

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch; See Waters Table in Sect. IV B

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: TX County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Waters Table in Sect. IV B° N, Long. °W;

Universal Transverse Mercator: UTM: N., E., NAD:

Name of nearest water body: Live Oak, Pin Oak and Upper Buckner's Creeks

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-Cummins, 12090301

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: 1 NOV 2021
 Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 464 linear feet: 10 width (ft) and/or 0.09 acres
Wetlands: acres

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

Elevation of established OHWM (if known):

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

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

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

³ Supporting documentation is presented in Section III.F.

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 body⁴ 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: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: 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 **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

Tributary stream order, if known:

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

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

Average width: feet

Average depth: feet

Average side slopes: **Pick List**

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input 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:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

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

Describe flow regime:

Other information on duration and volume:

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

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

Dye (or other) test performed:

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	
	<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of litter and debris
	<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> destruction of terrestrial vegetation
	<input type="checkbox"/> shelving	<input type="checkbox"/> the presence of wrack line
	<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> sediment sorting
	<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
	<input type="checkbox"/> sediment deposition	<input type="checkbox"/> multiple observed or predicted flow events
	<input type="checkbox"/> water staining	<input type="checkbox"/> abrupt change in plant community
	<input type="checkbox"/> other (list):	
<input type="checkbox"/> Discontinuous OHWM. ⁷ Explain:		

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

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

(iii) **Chemical Characteristics:**

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

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

⁷Ibid.

(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:

<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:

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:
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: The four reaches listed in the Waters Table in Sect. IV B are relatively permanent waters that transport seasonal surface flow for at least 90 continuous days per year.

Observations of flow and deep ponding were recorded in the wetland delineation report and confirmed with review of aerial photography.

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

Tributary waters: **464** linear feet **10** width (ft)

Other non-wetland waters: _____ acres

Identify type(s) of waters:

3. Non-RPWs⁸ 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 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 when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: _____ acres

7. Impoundments of jurisdictional waters.⁹

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

Demonstrate that impoundment was created from “waters of the U.S.” or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

which are or could be used for industrial purposes by industries in interstate commerce.

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

- 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.

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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006. Zone A
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 or Other (Name & Date): Photographs provided in Wetland Delineation Report, 9 SEP 2020

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:

SWG-2020-00651 Waters Table

Name	Size	Length	LAT/LONG	Jurisdiction
Reach 115 of Live Oak Creek	0.02 ac	118ft	29.817796°N, 97.092284°W	404
Reach 502 of Pin Oak Creek	0.03 ac	134ft	29.792941°N, 97.074609°W	404
Reach 515 of Upper Buckner's Ck	0.03 ac	168ft	29.838539°N, 97.092474°W	404
Reach 517 of Upper Buckner's Ck	0.01 ac	44ft	29.838564°N, 97.096071°W	404

The four sites are located within the 100-year flood plain of Live Oak, Pin Oak and Upper Buckner's Creeks. Within the review area, three features (Pin Oak Creek, Live Oak Creek, and Upper Buckner's Creek in two separate locations) were identified as relatively permanent waters that contribute surface water flow directly or indirectly to the Colorado River, a Traditionally Navigable Water (TNW). Observations of flow and deep ponding were recorded in the wetland delineation report and confirmed with review of aerial photography.

Reach 115 of Live Oak Creek is a relatively permanent water that contributes surface flow indirectly, by way of Buckner's Creek (a relatively permanent water), to the Colorado River (a traditionally navigable water). From the review area, Live Oak Creek flows approximately 2.94 miles downstream to Buckner's Creek, which flows an additional 18.85 miles to the Colorado River.

Reach 502 of Pin Oak Creek is a relatively permanent water that contributes surface flow indirectly, by way of Buckner's Creek (a relatively permanent water), to the Colorado River (a traditionally navigable water). From the review area, Pin Oak Creek flows approximately 6.75 miles downstream to Buckner's Creek, which flows an additional 15.24 miles to the Colorado River.

Reach 515 of Upper Buckner's Creek is a relatively permanent water that transports seasonal surface flow for at least 90 continuous days per year. is a relatively permanent water that contributes surface flow directly to the Colorado River (a traditionally navigable water). From the review area, Buckner's Creek flows approximately 18.00 miles downstream to the Colorado River.

Reach 517 of Upper Buckner's Creek is a relatively permanent water that transports seasonal surface flow for at least 90 continuous days per year. is a relatively permanent water that contributes surface flow directly to the Colorado River (a traditionally navigable water). From the review area, Buckner's Creek flows approximately 18.28 miles downstream to the Colorado River.

All four of these reaches are waters of the United States, jurisdictional 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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 505, Salt Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.7858°N, Long. 97.0578°W;

Universal Transverse Mercator: UTM: 14, 3296632 N., 687740 E., NAD: 83

Name of nearest water body: Salt Branch

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-Cummins, 12090301

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: 12 July 2022

Field Determination. Date(s): 12 April 2022

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 1,000 linear feet: 10 width (ft) and/or 0.23 acres

Wetlands: acres

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

Elevation of established OHWM (if known):

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

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

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

³ Supporting documentation is presented in Section III.F.

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

Note that the most recent Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the area.

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

Summarize rationale supporting conclusion that wetland is "adjacent":

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

1. Identify TNW:

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

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵. Reach 505 of Salt Branch, an intermittent stream with seasonal flow and beds and banks, flows a total of 1,000 feet within the review area along its 19,676 linear-foot course within the relevant reach to Pin Oak Creek. From this confluence, Pin Oak Creek flows approximately 6.75 miles downstream to Buckner's Creek, which flows an additional 15.24 miles to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 10 feet

Average depth: 1 feet

Average side slopes: **3:1**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Seasonal flow**

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

Describe flow regime: Relatively permanent, seasonal flow at least 90 consecutive days per year.

Other information on duration and volume:

Surface flow is: **Discrete**. Characteristics: This creek flows through a discrete channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank 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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	
<input type="checkbox"/> Discontinuous OHWM. ⁷ Explain:	

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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:
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: Reach 505 of Salt Branch, an intermittent stream with seasonal flow (over 90 days per year) with beds and banks, flows a total of 1,000 feet within the review area along its 19,676 linear-foot course within the relevant reach to Pin Oak Creek. From this confluence, Pin Oak Creek flows approximately 6.75 miles downstream to Buckner’s Creek, which flows an additional 15.24 miles to the Colorado River, a TNW.

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

Tributary waters: 1000 linear feet 10 width (ft)
 Other non-wetland waters: _____ acres

Identify type(s) of waters:

3. Non-RPWs⁸ 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 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.⁹

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

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

⁸See Footnote # 3.

