

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): August 21, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Tulsa, Port of Catoosa, SWT-2017-391

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Oklahoma County/parish/borough: Rogers City: Catoosa
Center coordinates of site (lat/long in degree decimal format): Lat. 36.230265° N, Long. -95.753175° W.
Universal Transverse Mercator:

Name of nearest waterbody: Unnamed tributary of Bird Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Bird Creek

Name of watershed or Hydrologic Unit Code (HUC): 110701070405

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: July 13, 2017

Field Determination. Date(s): July 14, 2017

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

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

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):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: 1,180 linear feet, OHWM 2-3' width (ft)

Wetlands: 0 acres.

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

Elevation of established OHWM (if known): .

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

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

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.

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, skip to Section III.D.4.

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

i. General Area Conditions:

Watershed size: ~23,999 acres

Drainage area: ~102 acres

Average annual rainfall: ~ 43.50 inches

Average annual snowfall: ~ 7 inches

ii. Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 1 tributary before entering TNW.

Project waters are 1-2 river miles from TNW.

Project waters are 1-2 river miles from RPW.

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

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

Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: The unnamed tributary of Bird Creek flows through the review area, to flow into another unnamed tributary of Bird Creek, which then flows into Bird Creek, a navigable water.

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

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

Tributary stream order, if known: 1st order

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

Tributary is: Natural
 Artificial (man-made). Explain: .
 Manipulated (man-altered). Explain: A portion of the relative reach was altered in the past by

the construction of West Keystone Avenue.

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

Average width: 4-5' feet

Average depth: 6"-1' feet

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

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Relatively stable due to adjacent riparian area.

Presence of run/riffle/pool complexes. Explain: The delineation submitted on behalf of the applicant observed pool and runs within the stream channel after a precipitation event that occurred within 24 hours prior to the field assessment on July 3, 2017.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): ~ 0.82 %

(c) Flow:

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

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: The USGS Stream Stats Report generated for the drainage area indicates an average daily streamflow of ~ 0.193 ft³/s (this statistic is based on the drainage area prior to some surrounding area land use changes). Flow is received from precipitation events and from overland sheet flow from surrounding uplands with an average of > 3" during the months of March through November (Tulsa, Station ID TULN; 1981-2010 - climate.ok.gov). It should be noted that monthly averages can be well exceeded for this area. For example, in 2017, the month of March received 10.43" and April received 8.24." This tributary's flow would likely have a high rate of change in response to precipitation events.

Other information on duration and volume:

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

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

Dye (or other) test performed: .

Tributary has (check all that apply):

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

Discontinuous OHWM.⁷ Explain: .

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

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

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

other (list):

iii) Chemical Characteristics:

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

Explain:

Identify specific pollutants, if known:

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

- Riparian corridor. Characteristics (type, average width): Varies from ~75' to ~200'.
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

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

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

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

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

ii) Chemical Characteristics:

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

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.

Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

The relevant reach for the unnamed tributary of Bird Creek is ~1,180 linear feet (lf) with connectivity to downstream navigable waters. The downstream navigable water connectivity is not depicted entirely on the USGS Topographic and NHD maps. Downstream connectivity was determined by review of satellite imagery, field observation, a previous downstream site delineation, and by a previous downstream Preliminary Jurisdictional Determination conducted by the Corps. This unnamed tributary of Bird Creek exhibits an ordinary high water mark (OHWM) of approximately 2-3' wide where it originates and flows for ~106 lf within the "South Property" review area. The remainder of relevant reach of this tributary, consisting of ~1,074 lf, is downstream of both review areas (~750 lf is within Zone AE, the 100-year floodplain). The OHWM was verified by field observation and by the delineation submitted on behalf of the applicant. Where this unnamed tributary of Bird Creek is depicted within portions of the "South Property" and the entire "North Property" review areas on the USGS Topographic and NHD Maps, a remnant channel feature is not jurisdictional (see Section III.F. - Non-Jurisdictional Waters). This unnamed tributary of Bird Creek is of the first order and receives flow from an average of approximately ~43.50 inches of rainfall and ~7 inches of snowfall annually, in addition to overland sheet flow within a ~102-acre drainage area. It should be noted that the physical geomorphology of the stream channel doesn't align exactly with the depiction on the USGS Topographic and NHD maps when compared to satellite imagery. The unnamed tributary of Bird Creek plays a part in transporting dissolved and suspended organic materials (e.g. woody debris and leaf fragments) from terrestrial habitats vital to support food webs in downstream waters. This was determined by the OHWM indicators, adjacent riparian area, and observation of organic material within the stream channel. The same ability to convey dissolved and suspended organic materials also results in the potential to carry environmental pollutants (or nutrients in overabundance) to navigable waters. For example, "stream channels have a natural dendritic design that has an intrinsic role in transporting various pollutants from widely dispersed upstream sources and concentrating them in downstream waters. Hyporheic zones of streams also play a key role in nitrogen transformations (uptake and cycling) and permanent removal (i.e., denitrification) as nitrogen is exposed to reactive benthic surfaces during transport (Alexander et al., 2007.) The adjacent riparian area also assists in maintenance of natural stream temperatures, trapping and filtering potential pollutants, slowing/storing flood waters, and helps maintain water quality through nutrient and contaminant uptake. "The influence of headwaters on downstream systems emerges from their attributes that meet unique habitat requirements of residents and migrants by: offering a refuge from temperature and flow extremes, competitors, predators, and introduced species; serving as a source of colonists; providing spawning sites and

