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 July 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SWT-2022-00313

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Oklahoma County/parish/borough: Tulsa City: Bixby
Center coordinates of site (lat/long in degree decimal format): Lat. 35.9485° **N**, Long. 95.9457° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Posey Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Arkansas River
Name of watershed or Hydrologic Unit Code (HUC): Upper Arkansas River - 111101010305
☒ 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: 15 July 2022
☒ Field Determination. Date(s): 14 July 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 and are not** "*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 waters[2] (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: 1,351 linear feet: 6 width (ft) and/or 0.866 acres.
      Wetlands: 1.43 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: **Within the review area, three ephemeral drainages, R6-1 (432 linear feet), R6-3 (483 linear feet) and R6-4 (413 linear feet) were observed. R6-3 and R6-4 are erosional features that convey sheetflow across the landscape without a discernible ordinary high water mark. Two, non-jurisdictional upland stock tanks were observed within the review**

[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.

area also. PUB-3 (0.310 acre) and PUB-4 (0.161 acre) were man-made impoundments constructed in the uplands, and are not impoundments of jurisdictional waters.

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 waterbody[4] 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: 45.3 **square miles**
Drainage area: 554 **acres**
Average annual rainfall: 41.91 inches
Average annual snowfall: 8.3 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **2** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **1-2** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/a.

Identify flow route to TNW[5]: R6SB-1 flows into Posey Creek approximately 200 yards offsite and Posey Creek flows into the Arkansas River, a Traditionally Navigable Water (TNW).

[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: R6SB-1 is a first order stream.

(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: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/% cover: Herbaceous/Woody/20%	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The stream channel is incised in areas throughout the project site.
Presence of run/riffle/pool complexes. Explain: N/A.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1-3 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: R6SB-1 recieves flow from jurisdictional wetlands and a jurisdictional impoundment upstream. Flow is likely brief, following rain events and is confined to the channel.
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: The channel is incised in many areas with a depth of approximately 1.5 feet from top of bank.

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

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (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	
☐ other (list):	

(iii) Chemical Characteristics:

[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 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.
[7]Ibid.

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

Explain: No flow was observed at the time a site visit was conducted. The stream channel had a healthy forested riparian area. No evidence of pollution was observed.

Identify specific pollutants, if known: .

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

☒ Riparian corridor. Characteristics (type, average width): Heavily forested with mature trees and native grasses, riparian cooridor is approximately 15-20 feet wide.

☐ 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: R6SB-1, within the review area, is located in a secluded pasture away from any well developed areas. The stream is surrounded by a healthy riparian area which provides a diverse habitat for a variety of species.

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:1.43 acres

Wetland type. Explain: Emergent wetlands PEM1-1 (1.055 acre) and PEM1-2 (0.168 acre) were observed within the review area, as well as forested wetlands PFO1-1 (0.109 acre) and PFO1-2 (0.098 acre).

Wetland quality. Explain: Each wetland observed appeared stable and functioning properly. PEM1-2 and PFO1-2 are likely the result of a neighboring development's stormwater retention facility outfall.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: PEM1-1 and PFO1-1 are located upstream of jurisdictional impoundment PUB1-1. These features likely retain water seasonally on an annual basis PEM1-2 and PFO1-2 likely receive ephemeral flow following rain events and are fed by a neighboring development's stormwater retention facility. During periods of heavy precipitation, water likely flows over the outfall structure into PEM1-2 and PFO1-2.

Surface flow is**: Confined**

Characteristics: The surface flow is likely confined to each, PEM1-1, PFO1-1, PEM1-2, and PFO1-2, due to their geomorphic position on the landscape.

Subsurface flow: **Pick List**. Explain findings: N/A.

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☐ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: PEM1-2 and PFO1-2 are connected to PUB-2 by a culvert placed between the wetlands and the stock tank.

☒ Ecological connection. Explain: PEM1-2 and PFO1-2 are located in close physical proximity to R6SB-1. Aquatic organisms likely move between R6SB-1 and PEM1-2 and PFO1-2 during periods of little or no stream flow utilizing these wetlands as habitat.

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

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

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

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: During the site visit conducted on July 14, 2022, each of the four jurisdictional wetlands were heavily vegetated with sedges and smartweed. Signs of hydrology were present. Water color was fairly clear.