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

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

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

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

Jurisdictional Waters (Section 404)

Water	Type	Area (Ac)	Latitude	Longitude
Reach 505	Intermittent Stream (R4SBC)	1,000 LF	0.23	29.7858N 97.0578W

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 59, Unnamed Tributary to Pin Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.7895°N, Long. 97.0888°W;

Universal Transverse Mercator: UTM: 14, 3296992 N., 684736 E., NAD: 83

Name of nearest water body: Pin Oak Creek

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-Cummins, 12090301

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: 12 July 2022

Field Determination. Date(s): 12 April 2022

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 1,701 linear feet: 10 width (ft) and/or 0.39 acres

Wetlands: 1.13 acres

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

Elevation of established OHWM (if known):

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

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

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

³ Supporting documentation is presented in Section III.F.

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 body⁴ 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: 2220 square miles

Drainage area: 81 acres

Average annual rainfall: 39 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.
 Tributary flows through 3 tributaries before entering TNW.

Project waters are 20-25 river miles from TNW.

Project waters are 2-5 river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

⁴ 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 TNW⁵. Reach 59, an unnamed tributary of Pin Oak Creek with bed and banks, flows 1,701 feet within the review area and then another 2,441 feet to Pin Oak Creek. From this confluence, Pin Oak Creek flows approximately 8 miles downstream to Buckner's Creek, which flows an additional 15.24 miles to the Colorado River, a TNW. Tributary stream order, if known: 1

(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: 10 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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: 1.31 acres

Wetland type. Explain: Palustrine Unconsolidated bottom (PUB) and Palustrine Emergent (PEM)

Wetland quality. Explain: Excavated ponded areas that have naturalized, and an emergent wetland area that has developed within the riparian corridor.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: After periods of rain, excess flow drains from the wetlands into Reach 59.

Surface flow is: **Discrete and confined**

Characteristics: The abutting wetlands are within the tributary and have confined flow to the tributary.

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: PEM Wetland located outside the project site is separated by one barrier.

(d) Proximity (Relationship) to TNW

Project wetlands are **20-25** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed

characteristics; etc.). Explain: Water color is green to clear with some sedimentation

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in width.

Vegetation type/percent cover. Explain: Herbaceous; 30-50%

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: 3

Approximately (1.31) 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>
Y	0.43 Onsite		
Y	0.70 Onsite		
Y	0.18 Offsite		

Summarize overall biological, chemical and physical functions being performed: The wetlands filter pollutants which aids in a reduction of chemical pollutants reaching downstream waters. The wetlands retain flood waters which reduces the velocities and sediment loads in downstream waters. The wetlands produce detritus as a food source for downstream aquatic organisms.

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:

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 NWI map identifies one palustrine emergent wetland that is 0.18-acre within the relevant reach outside the project site. Additionally, field investigations within the project study area identified 1.13 acres of wetlands abutting the relevant reach. The offsite wetland is adjacent but not abutting the relevant reach. The wetland is separated by one barrier and, therefore, adjacent to the relevant reach (unnamed tributary to Pin Oak Creek).

The 4,142 linear feet of relevant reach (unnamed tributary to Pin Oak Creek), the 1.13 acres of wetlands onsite abutting the relevant reach, and the 0.18-acre offsite adjacent wetland are being utilized for this significant nexus evalaution. This relevant reach and its adjacent wetlands are approximately 23 stream miles from the nearest TNW (Colorado River) and maintain a direct hydrologic connection through Pin Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach and its adjacent wetlands serve to aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River by filtering some pollutants before they reach the Colorado River. Therefore, the relevant reach and the adjacent wetlands within this relevant reach provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 23 river miles downstream of the project site.

The relevant reach and wetlands provide benefits to the physical integrity of the Colorado River by retaining floodwaters, reducing velocities during overbank events, and stabilizing soils. Removing these wetlands from the system would result in increased sediment load within the Colorado River channel, as well as increased volume and velocity. These increases would contribute to erosion and sedimentation within the Colorado River which would constitute alteration/degradation to the physical attributes of a TNW. Therefore, the wetlands identified in this relevant reach provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

The adjacent wetlands along the relevant reach produce detritus and organic matter as a food source for downstream aquatic organisms. It is doubtful that the relevant reach and its adjacent wetlands have aquatic organisms that require this relevant reach and its adjacent wetlands and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach and its adjacent wetlands have more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is sufficient evidence to support the statement that the aquatic resources within this reach provide a significant nexus (more than speculative or insubstantial) effect upon the chemical and physical integrity of the downstream TNW, the Colorado River. However, we could not conclude that the relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the biological integrity of the downstream TNW. There is a direct surface connection from the associated wetlands to Reach 59, with continuation of the surface connection to the Colorado River. Based on the significant nexus evaluation, we determined that Reach 59 and its onsite adjacent wetlands (Wetlands 365 and 55) are waters of the United States subject to federal jurisdiction under Section 404 of the Clean Water Act.

2. **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-RPWs⁸ 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: **1,701** linear feet **10** 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: **1.13** acres

7. Impoundments of jurisdictional waters.⁹

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

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

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

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

- 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.

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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020

- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018 or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

Jurisdictional Waters (Section 404)					
Water Reach	Type	Area (Ac)	Latitude	Longitude	
59	Intermittent Stream (R4SBC)	1,701 LF	0.39	29.7895N	97.0888W
365	Freshwater Pond/Fringe (PUB/PEM)	0.43	29.7939N	97.0898W	
55	Freshwater Pond/Fringe (PUB/PEM)	0.70	29.7926N	97.0893W	

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 455, Unnamed Tributary to Chandler Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8643°N, Long. 97.0811°W;

Universal Transverse Mercator: UTM: 14, 3305295 N., 685342 E., NAD: 83

Name of nearest water body: Chandler Branch

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-Cummins, 12090301

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: 12 July 2022

Field Determination. Date(s): 12 April 2022

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 5,866 linear feet: 10 width (ft) and/or 1.35 acres

Wetlands: 2.99 acres

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

Elevation of established OHWM (if known):

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

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

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

³ Supporting documentation is presented in Section III.F.

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

Note that the most recent Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the area.

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

Summarize rationale supporting conclusion that wetland is "adjacent":

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

1. Identify TNW:

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

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵: Reach 455, an unnamed tributary of Chandler Branch with bed and banks, flows 5,866 feet within the review area and then another 400 feet to Chandler Branch. From this confluence, Chandler Branch flows approximately 2.3 miles to Upper Buckner's Creek, which flows an additional 15.5 miles downstream to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 10 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site..

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Intermittent but not seasonal flow**

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

Describe flow regime: Flows for short duration after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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: 3.86 acres

Wetland type. Explain: Palustrine Unconsolidated bottom (PUB)

Wetland quality. Explain: Excavated ponded areas that have naturalized.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: After periods of rain, excess flow drains from the wetlands into Reach 455.

Surface flow is: **Discrete**

Characteristics: The wetlands flow to the tributary when they fill and overflow during precipitation events.

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 **15-20** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed

characteristics; etc.). Explain: Water color is green to clear with some sedimentation

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in width.

