flow through the abutting wetlands and into the downstream TNW; which is located approximately 0.75 river miles downstream of the 0.78-mile reach of the unnamed tributary.

The retention of water and retardation of overbank flooding associated with the abutting wetlands and the channel of the unnamed tributary has an effect on the physical functions of the downstream TNW. The function of the abutting wetlands reduces the flow of waters into the TNW. Increased flow increases flooding and scouring, resulting in loss of the physical integrity of the TNW.

There are no known species found within the review area that require these aquatic resources with this relevant reach and the waters of the TNW to fulfill their life cycle requirements. However, wetlands aid in providing detritus as a food source for many aquatic species.

**C. SIGNIFICANT NEXUS DETERMINATION**

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The unnamed tributary to the Colorado River within this reach is a non-RPW. This entire reach is approximately 0.78-mile long. This reach concludes approximately 0.75 river mile upstream of the nearest TNW. There are five wetlands (Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E) within the channel of the unnamed tributary to the Colorado River within the project boundary. Wetland JD-A is located approximately 1.2 river miles and 0.75 aerial miles from the downstream TNW, the Colorado River. Wetland JD-B is located approximately 1.24 river miles and 0.78 aerial miles from the downstream TNW, the Colorado River. Wetland JD-C is located approximately 1.25 river miles and 0.79 aerial miles from the downstream TNW, the Colorado River. Wetland JD-D is located approximately 1.45 river miles and 0.94 aerial miles from the downstream TNW, the Colorado River. Wetland JD-E is located approximately 1.46 river miles and 0.95 aerial miles from the downstream TNW, the Colorado River. Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E are located within the channel of the unnamed tributary to the Colorado River and therefore, are abutting the unnamed tributary to the Colorado River. Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E within the approximate 0.78-mile relevant reach, total approximately 0.0051-acre. All of the 0.0051-acre of wetlands being evaluated along this relevant reach are contiguous with the relevant reach of the unnamed tributary to the Colorado River. Additionally, there are approximately 0.566-acre of the unnamed tributary to the Colorado River within this reach.
  - Neither the unnamed tributary to the Colorado River nor the downstream TNW, the Colorado River, are listed on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County, is listed on the 303(d) list for bacteria. The approximate 0.0051-acre of adjacent wetlands and 0.566-acre of the unnamed tributary to the Colorado River provide important filtration and support to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located approximately 0.75 river miles downstream of the relevant reach; but that effect to the downstream TNW is speculative.
  - Within this relevant reach of the unnamed tributary to the Colorado River, there are approximately 0.0051-acre of similarly situated wetlands located within the channel. These adjacent wetlands and the channel provide for the retention of water and retardation of overbank flooding. These abutting wetlands and the approximate 0.566-acre of the tributary itself provide vital flood plain retention and storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing these approximate 0.0051-acre of adjacent wetlands and the 0.566-acre of the unnamed tributary to the Colorado River would increase the velocity and flow of liquids into the Colorado River, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.
  - There are no known species found in this review that require these aquatic resources within this



relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to the Colorado River for portions of their lifecycles, but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.

-In conclusion, it is the Corps' opinion that there is sufficient evidence to support the statement that the aquatic resources within this approximate 0.78-mile relevant reach, including approximately 0.566-acre of the unnamed tributary to the Colorado River and its 0.0051-acre of adjacent wetlands, provide a significant nexus (more than a speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW. As such, they are subject to federal jurisdiction under Section 404 of the Clean Water Act.

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 width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

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

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- 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 width (ft)
  - Other non-wetland waters: acres
- Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Water body 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: **4,109** linear feet **6** width (ft).
  - 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:

<sup>8</sup>See Footnote # 3.