Identify specific pollutants, if known: N/A.

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

☒ Riparian buffer. Characteristics (type, average width):10-30 linear feet.

☒ Vegetation type/percent cover. Explain: PEM1-1, PEM1-2, and PFO1-1 exhibited approximately 70-75% vegetative cover consisting mostly of hydrophytic vegetation to include sedges and smartweed. PFO1-2 exhibited approximately 40% cover consisting of cottonwood, black willow, sedges, and smartweed.

☐ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Each of the four jurisdictional wetlands identified serve as habitat to a variety of aquatic species and provide shelter and forage to migratory birds and other forms of wildlife.

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

All wetland(s) being considered in the cumulative analysis: **4**

Approximately (1.43) 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)
PEM1-1	Y	1.055	PEM1-2	N	0.168
PFO1-1	Y	0.109	PFO1-2	N	0.098

Summarize overall biological, chemical and physical functions being performed: Each of these wetlands act as a small catchment area for sediments carried via storm water toward the adjacent or abutting tributary as well as habitat for aquatic organisms, migratory birds, and other wildlife. Sediments and attached nutrients, pollutants, and/or other elements become deposited and captured within the wetland, as opposed to flowing directly into R6SB-1 and ultimately to the Arkansas River. Wetlands have been documented as having the capability of providing a long-term sink for nutrients present within waste, pesticides and fertilizers, primarily through their biogeochemical cycling (Walbridge and Lockaby 1994, Axt and Walbridge 1999). Due to this function, wetlands have long been termed the "kidneys of the landscape", due to their capacity to assist with pollutant filtration (Mitsch and Gosselink 2000). Because of the wetland's fluctuating hydrologic conditions, they likely host a variety of organisms dependent upon this type of system.

Axt, J.R., and M.R. Walbridge. 1999. Phosphate removal capacity of palustrine forested wetlands and adjacent uplands in Virginia. Soil Science Society of American Journal 63:1019-1031.

Mitsch, W.J. and J.G. Gosselink. 2000. Wetlands. John Wiley and Sons, Inc. New York, New York.

Walbridge, M.R. and B.G. Lockaby. 1994. Effects of forest management on biogeochemical functions in southern forested wetlands. Wetlands 14:10-17.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The subject ephemeral stream (R6SB-1) drains approximately 550 acres and provides storage and filtration during precipitation events. It has been determined that the unnamed ephemeral non-Relatively Permanent Water (non-RPW) possesses hydrologic connectivity to the Arkansas River (Traditional Navigable Water) into which they indirectly flow. Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al. 2006). Evidence of this connection and, consequently, a significant nexus is