Vegetation type/percent cover. Explain: Scrub shrub; 30-50%

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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

All wetland(s) being considered in the cumulative analysis: 2

Approximately (3.86) 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>
Y	0.87 Offsite		
Y	2.99 Onsite		

Summarize overall biological, chemical and physical functions being performed: The wetlands filter pollutants which aids in a reduction of chemical pollutants reaching downstream waters. The wetlands retain flood waters which reduces the velocities and sediment loads in downstream waters. The wetlands produce detritus as a food source for downstream aquatic organisms.

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:

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 NWI map identifies one palustrine unconsolidated bottom wetland that is 0.87-

acre within the relevant reach outside the project site. This wetland abuts the relevant reach. Additionally, field investigations within the project study area identified a 2.99-acre wetland abutting the relevant reach.

The 8,533 linear feet of relevant reach (unnamed tributary to Chandler Branch), the 2.99 acres of wetlands onsite abutting the relevant reach, and the 0.87-acre offsite adjacent wetland are being utilized for this significant nexus evalaution. This relevant reach and its adjacent wetlands are approximately 18 stream miles from the nearest TNW (Colorado River) and maintain a direct hydrologic connection through Chandler Branch and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach and its adjacent wetlands serve to aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River by filtering some pollutants before they reach the Colorado River. Therefore, the relevant reach and the adjacent wetlands within this relevant reach provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 18 river miles downstream of the project site.

The relevant reach and wetlands provide benefits to the physical integrity of the Colorado River by retaining floodwaters, reducing velocities during overbank events, and stabilizing soils. Removing these wetlands from the system would result in increased sediment load within the Colorado River channel, as well as increased volume and velocity. These increases would contribute to erosion and sedimentation within the Colorado River which would constitute alteration/degradation to the physical attributes of a TNW. Therefore, the wetlands identified in this relevant reach provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

The adjacent wetlands along the relevant reach produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach and its adjacent wetlands have aquatic organisms that require this relevant reach and its adjacent wetlands and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach and its adjacent wetlands have more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

2. In conclusion, it is the Corps opinion that there is sufficient evidence to support the statement that the aquatic resources within this reach provide a significant nexus (more than speculative or insubstantial) effect upon the chemical and physical integrity of the downstream TNW, the Colorado River. However, we could not conclude that the relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the biological integrity of the downstream TNW. There is a direct surface connection from the associated wetlands to Reach 455, with continuation of the surface connection to the Colorado River. Based on the significant nexus determination, we determined that Reach 455 and its onsite adjacent wetlands (Wetland 447/447P) are waters of the United States 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-RPWs⁸ 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: **5,866** linear feet **10** 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 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: **2.99** acres

7. Impoundments of jurisdictional waters.⁹

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

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

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

- 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.

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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):

- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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: See next page for Jurisdictional Waters List

Jurisdictional Waters (Section 404)

Water Reach	Type	Area (Ac)	Latitude	Longitude
455	Intermittent Stream (R4SBC)	5,866 LF	1.35	29.8643N 97.0811W
447/447p	Freshwater Pond/Fringe (PUB/PEM)		2.99	29.8631N, 97.0791W

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Feature Wetland Locations listed in Section IV B. °N, Long. °W;

Universal Transverse Mercator: UTM: N., E., NAD:

Name of nearest water body: Busby Branch, and Live Oak, Pin Oak and Upper Buckner's Creeks

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-Cummins; 12090301

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: 1 JUL 2022
 Field Determination. Date(s): 12 APR 2022

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):¹

TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

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

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

c. Limits (boundaries) of jurisdiction based on: Not Applicable.

Elevation of established OHWM (if known):

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

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

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

³ Supporting documentation is presented in Section III.F.

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

There are thirteen (13) depressional isolated wetlands comprising approximately 0.397 acre within the subject site. The nearest water is Salt Branch, an ephemeral stream with bed and banks, located approximately 285 linear feet west of the subject site. Salt Branch flows approximately 6.75 miles downstream to Buckner's Creek, which flows an addiitonal 15.24 miles to the Colorado River, a TNW. Based on a review of multiple exhibits, topographical maps, historical aerials, the U.S. Fish and Wildlife Service National Wetland Inventory map, the U.S. Department of Agriculture National Cooperative Soil Survey (NCSS) map data, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and ground-truthing during the 12 APR 2022 field site visit, there appear to be no discrete surface hydrological connections between the subject wetlands and any water of the U.S. The exact boundaries (as standard with isolated wetlands) were not verified, but the feature polygons were examined via aerial photography and ground truthing to ensure that they are closed polygons surrounded by uplands.

-The subject wetlands are all located outside the 1% annual flood risk zone (100-year floodplain) of any water of the U.S.

-The subject wetlands are neither currently used, nor have been used in the past, nor susceptible to use for interstate or foreign commerce

-The subject wetlands are not subject to the ebb and flow of the daily tide.

-The subject wetlands do not cross interstate or tribal boundaries.

-There are no indications that these "Isolated*" wetlands would 1) affect or be used by any interstate or foreign travelers for recreational or other purposes, 2) affect or be used for fish or shellfish that could be taken and sold in interstate or foreign commerce, or 3) be involved in any direct current use or potential use for industrial purposes by industries in interstate commerce.

-The subject wetlands are not impoundments of any water of the U.S.

-The subject wetlands are not part of a surface tributary system to any water body.

-The subject wetlands are not part of the territorial seas.

-The subject wetlands are not located "Adjacent***" to waters of the U.S. (other than waters that are themselves wetlands).

-The subject wetlands are not located reasonably close to a water of the US as to infer it is "ecologically adjacent"; for the wetlands to be determined to "reasonably close", they must be in a geomorphic position such that an ecologic interconnectivity is beyond speculation or insubstantial for a known biologic species that requires both, the subject wetlands and the nearest known waterbody (a known water of the U.S. other than an adjacent wetland) to fullfill spawning and/or life cycle requirements. There are no known species in this geo-region that require both these wetlands under review and the nearest known waterway to fulfill their life cycle requirements, therefore these wetlands are ecologically isolated.

*33 CFR 330.2 (e): Isolated waters means those non-tidal waters of the U.S. that are:

(1) Not part of a surface tributary system to interstate or navigable waters of the US; and

(2) Not adjacent to such tributary waterbodies.

** 33 CFR 328.3 (a)(7) adjacent wetlands: Federal regulations, specifically 33 CFR 328.3 c) defines "ADJACENT" as: bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

In summary, the subject wetlands have been identified per the Atlantic and Gulf Coastal Plain Region Supplement of the 1987 Corps of Engineers Wetland Delineation Manual. The subject wetlands are not inseparably bound to a water of the U.S., are not adjacent to any water of the U.S., and do not have a discrete hydrological surface connection to any water of the U.S. The site wetlands are "isolated" with no known nexus to interstate commerce and as such it is the Corps draft determination that the subject site wetland would not be subject to federal jurisdiction under Section 404 of the Clean Water Act (Section 404) or Section 10 of the Rivers and Harbors Act (Section 10).