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 jurisdictional. 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: **appx. 0.0051** acres

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain:  
 Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft)  
 Other non-wetland waters: \_\_\_\_\_ acres  
Identify type(s) of waters:  
 Wetlands: \_\_\_\_\_ acres

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).  
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:  
 Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft).  
 Lakes/ponds: \_\_\_\_\_ acres.  
 Other non-wetland waters: \_\_\_\_\_ acres. List type of aquatic resource:  
 Wetlands: \_\_\_\_\_ acres.

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> 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.



303(d) list for bacteria. The approximate 0.0051-acre of adjacent wetlands and 0.566-acre of the unnamed tributary to the Colorado River provide important filtration and support to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located approximately 0.75 river miles downstream of the relevant reach; but that effect to the downstream TNW is speculative.

-Within this relevant reach of the unnamed tributary to the Colorado River, there are approximately 0.0051-acre of similarly situated wetlands located within the channel. These adjacent wetlands and the channel provide for the retention of water and retardation of overbank flooding. These abutting wetlands and the approximate 0.566-acre of the tributary itself provide vital flood plain retention and storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing these approximate 0.0051-acre of adjacent wetlands and the 0.566-acre of the unnamed tributary to the Colorado River would increase the velocity and flow of liquids into the Colorado River, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.

-There are no known species found in this review that require these aquatic resources within this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to the Colorado River for portions of their lifecycles, but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.

-In conclusion, it is the Corps' opinion that there is sufficient evidence to support the statement that the aquatic resources within this approximate 0.78-mile relevant reach, including approximately 0.566-acre of the unnamed tributary to the Colorado River and its 0.0051-acre of adjacent wetlands, provide a significant nexus (more than a speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW. As such, they are subject to federal jurisdiction under Section 404 of the Clean Water Act.

Wetlands	Latitude	Longitude	UTM	Northing	Easting	Acres	Linear Feet
JD-A	29.515110 N	96.421206 W	14	3267830	749963	0.0001	
JD-B	29.514884 N	96.421754 W	14	3267804	749910	0.0007	
JD-C	29.514858 N	96.421861 W	14	3267801	749890	0.001	
JD-D	29.515215 N	96.424371 W	14	3267835	749656	0.0004	
JD-E	29.515286 N	96.424559 W	14	3267842	749637	0.003	
Tributary							
JD-3	29.514836 N	96.420505 W	14	3267801	750031	0.566	4,109

**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): 29 September 2017**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston District, SWG-2015-00630, Martin Marietta Materials Southwest LLC, Tributary JD-1

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

State: Texas County/Parish: Colorado City: near Garwood  
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.514781° N, Long. 96.416607° W;  
Universal Transverse Mercator: UTM: 14, 3267804 N., 750409 E., NAD: 83  
Name of nearest water body: Unnamed tributary to the Colorado River  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Colorado River  
Name of watershed or Hydrologic Unit Code (HUC): Lower Colorado - 12090302  
 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: 19 July 2017
- Field Determination. Date(s): 11 July 2017

**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):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (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: 276 linear feet: 11 width (ft) and/or 0.07 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):<sup>3</sup>**

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

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.

- 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**

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, fill out Section III.D.2 and 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 water body<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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: 60 square miles

Drainage area: 0.7 square miles

Average annual rainfall: 47.57 inches

Average annual snowfall: 0.20 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 1 (or less) river miles from TNW.

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

Project waters are 1 (or less) 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:

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<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW<sup>5</sup>: Unnamed tributary to the Colorado River - Colorado River  
Tributary stream order, if known: Second Order

(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: 11 feet

Average depth: 2 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:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The unnamed tributary to the Colorado River is sinuous.

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Meandering

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Intermittent but not seasonal flow

Estimate average number of flow events in review area/year: Pick List

Describe flow regime: The unnamed tributary to the Colorado River is an intermittent tributary.

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  
 OHWM<sup>6</sup> (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.<sup>7</sup> 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:**

<sup>5</sup> 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.

<sup>6</sup> 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 water body'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.

<sup>7</sup>Ibid.