rearing areas; being a rich source of food; and creating migration corridors throughout the landscape. Degradation and loss of headwaters and their connectivity to ecosystems downstream threaten the biological integrity of entire river networks,” (Meyer et al., 2007). Additionally, due to the close proximity (< 2 miles) to Bird Creek, the ~1,180 lf of the unnamed tributary of Bird Creek, has been determined to have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW.

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

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

- Tributary waters: **1,180** linear feet, **2-3'** 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.

⁸See Footnote # 3.

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:

Review of the USGS Topographic and the NHD maps depicts a ~2,900 lf intermittent, blue line tributary (unnamed tributary of Bird Creek) beginning from Main Parkway Road traversing from northeast to southwest to West Keystone Avenue, where it connects into an intermittent, blue line tributary (another unnamed tributary of Bird Creek). Review of satellite of imagery, field observation, and the delineation submitted on behalf of the applicant, indicates the unnamed tributary of Bird Creek doesn't follow the mapped USGS Topographic Map and USGS NHD Map entirely where it has been altered by anthropogenic activities in the past. There is ~754 lf of a remnant channel feature that is separated by ~485 lf of open field. The open field did not exhibit any OHWM indicators as defined in 33 CFR 328.3(e); or physical OHWM indicators described in 3(b) of RGL 05-05. The ~485 lf open field area has ongoing agricultural practices in the form of haying. Species such as Johnsongrass, (*Sorghum halepense*) with the indicator status of FACU, and sericea lespedeza (*Lespedeza cuneate*) with the indicator status of UPL, were observed in the open field where a previous stream channel might have been located. This would indicate the hydrology within this area was of low volume, infrequent, short duration flow. Drought conditions are indicated as “none” for Rogers County according to the Oklahoma Climatological Survey dated July 11, 2017. Mapped soils are indicated as Urban Land (URB) within the review area where this feature is located according to the Soil Survey Geographic Database (SSURGO). The NWI map indicates a potential PUBHx feature that is not present within the remnant channel feature as evident by satellite imagery and field observation. The remnant channel feature and the 0.06 wetland feature delineated on behalf of the applicant terminates at the open field and are not

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.

located within the floodplain according to the FEMA National Flood Hazard Layer Dataset. The lack of hydrology is likely a result of past anthropogenic activities within the surrounding vicinity over time that has severed a significant nexus with downstream navigable waters.

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): ~ **754** linear feet, **4-6'** width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: **0.06** 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: Kleinfelder "Draft Wetland and Stream Delineation Report, Properties Located SW of Main Parkway and Grand Road, Tulsa Port Catoosa, Rogers County, Oklahoma," dated July 6, 2017.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute, Mingo, Oklahoma.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Accessed July 13, 2017.
- National wetlands inventory map(s). Cite name: Accessed July 13, 2017.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: Panel 40131C0335H.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth.
or Other (Name & Date): Kleinfelder "Draft Wetland and Stream Delineation Report, Properties Located SW of Main Parkway and Grand Road, Tulsa Port Catoosa, Rogers County, Oklahoma," dated July 6, 2017.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature:

Richard B. Alexander, Elizabeth W. Boyer, Richard A. Smith, Gregory E. Schwarz, Richard B. Moore. 2007. The Role of Headwater Streams in Downstream Water Quality. *Journal of the American Water Resources Association*. 43(1): 41-59.

Judy L. Meyer, David L. Strayer, J. Bruce Wallace, Sue L. Eggert, Gene S. Helfman, and Norman E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. *Journal of the American Water Resources Association*. 43(1): 86-103.

Other information (please specify): Mesonet.org; Climate.ok.gov; USGS StreamStats; Dewberry Engineers Inc., report "United States Army Corps of Engineers, Section 10/404 Individual Wetlands Permit, Application Report, Tulsa Port of Catoosa, Barge Fleeting Area Project, Rogers County, Oklahoma," dated April 2013

B. ADDITIONAL COMMENTS TO SUPPORT JD: The review area consists of two properties depicted as the "North Property" (~30 acres) and the "South Property" (~9.84 acres). The Corps concurs with the delineation report submitted on behalf of the applicant that "E1" and "W1" features are not jurisdictional waters of the United States. The Corps also concurs that "E2" is associated with a waters of the United States. The previous delineation report referenced on downstream waters and associated Corps PJD is the Regulatory Office Project No. SWT-2012-947.