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 body⁴ 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: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: 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 **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

Tributary stream order, if known:

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

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

Average width: feet

Average depth: feet

Average side slopes: **Pick List**

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input 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:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

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

Describe flow regime:

Other information on duration and volume:

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

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of wrack line
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> sediment sorting
<input type="checkbox"/> shelving	<input type="checkbox"/> scour
<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> sediment deposition	
<input type="checkbox"/> water staining	
<input type="checkbox"/> other (list):	

Discontinuous OHWM.⁷ Explain:

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

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" 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):	

(iii) **Chemical Characteristics:**

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

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

⁷Ibid.

(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:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
------------------------------	------------------------	------------------------------	------------------------

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:
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-RPWs⁸ 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 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 when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres

7. Impoundments of jurisdictional waters.⁹

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

Demonstrate that impoundment was created from “waters of the U.S.” or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

which are or could be used for industrial purposes by industries in interstate commerce.

Interstate isolated waters. Explain:

Other factors. Explain:

Identify water body and summarize rationale supporting determination:

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

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: 0.397 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: Wetland delineation report submitted by consultant, dated 9 SEP 2020.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
 - Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey; (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>), accessed 10 SEP 2020
- National wetlands inventory map(s). Cite name: FWS NWI Online Mapper. (<http://www.fws.gov/wetlands/data/mapper.HTML>), accessed 10 SEP 2020.
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: Panel Number 48149C0400C, 17 OCT 2006
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (GE) 2018
 - or Other (Name & Date): Photographs provided in Wetland Delineation Report, 9 SEP 2020 and site visit 12 APR 2022
- 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:

Feature Wetland Locations:

Wetland 336 (0.025 ac): Lat. 29.78517° N, Long. 97.06905° W;
Wetland 371 (0.022 ac): Lat. 29.79124° N, Long. 97.08001° W;
Wetland 373 (0.012 ac): Lat. 29.79093° N, Long. 97.07875° W;
Wetland 466 (0.281 ac): Lat. 29.84721° N, Long. 97.08708° W;
Wetland 1027 (0.005 ac): Lat. 29.77838° N, Long. 97.05095° W;
Wetland 1028 (0.003 ac): Lat. 29.79310° N, Long. 97.08620° W;
Wetland 1029 (0.001 ac): Lat. 29.79319° N, Long. 97.08622° W;
Wetland 1030 (0.004 ac): Lat. 29.79325° N, Long. 97.08661° W;
Wetland 1032 (0.001 ac): Lat. 29.79090° N, Long. 97.07889° W;
Wetland 1034 (0.005 ac): Lat. 29.78418° N, Long. 97.06975° W;
Wetland 1036 (0.005 ac): Lat. 29.78166° N, Long. 97.05299° W;
Wetland 1037 (0.032 ac): Lat. 29.78176° N, Long. 97.05088° W;
Wetland 1038 (0.001 ac): Lat. 29.77949° N, Long. 97.05050° W;

There are thirteen (13) depressional isolated wetlands comprising approximately 0.397 acre within the subject site. The nearest water is Salt Branch, an ephemeral stream with bed and banks, located approximately 285 linear feet west of the subject site. Salt Branch flows approximately 6.75 miles downstream to Buckner's Creek, which flows an addiitonal 15.24 miles to the Colorado River, a TNW.

Based on a review of multiple exhibits, topographical maps, historical aerials, the U.S. Fish and Wildlife Service National Wetland Inventory map, the U.S. Department of Agriculture National Cooperative Soil Survey (NCSS) map data, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and ground-truthing during the 12 APR 2022 field site visit, there appear to be no discrete surface hydrological connections between the subject wetlands and any water of the U.S. The exact boundaries (as standard with isolated wetlands) were not verified, but the feature polygons were examined via aerial photography and ground truthing to ensure that they are closed polygons surrounded by uplands.

- The subject wetlands are all located outside the 1% annual flood risk zone (100-year floodplain) of any water of the U.S.
- The subject wetlands are neither currently used, nor have been used in the past, nor susceptible to use for interstate or foreign commerce
- The subject wetlands are not subject to the ebb and flow of the daily tide.
- The subject wetlands do not cross interstate or tribal boundaries.
- There are no indications that these "Isolated*" wetlands would 1) affect or be used by any interstate or foreign travelers for recreational or other purposes, 2) affect or be used for fish or shellfish that could be taken and sold in interstate or foreign commerce, or 3) be involved in any direct current use or potential use for industrial purposes by industries in interstate commerce.
- The subject wetlands are not impoundments of any water of the U.S.
- The subject wetlands are not part of a surface tributary system to any water body.
- The subject wetlands are not part of the territorial seas.
- The subject wetlands are not located "Adjacent**" to waters of the U.S. (other than waters that are themselves wetlands).
- The subject wetlands are not located reasonably close to a water of the US as to infer it is "ecologically adjacent"; for a water/wetland to be determined to "reasonably close" it must be in a geomorphic position

such that an ecologic interconnectivity is beyond speculation or insubstantial for a known biologic species that requires both, the subject wetlands and the nearest known waterbody (a known water of the U.S. other than an adjacent wetland) to fulfill spawning and/or life cycle requirements. There are no known species in this geo-region that require both these wetlands under review and the nearest known waterway to fulfill their life cycle requirements, therefore this water/wetland is ecologically isolated.

*33 CFR 330.2 (e): Isolated waters means those non-tidal waters of the U.S. that are:

- (1) Not part of a surface tributary system to interstate or navigable waters of the US; and
- (2) Not adjacent to such tributary waterbodies.

** 33 CFR 328.3 (a)(7) adjacent wetlands: Federal regulations, specifically 33 CFR 328.3 c) defines "ADJACENT" as: bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

In summary, the subject wetlands have been identified per the Atlantic and Gulf Coastal Plain Region Supplement of the 1987 Corps of Engineers Wetland Delineation Manual. The subject wetlands are not inseparably bound to a water of the U.S., are not adjacent to any water of the U.S., and do not have a discrete hydrological surface connection to any water of the U.S. The site wetlands are "isolated" with no known nexus to interstate commerce and as such it is the Corps draft determination that the subject site wetland would not be subject to federal jurisdiction under Section 404 or Section 10.

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch; See Waters Table in Sect. IV B

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: TX County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Waters Table in Sect. IV B° N, Long. ° W;

Universal Transverse Mercator: UTM: N., E., NAD:

Name of nearest water body: Busby Branch, and Live Oak, Pin Oak and Upper Buckner's Creeks

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-Cummins, 12090301

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: 8 July 2022
 Field Determination. Date(s): 12 April 2022

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):¹

TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **48 separate waters with their associated fringe wetlands (24.22 total acres) best described in the preamble for 33 CFR 328, published in Federal Register Volume 51, Number 219, published November 13, 1986 (page 41217)**, which states, "For clarification, it should be noted that we generally do not consider the following waters to be Waters of the United States...**(c) Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.**". See Waters Table in Sect. IV B.