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

Explain: **Water color is discolored.**

Identify specific pollutants, if known: **The unnamed tributary to the Colorado River is not on the 303 (d) list. The downstream TNW, the Colorado River, is also not on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County is on the 303(d) list for bacteria.**

(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: **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 **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: The unnamed tributary to the Colorado River within this reach is a non-RPW. This entire reach is approximately 0.77-mile long, however, only 276 linear feet (0.05-mile) of the relevant reach is in the review area. This reach flows directly into the Colorado River, the nearest TNW. There are five wetlands (Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E) within the channel of the unnamed tributary to the Colorado River in the relevant reach directly upstream of this reach. Approximately 0.72-mile of this relevant reach is off site and was not inspected, however, based on the presence of herbaceous wetlands within the channel upstream of this relevant reach, it is highly likely herbaceous wetlands are located within the channel of this relevant reach. The second order relevant reach that is the subject of this significant nexus evaluation is 0.77-mile long, is approximately 11 feet wide, and has an area of approximately 1.03 acre.

-Neither the unnamed tributary to the Colorado River nor the downstream TNW, the Colorado River, are on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County, is listed on the 303(d) list for bacteria. The approximate 1.03-acre of the unnamed tributary to the Colorado River, and its probable wetlands, is part of a small headwater tributary system. These systems often have shallow water, low volume, and slow flow, which allows for more surface area of the water column to come into contact with the channel substrate and any vegetation that may be present, allowing pollutants to settle out and be filtered from the water column before reaching the downstream TNW. As such, the unnamed tributary and probable wetlands provide important

filtration of runoff, which may contain pollutants, sediments, excess nutrients, etc., from adjacent uplands that flows through the probable wetlands before entering the unnamed tributary prior to flowing to the downstream TNW. Ultimately, the unnamed tributary and probable wetlands aid in supporting the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located immediately downstream of the relevant reach of the unnamed tributary, but that effect to the downstream TNW is speculative.

-Within this relevant reach of the unnamed tributary to the Colorado River, it is highly likely there are herbaceous wetlands within the channel. The probable adjacent wetlands provide for retention of water and retardation of overbank flooding. These probable abutting wetlands and the approximate 1.03-acre of the tributary itself provide vital flood plain retention and storage of excess water which can temporarily be stored in wetlands and thereby minimizing potential flooding of downstream areas. In addition, water can also slowly be released from wetlands downstream to maintain seasonal flow volumes. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing the 1.03-acre of the unnamed tributary to the Colorado River would increase the velocity and flow of liquids in the Colorado River, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.

-There are no known species found in this review that require these aquatic resources within this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to the Colorado River for portions of their lifecycles. but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.

-In conclusion, it is the Corps' opinion that there is sufficient evidence to support the statement that the aquatic resources within this approximate 0.77-mile relevant reach, including approximately 1.03-acre of the unnamed tributary to the Colorado River and its probable adjacent wetlands, provide a significant nexus (more than a speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW. As such, they are subject to federal jurisdiction under Section 404 of the Clean Water Act.

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 width (ft), Or, acres.  
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 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 width (ft)  
 Other non-wetland waters: acres

Identify type(s) of waters:

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Water body 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: **276** linear feet **11** width (ft).  
 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 jurisdictional. 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.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- 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:

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> 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.

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:        linear feet        width (ft)
- Other non-wetland waters:        acres  
    Identify type(s) of waters:
- Wetlands:        acres

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams):        linear feet        width (ft).
- Lakes/ponds:        acres.
- Other non-wetland waters:        acres. List type of aquatic resource:
- Wetlands:        acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams):        linear feet,        width (ft).
- Lakes/ponds:        acres.
- Other non-wetland waters:        acres. List type of aquatic resource:
- Wetlands:        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: Request received 15 March 2017
  - 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: Site visit 11 July 2017
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: Lower Colorado - 12090302
  - USGS NHD data
  - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1957 and 1981 USGS Altair, Texas Quadrangle
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Colorado County, Texas
- National wetlands inventory map(s). Cite name: USFWS NWI Mapper
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: National Flood Hazard Layer (FEMA) Map
- 100-year Floodplain Elevation is:        (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Google Earth Pro (1994-2017)  
    or  Other (Name & Date): 2015 Color Infrared Maps
- 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 unnamed tributary to the Colorado River within this reach is a non-RPW. This entire reach is approximately 0.77-mile long, however, only 276 linear feet (0.05-mile) of the relevant reach is in the review area. This reach flows directly into the Colorado River, the nearest TNW. There are five wetlands (Wetlands JD-A, JD-B, JD-C, JD-D, and JD-E) within the channel of the unnamed tributary to the Colorado River in the relevant reach directly upstream of this reach. Approximately 0.72-mile of this relevant reach is off site and was not inspected, however, based on the presence of herbaceous wetlands within the channel upstream of this relevant reach, it is highly likely herbaceous wetlands are located within the channel of this relevant reach. The second order relevant reach that is the subject of this significant nexus evaluation is 0.77-mile long, is approximately 11 feet wide, and has an area of approximately 1.03 acre.

-Neither the unnamed tributary to the Colorado River nor the downstream TNW, the Colorado River, are listed on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County, is listed on the 303(d) list for bacteria. The approximate 1.03-acre of the unnamed tributary to the Colorado River, and its probable wetlands, is part of a small headwater tributary system. These systems often have shallow water, low volume, and slow flow, which allows for more surface area of the water column to come into contact with the channel substrate and any vegetation that may be present, allowing pollutants to settle out and be filtered from the water column before reaching the downstream TNW. As such, the unnamed tributary and probable wetlands provide important filtration of runoff, which may contain pollutants, sediments, excess nutrients, etc., from adjacent uplands that flows through the probable wetlands before entering the unnamed tributary prior to flowing to the downstream TNW. Ultimately, the unnamed tributary and probable wetlands aid in supporting the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located immediately downstream of the relevant reach of the unnamed tributary, but that effect to the downstream TNW is speculative.

-Within this relevant reach of the unnamed tributary to the Colorado River, it is highly likely there are herbaceous wetlands within the channel. The probable adjacent wetlands provide for retention of water and retardation of overbank flooding. These probable abutting wetlands and the approximate 1.03-acre of the tributary itself provide vital flood plain retention and storage of excess water which can temporarily be stored in wetlands and thereby minimizing potential flooding of downstream areas. In addition, water can also slowly be released from wetlands downstream to maintain seasonal flow volumes. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing the 1.03-acre of the unnamed tributary to the Colorado River would increase the velocity and flow of liquids in the Colorado River, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.

-There are no known species found in this review that require these aquatic resources within this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to the Colorado River for portions of their lifecycles. but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.

-In conclusion, it is the Corps' opinion that there is sufficient evidence to support the statement that the aquatic resources within this approximate 0.77-mile relevant reach, including approximately 1.03-acre of the unnamed tributary to the Colorado River and its probable adjacent wetlands, provide a significant nexus (more than a speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW. As such, they are subject to federal jurisdiction under Section 404 of the Clean Water Act.





**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): 29 September 2017**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston District, SWG-2015-00630, Martin Marietta Materials Southwest LLC, Tributary JD-2

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

State: Texas County/Parish: Colorado City: near Garwood  
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29. 515415° N, Long. 96.416482° W;  
Universal Transverse Mercator: UTM: 14, 3267874 N., 750420 E., NAD: 83  
Name of nearest water body: Unnamed tributary to the Colorado River  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Colorado River  
Name of watershed or Hydrologic Unit Code (HUC): Lower Colorado - 12090302  
 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: 19 July 2017  
 Field Determination. Date(s): 11 July 2017

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. **[Required]**

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres  
Wetlands: acres

**c. Limits (boundaries) of jurisdiction based on: **Pick List****

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

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

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.