supported by the observations and scientific literature in the following paragraphs. The unnamed non-RPW possesses features of ephemeral tributaries with ordinary high water marks (OHWMs). Features which indicate the presence of an OHWM include a defined bed and bank, a natural line impressed on the bank, vegetation matted down or absent and disturbed leaf litter. Solid organic matter (OM), such as leaves and other detrital material, is processed by a feeding group referred to as "shredders", which includes crayfish, larvae of craneflies, caddisflies, and nymphs of stoneflies. Shredders break down this coarse material, and allow the material to be utilized by a secondary group known as "collectors". Collectors further process the OM and produce dissolved OM and fine particulate matter, which flow downstream. Generally, as the solid OM is processed and translocated downstream, so are the microorganisms and invertebrates which utilize the material (Smith and Smith 2001). As such, headwater tributaries like these R6SB-1 represent the base of the food chain and, therefore, comprise one of the most important components of a watershed (Meyer et al. 2007). That is, the diversity of aquatic fauna in this headwater stream contributes to the biodiversity of Posey Creek and the Arkansas River by fitting into the complex foodweb of the river basin. Furthermore, the frequency of major rainfall events in the watershed results in pulsating hydrology, which sustains the local waterways, and subsequently, the Arkansas River system. This influences the chemistry of the Arkansas River basin via the transport of sediments and nutrients and geochemical cycling which occur during these pulses. After water is conveyed through the tributary, drying occurs in the headwater stream. This process of drying produces natural chemical and physical changes in the headwater stream. According to Izbicki (2007), even while headwater streams are drying, they remain an integral part of the overall stream because of this influence on the chemistry of the river downstream. Finally, headwater streams have been documented as providing necessary habitat for birds, mammals, reptiles, and amphibian populations (Meyer 2007). The small catchment area of headwater streams results in some of the most diverse habitats within a lotic system. Since the channels are greatly affected by precipitation events, the physical and chemical state of the streams change rapidly and frequently which allows the habitat to be utilized by a large variety of species. Headwater streams are utilized not only by species which are unique to headwater streams, but also by animals which depend on such an environment for certain stages of their life cycles and those which migrate between headwater environments and larger waters. R6SB-1 possesses a hydrologic connection to Posey Creek and, subsequently, to the Arkansas River through an open and defined channel. Due to this hydrologic connection, the unnamed tributary has the capacity to contribute hydrology, carry pollutants, provide habitat for aquatic life cycles, and provide food in the form of organic matter to waters downstream, all of which illustrates that the unnamed non- RPWs possess a significant nexus to Posey Creek and the Arkansas River. Abutting wetlands PEM1-1 and PFO1-2 poss a hydrologic connection to the Posey Creek and ultimately the Arkansas River through an open and defined channel. Due to this hydrologic connection, R6SB-1 has the capacity to contribute hydrology, carry pollutants, provide habitat for aquatic life cycles, and provide food in the form of organic matter to waters downstream, all of which illustrates that the non-RP and the adjacent wetlands possess a significant nexus to the Arkansas River. Adjacent wetlands, PEM1-2 and PFO1-2 provide an ecologic connection to the non-RPW and ultimately the downstream TNW due to the close proximity on the landscape to the non-RPW and a surface connection through PUB-2. Multiple aerial images show a continuous flow path through from the wetlands through PUB-2 into R6SB-1. PEM1-2 and PFO1-2 also provide sustainable aquatic habitat for crayfish, frogs, and other macro invertebrates. Because of the wetland's fluctuating hydrologic conditions, they host a variety of organisms dependent upon this type of system. Given that the wetland is located in a fairly rural environment, it provides habitat for a variety of species also adapted to this type of area. The wetlands have the capacity to physically affect the conditions of the adjacent tributary through their ability to store storm water in times of heavy rain events. Grass and leaf litter, and other organic materials also assist with slowing the flow of water and aiding with trapping sediments. By reducing the volume and velocity of storm water entering the adjacent tributary, the wetland minimizes the erosive forces of the storm water. By reducing the volume and velocity of flow, erosion potentials decrease and sediment transport downstream becomes minimized. This affects Posey Creek, and subsequently the Arkansas River, by reducing sediment input and erosion within these waters.

LITERATURE CITED:

Freeman, M. C., C. M. Pringle, and C. R. Jackson. 2007. Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales. Journal of the American Water Resources Association. 43: 5-14.

Izbicki, J. A. 2007. Physical and Temporal Isolation of Mountain Headwater Streams in the Western Mojave Desert, Southern California. Journal of the American Water Resources Association. 43: 26-40.

Meyer, J. L., D. L.Strayer, J. B. Wallace, S. L. Eggert, G. S. Helfman, and N. E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.

Smith, R. L. and T. M. Smith. 2001. Ecology and Field Biology. Benjamin Cummings, New York. Pp. 644-650.

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3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[8] 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: **1,351** linear feet **6** width (ft).
☒ Other non-wetland waters: **0.481** acres.
Identify type(s) of waters: **PUB-1 is an impoundment constructed on channel of jurisdictional 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 jurisidictional. 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: **1.43** 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.

[8]See 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): **896** linear feet, **3** width (ft).
☒ Lakes/ponds: 0.471 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: Lentic and Lotic Waterbody and Wetland Delineation Study Undeveloped 75 Acres MOL Proposed Residential Development - May 24, 2022.
☒ 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: 111101010305.
☒ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: USGS 7.5 Minute Bixby, Oklahoma Quandrangle.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: USFWS NWI Wetlands Mapper.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Google Earth & Digital Globe 1995-2022.
or ☒ Other (Name & Date):Delineation - May 24, 2022 & Site Visit July 14, 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: N/A.