An additional **14 separate waters with their associated fringe wetlands (34.40 total acres) best described in the preamble for 33 CFR 328, published in Federal Register Volume 51, Number 219, published November 13, 1986 (page 41217)**, which states, "For clarification, it should be noted that we generally do not consider the following waters to be Waters of the United States... **(e) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States (see 33CFR 328.3(a)).**". See Waters Table in Sect. IV B.

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 body⁴ 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: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: 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 **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

Tributary stream order, if known:

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

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

Average width: feet

Average depth: feet

Average side slopes: **Pick List**

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input 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:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

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

Describe flow regime:

Other information on duration and volume:

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

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of wrack line
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> sediment sorting
<input type="checkbox"/> shelving	<input type="checkbox"/> scour
<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> sediment deposition	
<input type="checkbox"/> water staining	
<input type="checkbox"/> other (list):	

Discontinuous OHWM.⁷ Explain:

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

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" 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):	

(iii) **Chemical Characteristics:**

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

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

⁷Ibid.

(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:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
------------------------------	------------------------	------------------------------	------------------------

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:
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-RPWs⁸ 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 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 when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres

7. Impoundments of jurisdictional waters.⁹

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

Demonstrate that impoundment was created from “waters of the U.S.” or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

which are or could be used for industrial purposes by industries in interstate commerce.

Interstate isolated waters. Explain:

Other factors. Explain:

Identify water body and summarize rationale supporting determination:

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

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 Section II B 2
- 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: 58.34 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: **Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref. 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **FIRM Panel 48149C0400C, effective 17 OCT 2006.**
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **Google Earth imagery, flown 18 JAN 2018**
or Other (Name & Date): **Photographs from site visit, 12 APR 2022**
- 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:

SWG-2020-00651 Waters Table

Preamble waters (not jurisdictional)...(c) Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing:

Waters Name	Size	Coordinates
61	0.87 ac	29.79348°N, 97.08286°W
82	0.30 ac	29.82400°N, 97.08813°W
112	0.07 ac	29.81785°N, 97.09342°W
122	0.07 ac	29.80586°N, 97.08595°W
255	0.15 ac	29.80689°N, 97.07418°W
269	0.53 ac	29.79693°N, 97.07739°W
272	0.30 ac	29.79998°N, 97.08128°W
273	0.08 ac	29.80028°N, 97.08095°W
275	0.24 ac	29.79479°N, 97.08082°W
325	0.09 ac	29.79985°N, 97.06666°W
326	0.23 ac	29.79287°N, 97.07041°W
331	1.45 ac	29.79137°N, 97.06197°W
335	1.08 ac	29.78655°N, 97.06310°W
344	0.08 ac	29.88706°N, 97.06262°W
350	0.53 ac	29.78592°N, 97.05480°W
358/1041	0.24 ac	29.80181°N, 97.08401°W
359/1040	0.11 ac	29.80103°N, 97.08382°W
369	0.06 ac	29.79523°N, 97.07987°W
370	0.14 ac	29.79124°N, 97.08032°W
379	0.02 ac	29.82028°N, 97.09265°W
434/435	0.46 ac	29.86391°N, 97.08442°W
452/452p	0.96 ac	29.86015°N, 97.08003°W
461/461p	4.98 ac	29.85432°N, 97.08294°W
471/471p	0.22 ac	29.85127°N, 97.09385°W
472/1112	0.81 ac	29.85372°N, 97.09356°W
488	0.40 ac	29.84410°N, 97.09378°W
499	0.49 ac	29.85991°N, 97.09271°W
1001/1106	0.07 ac	29.85039°N, 97.08934°W
1008/1108	0.08 ac	29.85108°N, 97.09316°W
1016/1124	0.50 ac	29.86442°N, 97.07569°W
1039/1069/1071	0.37 ac	29.80407°N, 97.07969°W
1053	0.01 ac	29.78218°N, 97.06631°W
1062	1.07 ac	29.79065°N, 97.05104°W
1064	0.01 ac	29.79234°N, 97.07328°W
1068/1069/1071	4.16 ac	29.79370°N, 97.05731°W
1078	0.60 ac	29.80044°N, 97.08060°W
1084	0.03 ac	29.80567°N, 97.06859°W
1085	0.02 ac	29.80676°N, 97.08593°W
1087	0.03 ac	29.80718°N, 97.08589°W

1095	0.01 ac	29.84334°N, 97.09406°W
1096	0.05 ac	29.84359°N, 97.09407°W
1097	0.01 ac	29.84394°N, 97.09415°W
1098	0.02 ac	29.84394°N, 97.09401°W
1099	0.01 ac	29.84405°N, 97.09418°W
469/469p	0.28 ac	29.84982°N, 97.09492°W
91a	0.76 ac	29.82639°N, 97.09129°W
91b	0.87 ac	29.82692°N, 97.09034°W

Preamble waters (not jurisdictional)...(e) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States (see 33CFR 328.3(a)):

Name	Size	Coordinates
437/458	2.37 ac	29.85999°N, 97.08486°W
438/460/478	7.51 ac	29.86023°N, 97.08261°W
439/439p	0.92 ac	29.86706°N, 97.08213°W
443/1127/443p	4.32 ac	29.86519°N, 97.08073°W
450/450p	2.46 ac	29.86135°N, 97.08221°W
454/454p	1.08 ac	29.86527°N, 97.07775°W
459/1115	1.45 ac	29.85746°N, 97.08494°W
462/462p	3.63 ac	29.85093°N, 97.08459°W
463/463p	2.51 ac	29.84904°N, 97.08441°W
464/465	2.48 ac	29.84889°N, 97.08578°W
470	3.19 ac	29.84627°N, 97.09251°W
473/473p	1.26 ac	29.84920°N, 97.09337°W
509	0.11 ac	29.81116°N, 97.08945°W
1006/1102	1.13 ac	29.84808°N, 97.09374°W

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 117, Unnamed Tributary to Live Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8094° N, Long. 97.0915° W;

Universal Transverse Mercator: UTM: 14, 3299139 N., 684439 E., NAD: 83

Name of nearest water body: Live Oak Creek

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

Explain:



Note that the most recent Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the area.

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

Summarize rationale supporting conclusion that wetland is "adjacent":

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

Identify TNW:

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 and adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1; otherwise, see Section III.B below.

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵. Reach 117, an unnamed tributary of Live Oak Creek with bed and banks, flows 2,166 feet within the review area and then another 2,457 feet to Live Oak Creek. From this confluence, Live Oak Creek flows approximately 2.7 miles downstream to Buckner's Creek, which flows an additional 18.85 miles to the Colorado River, a TNW. Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 500 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 4,623 linear feet of relevant reach (unnamed tributary to Live Oak Creek) is being utilized for this significant nexus evalaution. This relevant reach is approximately 22 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Live Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 22 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 117 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

□ 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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

Tributary waters: linear feet 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 explanation in Section III.C.1.**
- Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **2,166** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 393, Unnamed Tributary to Live Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8053°N, Long. 97.0959°W;

Universal Transverse Mercator: UTM: 14, 3298372 N., 684021 E., NAD: 83

Name of nearest water body: Live Oak Creek

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

Explain:



Note that the most instructional guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the area.