- 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

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, fill out Section III.D.2 and 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 water body<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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: 60 square miles

Drainage area: 0.2 square miles

Average annual rainfall: 47.57 inches

Average annual snowfall: 0.20 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

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

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

Project waters are 1 (or less) 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:

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<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW<sup>5</sup>: **Unnamed Tributary (JD-2) - Unnamed Tributary to the Colorado River (JD-1) - Colorado River**

Tributary stream order, if known: **First Order**

(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: **2** feet  
Average depth: **0.5** feet  
Average side slopes: **2:1**

**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 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: **The Unnamed Tributary to the Unnamed Tributary to the Colorado River is relatively straight.**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: **The Unnamed Tributary (JD-2) is an ephemeral tributary that flows into the Unnamed Tributary to the Colorado River that flows into a TNW, the Colorado River.**

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):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Bed and banks  |  |
| <input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply): |  |
| <input checked="" type="checkbox"/> clear, natural line impressed on the bank            | <input type="checkbox"/> the presence of litter and debris           |
| <input checked="" type="checkbox"/> changes in the character of soil                     | <input type="checkbox"/> destruction of terrestrial vegetation       |
| <input checked="" type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line                  |
| <input type="checkbox"/> vegetation matted down, bent, or absent                         | <input checked="" type="checkbox"/> sediment sorting                 |
| <input type="checkbox"/> leaf litter disturbed or washed away                            | <input checked="" type="checkbox"/> scour                            |
| <input checked="" type="checkbox"/> sediment deposition                                  | <input 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):   |  |
| <input type="checkbox"/> Discontinuous OHWM. <sup>7</sup> 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                              |  |
| <input type="checkbox"/> other (list):                             |  |

<sup>5</sup> 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.

<sup>6</sup>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 water body'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.

<sup>7</sup>Ibid.

**(iii) Chemical Characteristics:**

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

Explain: No water was observed in the unnamed tributary.

Identify specific pollutants, if known: Neither the Unnamed Tributary nor the Unnamed Tributary to the Colorado River are on the 303 (d) list. The downstream TNW, the Colorado River, is also not on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County is on the 303(d) list for bacteria.

(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:
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: The unnamed tributary (JD-2) flows into the unnamed tributary to the Colorado River that flows into the Colorado River. The unnamed tributary (JD-2) has ephemeral flow with surface flow after rain events and is a non-RPW. This entire reach is approximately 0.06-mile long. This reach concludes approximately 0.75 river mile upstream of the nearest TNW, the Colorado River. There are no adjacent wetlands within this relevant reach. JD-2 is 324 linear feet long and 2 feet wide, with an area of 0.06-acre.  
-Neither the Unnamed Tributary nor the Unnamed Tributary to the Colorado River are on the 303 (d) list. The downstream TNW, the Colorado River, is also not on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County is on the 303(d) list for bacteria. The 0.06-acre unnamed tributary does not have any adjacent wetlands and is too small to provide important filtration and support to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located approximately 0.75 river miles downstream of the relevant reach; although it does provide some filtration and aids in the treatment of bacteria, thermal and chemical pollutants, that effect to the downstream TNW is insubstantial.  
-Within this relevant reach, there are no adjacent wetlands. The 0.06-acre unnamed tributary provides for the retention of water and retardation of overbank flooding, flood plain retention and

storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. However, the effects of removing this 0.06-acre unnamed tributary would slightly increase the velocity and flow of liquids into the Colorado River, and the effect on the downstream TNW would be insubstantial.

-There are no known species found in this review that require these aquatic resources within this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has an indirect hydrologic connection with the TNW, it is feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary (JD-2) for portions of their lifecycles, but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area may aid and support the biological integrity of the downstream TNW, however, the effect would be insubstantial.

-In conclusion, it is the Corps' opinion that this relevant reach does not provide more than a speculative or insubstantial effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. As such, this relevant reach (JD-2) would not be subject to federal jurisdiction under Section 404 of the Clean Water Act.

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 width (ft), Or, acres.  
 Wetlands adjacent to TNWs: acres.

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

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 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 width (ft)  
 Other non-wetland waters: acres

Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

Water body that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres

Identify type(s) of waters:

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

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<sup>8</sup>See Footnote # 3.



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 jurisdictional. 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.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain:  
 Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft)  
 Other non-wetland waters: \_\_\_\_\_ acres  
Identify type(s) of waters:  
 Wetlands: \_\_\_\_\_ acres

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).  
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: **See Additional Comments below.**  
 Other: (explain, if not covered above):

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> 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.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams):      linear feet      width (ft).
- Lakes/ponds:      acres.
- Other non-wetland waters:      acres. List type of aquatic resource:
- Wetlands:      acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): **361** linear feet, **2** width (ft).
- 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: **Request received 15 March 2017**
  - 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: **Site visit 11 July 2017**
- Corps navigable waters’ study:
- U.S. Geological Survey Hydrologic Atlas: Lower Colorado - 12090302
  - USGS NHD data
  - USGS 8 and 12 digit HUC maps
- Galveston District’s Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: **1957 and 1981 USGS Altair, Texas Quadrangle**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Soil Survey of Colorado County, Texas**
- National wetlands inventory map(s). Cite name: **USFWS NWI Mapper**
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **National Flood Hazard Layer (FEMA) Map**
- 100-year Floodplain Elevation is:      (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Google Earth Pro (1994-2017)**
  - or  Other (Name & Date): **2015 Color Infrared Maps**
- 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 unnamed tributary (JD-2) flows into the unnamed tributary to the Colorado River that flows into the Colorado River. The unnamed tributary (JD-2) has ephemeral flow with surface flow after rain events and is a non-RPW. This entire reach is approximately 0.06-mile long. This reach concludes approximately 0.75 river mile upstream of the nearest TNW, the Colorado River. There are no adjacent wetlands within this relevant reach. JD-2 is 324 linear feet long and 2 feet wide, with an area of 0.06-acre.

-Neither the Unnamed Tributary nor the Unnamed Tributary to the Colorado River are on the 303 (d) list. The downstream TNW, the Colorado River, is also not on the 303 (d) list, however, the downstream segment of the TNW, the Colorado River, from Wharton, in Wharton County to the confluence of Blue Creek in Matagorda County is on the 303(d) list for bacteria. The 0.06-acre unnamed tributary does not have any adjacent wetlands and is too small to provide important filtration and support to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in the Colorado River (TNW) located approximately 0.75 river miles downstream of the relevant reach; although it does provide some filtration and aids in the treatment of bacteria, thermal and chemical pollutants, that effect to the downstream TNW is insubstantial.

-Within this relevant reach, there are no adjacent wetlands. The 0.06-acre unnamed tributary provides for the retention of water and retardation of overbank flooding, flood plain retention and storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. However, the effects of removing this 0.06-acre unnamed tributary would slightly increase the velocity and flow of liquids into the Colorado River, and the effect on the downstream TNW would be insubstantial.

-There are no known species found in this review that require these aquatic resources within this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach has an indirect hydrologic connection with the TNW, it is feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary (JD-2) for portions of their lifecycles, but there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to full lifecycle requirements. The aquatic resources within this review area may aid and support the biological integrity of the downstream TNW, however, the effect would be insubstantial.

-In conclusion, it is the Corps' opinion that this relevant reach does not provide more than a speculative or insubstantial effect upon the chemical, physical, and/or biological intergrity of the downstream TNW, the Colorado River. As such, this relevant reach (JD-2) would not be subject to federal jurisdiction under Section 404 of the Clean Water Act.