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

Summarize rationale supporting conclusion that wetland is “adjacent”:

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

Identify TNW:

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 and adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1; otherwise, see Section III.B below.

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵. Reach 393, an unnamed tributary of Live Oak Creek with bed and banks, flows 2,400 feet within the review area and then another approximately 2,500 feet by way of Reach 504 to Live Oak Creek. From this confluence, Live Oak Creek flows approximately 3.2 miles downstream to Buckner's Creek, which flows an additional 18.85 miles to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site..

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: **Flows after precipitation events**

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

other (list):
 Discontinuous OHWM.⁷ Explain:

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

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 700 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 3,702 linear feet of relevant reach (unnamed tributary to Live Oak Creek) is being utilized for this significant nexus evalaution. This relevant reach is approximately 22 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Live Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 22 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and

sedimentation within the Colorado River, however, this would be speculative based on the length on the relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 393 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is

⁸See Footnote # 3.

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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

Tributary waters: linear feet 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 explanation in Section III.C.1.**
 Other: (explain, if not covered above):

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

¹⁰ **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.**

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): **2,400** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 504, Unnamed Tributary to Live Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.809175°N, Long. 97.097593°W;
Universal Transverse Mercator: UTM: 14, N., E., NAD: 83

Name of nearest water body: Live Oak Creek

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-Cummins, 12090301

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: 17 May 2022
 Field Determination. Date(s): 12 April 2022

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):¹

TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

Explain:



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

2. **Western and adjacent to TNW** Summarize rationale supporting conclusion that wetland is “adjacent”:

Summarize rationale supporting conclusion that wetland is "adjacent";

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

1. Identify TNW:

The agreements will assert jurisdiction over TNWs and wetlands adjacent to TNWs. 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.

A. TWS AND WETLANDS ADJACENT TO TWS

Identify flow route to TNW⁵. Reach 504, an unnamed tributary of Live Oak Creek with bed and banks, flows 105 feet within the review area and then another approximately 600 feet to Live Oak Creek. From this confluence, Live Oak Creek flows approximately 3.2 miles downstream to Buckner's Creek, which flows an additional 18.85 miles to the Colorado River, a TNW.

Tributary stream order, if known: 2

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: **Flows after precipitation events.**

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

other (list):
 Discontinuous OHWM.⁷ Explain:

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

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 700 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 1,784 linear feet of relevant reach (unnamed tributary to Live Oak Creek) is being utilized for this significant nexus evalaution. This relevant reach is approximately 22 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Live Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 22 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 504 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

Tributary waters: linear feet 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 explanation in Section III.C.1.**
- Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **105** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020,00651, 7V Solar Ranch, Reach 137, Unnamed Tributary to Live Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8233°N, Long. 97.0912°W;

Universal Transverse Mercator: UTM: 14, N., E., NAD: 83

Name of nearest water body: Live Oak Creek

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-Cummins, 12090301

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: 12 July 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

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

2. **Western and adjacent to TNW** Summarize rationale supporting conclusion that wetland is “adjacent”:

Summarize rationale supporting conclusion that wetland is "adjacent";

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

1. Identify TNW:

The agreements will assert jurisdiction over TNWs and wetlands adjacent to TNWs. 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.

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵. Reach 137, an unnamed tributary of Live Oak Creek with bed and banks, flows 3,928 feet within the review area and then another 1,100 feet to Live Oak Creek. From this confluence, Live Oak Creek flows approximately 2.5 miles downstream to Buckner's Creek, which flows an additional 18.85 miles to the Colorado River, a TNW. Tributary stream order, if known: 1

(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: 10 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 100-700 feet in 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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: 0.195 acres

Wetland type. Explain: Palustrine Emergent (PEM)

Wetland quality. Explain: Emergent wetland areas that have developed within the riparian corridor.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: After periods of rain, excess flow drains from the wetlands into Reach 137.

Surface flow is: **Discrete**

Characteristics: Wetlands are abutting the unnamed tributary to Live Oak Creek and flow to the creek when full.

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 **20-25** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed

characteristics; etc.). Explain: Water color is green to clear with some sedimentation

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 100-700 feet in width.

Vegetation type/percent cover. Explain: Herbaceous; 30-50%

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: 1

Approximately (0.195) 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>
Y	0.19		
Y	0.005		

Summarize overall biological, chemical and physical functions being performed: The wetlands filter pollutants which aids in a reduction of chemical pollutants reaching downstream waters. The wetlands retain flood waters which reduces the velocities and sediment loads in downstream waters. The wetlands produce detritus as a food source for downstream aquatic organisms.

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:

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 NWI map did not identify any offsite wetlands that are adjacent to this relevant reach. Field investigations within the project study area identified two wetlands totaling 0.195-acre abutting the relevant reach (unnamed tributary to Live Oak Creek).

The 5,646 linear feet of relevant reach (unnamed tributary to Live Oak Creek) and the 0.195-acre of wetlands onsite abutting the relevant reach are being utilized for this significant nexus determination. This relevant reach and its adjacent wetlands are approximately 21 stream miles from the nearest TNW (Colorado River) and maintain a direct hydrologic connection through Live Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach and its adjacent wetlands serve to aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River by filtering some pollutants before they reach the Colorado River. However, the adjacent wetlands total less than 0.2-acre and are located 21 miles upstream of the TNW. Based on the small amount of wetlands filtering pollutants and the large distance to the Colorado River, we could not determine that this relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 21 river miles downstream of the project site.

The relevant reach and wetlands provide benefits to the physical integrity of the Colorado River by retaining floodwaters, reducing velocities during overbank events, and stabilizing soils. Removing these wetlands from the system would result in increased sediment load within the Colorado River channel, as well as increased volume and velocity. These increases would contribute to erosion and sedimentation within the Colorado River which would constitute alteration/degradation to the physical attributes of a TNW. However, the adjacent wetlands total less than 0.2-acre and are located 21 miles upstream of the TNW. Based on the small amount of wetlands retaining floodwaters and the large distance to the Colorado River, we could not determine that this relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

The adjacent wetlands along the relevant reach produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach and its adjacent wetlands have aquatic organisms that require this relevant reach and its adjacent wetlands and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach and its adjacent wetlands have more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

2. In conclusion, it is the Corps opinion that there is insufficient evidence to support the statement that the aquatic resources within this reach provide a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Therefore, we determined that Reach 137 and its onsite adjacent wetlands (Wetlands 137W and 1091) are not waters of the United States and are not 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-RPWs⁸ 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 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.⁹

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

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

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

- 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: acres
- 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 explanation in Section III.C.1.**
 - 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): **3.298** linear feet, **10** width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: **0.195** 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: **Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020**
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:
 - U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
 - Galveston District's Approved List of Navigable Waters
 - U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
 - USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
 - National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
 - State/Local wetland inventory map(s):
 - FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.

- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020,00651, 7V Solar Ranch, Reach 257, Unnamed Tributary to Pin Oak Creek

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8017°N, Long. 97.0778°W;

Universal Transverse Mercator: UTM: 14, 3298362 N., 685777 E., NAD: 83

Name of nearest water body: Pin Oak Creek

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

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

2. **Western and adjacent to TNW** Summarize rationale supporting conclusion that wetland is “adjacent”:

Summarize rationale supporting conclusion that wetland is "adjacent";

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

1. Identify TNW:

The agreements will assert jurisdiction over TNWs and wetlands adjacent to TNWs. 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.

A. TWS AND WETLANDS ADJACENT TO TWS

Identify flow route to TNW⁵. Reach 257, an unnamed tributary of Pin Oak Creek with bed and banks, flows approximately 1 mile within the review area to Pin Oak Creek. From this confluence, Pin Oak Creek flows approximately 6 miles downstream to Buckner's Creek, which flows an additional 15.24 miles to the Colorado River, a TNW. Tributary stream order, if known:

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

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

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

Average width: 10 feet

Average depth: 1 feet

Average side slopes: **3:1**

Primary tributary substrate composition (check all that apply):

Silt
 Cobble
 Bedrock
 Other. Explain:
 Sands
 Gravel
 Vegetation. Type/% cover:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rock deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site..

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rock deposited from distinct flood events.

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

Dye (or other) test performed:

Tributary has (check all that apply):

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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: 0.14 acres

Wetland type. Explain: Palustrine Forested (PFO)

Wetland quality. Explain: A forested wetland area within the riparian corridor.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: After periods of rain, excess flow drains from the wetlands into Reach 257.

Surface flow is: **Discrete**

Characteristics: Lies within the 100-year floodplain of Pin Oak Creek

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: Located within the 100-year floodplain of Pin Oak Creek.

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **20-25** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water color is green to clear with some sedimentation

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width): Riparian corridor exists in an inconsistent band of vegetation primarily consisting of shrub/scrub species approximately 500-700 feet in width.

Vegetation type/percent cover. Explain: Forested; 100%

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: 1

Approximately (0.14) 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>
Y	0.14 Offsite		

Summarize overall biological, chemical and physical functions being performed: The wetlands filter pollutants which aids in a reduction of chemical pollutants reaching downstream waters. The wetlands retain flood waters which reduces the velocities and sediment loads in downstream waters. The wetlands produce detritus as a food source for downstream aquatic organisms.

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:

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 NWI map identifies one palustrine unconsolidated bottom semipermanently flooded aquatic feature outside the project area. In the 1995 Google Earth aerial photo, it appears to be open water. However, the Google Earth aerial photos from 1997 to present show the feature is vegetated and progressed from emergent to forested vegetation. Therefore, we determined this feature is a wetland.

Additionally, field investigations within the project study area did not identify any additional wetlands along the relevant reach. The offsite wetland is adjacent but not abutting the relevant reach. The wetland has a discrete hydrological surface connection through the 100-year floodplain and, therefore, is adjacent to the relevant reach (unnamed tributary to Pin Oak Creek).

The 6,653 linear feet of relevant reach (unnamed tributary to Pin Oak Creek) and the 0.14-acre offsite wetland are being utilized for this significant nexus determination. This relevant reach and its adjacent wetlands are approximately 21 stream miles from the nearest TNW (Colorado River) and maintain a direct hydrologic connection through Pin Oak Creek and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach and its adjacent wetlands serve to aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River by filtering some pollutants before they reach the Colorado River. However, the adjacent wetland is less than 0.15-acre and is located 21 miles upstream of the TNW. Based on the small amount of wetlands filtering pollutants and the large distance to the Colorado River, we could not determine that this relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 21 river miles downstream of the project site.

The relevant reach and wetlands provide benefits to the physical integrity of the Colorado River by retaining floodwaters, reducing velocities during overbank events, and stabilizing soils. Removing these wetlands from the system would result in increased sediment load within the Colorado River channel, as well as increased volume and velocity. These increases would contribute to erosion and sedimentation within the Colorado River which would constitute alteration/degradation to the physical attributes of a TNW. However, the adjacent wetland is less than 0.15-acre and is located 21 miles upstream of the TNW. Based on the small amount of wetlands retaining floodwaters and the large distance to the Colorado River, we could not determine that this relevant reach and its adjacent wetlands provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

The adjacent wetlands along the relevant reach produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach and its adjacent wetlands have aquatic organisms that require this relevant reach and its adjacent wetlands and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach and its adjacent wetlands have more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

2. 2. In conclusion, it is the Corps opinion that there is insufficient evidence to support the statement that the aquatic resources within this reach provide a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Therefore, we determined that Reach 257 is not a water of the United States and is not 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-RPWs⁸ 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 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.⁹

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

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

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

⁸See Footnote # 3.

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

- 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 explanation in Section III.C.1.**
- 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): **4,954** linear feet, **10** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020

- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 468, Unnamed Tributary to Busby Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8459° N, Long. 97.0854° W;

Universal Transverse Mercator: UTM: 14, 3303248 N., 684961 E., NAD: 83

Name of nearest water body: Busby Branch

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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 body⁴ 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: 2220 square miles

Drainage area: 54 acres

Average annual rainfall: 39 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.
 Tributary flows through 3 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1-2 river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

⁴ 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 TNW⁵: Reach 468, an unnamed tributary of Busby Branch with bed and banks, flows 1,007 feet within the review area and then another 324 feet to Busby Branch. From this confluence, Busby Branch flows approximately 0.45 mile to Upper Buckner's Creek, which flows an additional 17.5 miles downstream to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 550 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 1,331 linear feet of relevant reach (unnamed tributary to Busby Branch) is being utilized for this significant nexus evaluation. This relevant reach is approximately 18 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Busby Branch and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 18 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 468 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

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 explanation in Section III.C.1.**

Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **1,007** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 469, Unnamed Tributary to Busby Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8467° N, Long. 97.0888° W;

Universal Transverse Mercator: UTM: 14, 3303332 N., 684631 E., NAD: 83

Name of nearest water body: Busby Branch

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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 body⁴ 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: 2220 square miles

Drainage area: 11 acres

Average annual rainfall: 39 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.
 Tributary flows through 3 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1-2 river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

⁴ 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 TNW⁵: Reach 469, an unnamed tributary of Busby Branch with bed and banks, flows 237 feet within the review area and then another 264 feet to Busby Branch. From this confluence, Busby Branch flows approximately 0.7 mile to Upper Buckner's Creek, which flows an additional 17.5 miles downstream to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 300 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 501 linear feet of relevant reach (unnamed tributary to Busby Branch) is being utilized for this significant nexus evaluation. This relevant reach is approximately 18 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Busby Branch and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 18 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 469 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

□ 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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

Tributary waters: linear feet 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 explanation in Section III.C.1.**
- Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **237** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 474, Unnamed Tributary to Busby Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8598°N, Long. 97.0966°W;

Universal Transverse Mercator: UTM: 14, 3304771 N., 683853 E., NAD: 83

Name of nearest water body: Busby Branch

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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 body⁴ 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: 2220 square miles

Drainage area: 83 acres

Average annual rainfall: 39 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.
 Tributary flows through 3 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1-2 river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

⁴ 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 TNW⁵: Reach 474, an unnamed tributary of Busby Branch with bed and banks, flows 450 feet within the review area and then another 400 feet to Busby Branch. From this confluence, Busby Branch flows approximately 1.5 miles to Upper Buckner's Creek, which flows an additional 17.5 miles downstream to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 90 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
------------------------------	------------------------	------------------------------	------------------------

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 2,060 linear feet of relevant reach (unnamed tributary to Busby Branch) is being utilized for this significant nexus evaluation. This relevant reach is approximately 19 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Busby Branch and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 19 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 474 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

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.⁹

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

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

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

SUCH WATERS (CHECK ALL THAT APPLY):

- 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):

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

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 explanation in Section III.C.1.**
- Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **450** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
- USDA Natural Resources Conservation Service Soil Survey. Citation: Fayette County, Texas soils map, ref: 10 SEP 2020
- National wetlands inventory map(s). Cite name: Muldoon, Texas NWI map, ref. 4 April 2022
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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:

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): 22 SEP 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2020-00651, 7V Solar Ranch, Reach 672, Unnamed Tributary to Busby Branch

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Fayette City: Muldoon

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.8533°N, Long. 97.0878°W;

Universal Transverse Mercator: UTM: 14, 3304065 N., 684715 E., NAD: 83

Name of nearest water body: Busby Branch

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-Cummins, 12090301

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: 17 May 2022

Field Determination. Date(s): 12 April 2022

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):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: 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):³

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

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

³ Supporting documentation is presented in Section III.F.

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

Explain:



Note that the most recent Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the area.

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

Summarize rationale supporting conclusion that wetland is "adjacent":

2. Wetland adjacent to TNW

Summarize rationale supporting determination:

Identify TNW:

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 and adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1; otherwise, see Section III.B below.

A. TWS AND WETLANDS ADJACENT TO TWS

SECTION III: CWA ANALYSIS

Identify flow route to TNW⁵: Reach 672, an unnamed tributary of Busby Branch with bed and banks, flows 1,146 feet within the review area and then another 400 feet to Busby Branch. From this confluence, Busby Branch flows approximately 0.75 mile to Upper Buckner's Creek, which flows an additional 17.5 miles downstream to the Colorado River, a TNW.

Tributary stream order, if known: 1

(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: 5 feet

Average depth: 1 feet

Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: This creek flows through a discrete channel with clearly defined bed and banks. The creek has a clearly defined riparian area through confined drainage features (draws or valleys) with presence of rack deposited from distinct flood events.

Presence of run/riffle/pool complexes. Explain: Observations of flow and deep ponding were confirmed with direct observation during the 12 April 2022 site visit. It rained in the days prior to the site.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: Flows after precipitation events.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: This creek flows through a channel with clearly defined bed and banks. The creek flows through a drainage feature with presence of rack deposited from distinct flood events.

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 ⁶ (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input checked="" type="checkbox"/> the presence of litter and debris
<input checked="" type="checkbox"/> changes in the character of soil	<input checked="" type="checkbox"/> destruction of terrestrial vegetation
<input checked="" type="checkbox"/> shelving	<input checked="" type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input checked="" type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input checked="" type="checkbox"/> scour
<input checked="" type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input checked="" type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Discontinuous OHWM.⁷ Explain:

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

<input type="checkbox"/> High Tide Line indicated by:	<input checked="" 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 checked="" type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input checked="" type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

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

Explain: Water color is stained from presence of tannins from rotting/decaying vegetation.

Identify specific pollutants, if known:

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): 90 feet
- 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: Direct observations and sign of mammalian, reptilian, and avian wildlife during 12 April 2022 site visit included feral hog, white-tail deer, various bird species and reptiles.

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:

<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:

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 NWI map and site visit did not identify any wetlands adjacent to this relevant reach.

Because there are no adjacent wetlands along this relevant reach, only the 3,549 linear feet of relevant reach (unnamed tributary to Busby Branch) is being utilized for this significant nexus evaluation. This relevant reach is approximately 18 stream miles from the nearest TNW (Colorado River) and maintains a direct hydrologic connection through Busby Branch and Buckner's Creek, relatively permanent tributaries. Through this connection, this relevant reach does not have any wetlands to filter pollutants before they reach the TNW, the Colorado River. Therefore, this relevant reach does not aid in the reduction of chemical pollutants from adjacent land uses (agriculture and transportation) flowing into the Colorado River. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the chemical integrity of the TNW, the Colorado River, located approximately 18 river miles downstream of the project site.

The relevant reach does not have any adjacent wetlands to retain floodwaters. Therefore, this relevant reach does not provide benefits to the physical integrity of the Colorado River by reducing velocities during overbank events, or stabilizing soils. This relevant reach could contribute to erosion and sedimentation within the Colorado River, however, this would be speculative based on the length on the

relevant reach and the distance to the TNW. Therefore, this relevant reach does not provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW, the Colorado River.

There are no adjacent wetlands along this relevant reach to produce detritus and organics as a food source for downstream aquatic organisms. It is doubtful that the relevant reach has aquatic organisms that require this relevant reach and the TNW, the Colorado River. Therefore, we could not conclude that the relevant reach has more than a speculative or insubstantial effect on the biological integrity of the Colorado River.

In conclusion, it is the Corps opinion that there is not sufficient evidence to support the statement that this relevant reach provides a significant nexus (more than speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW, the Colorado River. Based on the significant nexus determination, we determined that Reach 672 is not a water of the United States and is not 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-RPWs⁸ 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 indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See Footnote # 3.

□ 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.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

Tributary waters: linear feet 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 explanation in Section III.C.1.**

Other: (explain, if not covered above):

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

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

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): **1,146** linear feet, **5** 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: Wetland Delineation Report: Application and pertinent data provided by Huffman-Broadway Group, Inc., for 7V Solar Ranch, LLC, dated 9 SEP 2020
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data
 - USGS 8 and 12 digit HUC maps
- Galveston District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000; Muldoon, Texas (2019)
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- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM Panel 48149C0400C, effective 17 OCT 2006.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth imagery, flown 18 JAN 2018
 - or Other (Name & Date): Photographs taken during 12 April 2022 Site Visit
- 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: