**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):** January 25, 2022

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** CESWL-RD, Project Aurora Phase II, SWL-2019-00025-1

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**
State: Arkansas County/parish/borough: Benton County City: Centerton
Center coordinates of site (lat/long in degree decimal format): Lat. 36.3092°, Long. -94.2567°
Universal Transverse Mercator: NAD 83/UTM Zone 15, 4018976.86 Northing, 387177.68 Easting
Name of nearest waterbody: Little Osage Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Illinois River
Name of watershed or Hydrologic Unit Code (HUC): Illinois 11110103 (HUC 8)

☑ 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: September 14, 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 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: INT-1: 534 linear feet: 8 width (ft) and/or 0.098 acres.

**c. Limits (boundaries) of jurisdiction based on:** Established by OHWM
Elevation of established OHWM (if known): Unknown

**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: EPH-1, an ephemeral swale measuring approximately 885 linear feet in length and 4 feet in width (average width), extends west-southwestward from approximately the center of the project area to intermittent stream INT-1. As a swale, EPH-1 is not jurisdictional. Additionally, EPH-1 does not provide a significant nexus connection to any aquatic resources within the project area. OW-1 is an isolated 0.41-acre, open-water aquatic resource—a manmade farm pond—located east of the project area's center. WET-A is an isolated 0.04-acre herbaceous wetland adjacent to the eastern edge of OW-1. There are no indirect or direct significant nexus connections between OW-1 and WET-A and a TNW.

[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 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: 757.73 square miles (HUC 8, 11110103, Illinois)
Drainage area: 0.63 square miles

Average annual rainfall: 49.04 inches (average from 2000 to 2021, taken from NOAA Online Weather Data accessed on 9/14/21)
Average annual snowfall: 9.0 inches (average from 2000 to 2021, taken from NOAA Online Weather Data accessed on 9/14/21)

**(ii) Physical Characteristics:**

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☑ Tributary INT-1flows through 2 tributaries before entering TNW

Project waters are 30 (or more) river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 30 (or more) 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. The project waters under this action are entirely within Benton County in Arkansas.

Identify flow route to TNW[5]: INT-1 (intermittent stream) flows into Little Osage Creek (perennial stream) and Little Osage Creek flows into Osage Creek (perennial stream) which flows into the Illinois River (perennial) near Pedro, Arkansas (T. 17 N., R. 32 W., Section 4). From the confluence of Osage Creek and the Illinois River, the Illinois River flows westward to Oklahoma where it becomes a TNW northeast of the town of Tahlequa, Oklahoma near Moody and Ellerville at river mile 75.7.

[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: Unknown

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

**Tributary** is:
- ☑ Natural. Explain: INT-1 appears to be a natural stream although agricultural activities may have influenced it over time.
- ☐ Artificial (man-made). Explain:
- ☐ Manipulated (man-altered). Explain:

**Tributary** properties with respect to top of bank (estimate):
Average width: INT-1: 8 feet
Average depth: INT-1: 4 feet
Average side slopes: INT-1: Vertical (1:1 or less)

Primary tributary substrate composition (check all that apply):

| | | |
|---|---|---|
| ☑ Silts | ☑ Sands | ☐ Concrete |
| ☐ Cobbles | ☑ Gravel | ☐ Muck |
| ☐ Bedrock | ☑ Vegetation. Type/% cover: INT-1 flows through forested riparian community (100% coverage). | |

☑ Other. Explain: Streams run through gravelly silt loam; silt loam, and silty clay loam soils

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: INT-1 is an incised stream exhibiting some bank failure on both sides of the channel.

Presence of run/riffle/pool complexes. Explain: INT-1 exhibits riffle/pool complexes along its length.

Tributary geometry: INT-1 exhibits meandering stream morphology.

Tributary gradient (approximate average slope): INT-1: less than 1%

(c) Flow:
Tributary provides for: INT-1: Seasonal Flow

Estimate average number of flow events in review area/year: 20 (or greater)
Describe flow regime: Intermittent flow through INT-1 is influenced the level of groundwater and by precipitation runoff

Other information on duration and volume: INT-1 flows relatively continually (i.e., 5 out of 8 years) with greater flow capacity when groundwater is in the stream channel during wetter months of the year and also during and following storm events.

Surface flow is: Discrete and Confined Characteristics: Surface flow through INT-1 is both discrete and confined as the channel is distinct and confined within defined banks.

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:

[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.

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

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

**(iii) Chemical Characteristics:**

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

Explain: Flowing and pooling water was observed in INT-1 and was clear at the time of observation. INT-1 is in a developing area but is still surrounded by some agricultural fields. INT-1 presently flows through forested areas in agricultural fields north and south of the project area and is likely subject to carrying chemicals used in agricultural fertilizing as well as chemicals used in residential lawn and garden care in nearby residential developments. INT-1 carries sediment load from precipitation runoff traversing agricultural fields. Non-agricultural development is evident and increasing in the area and it's likely that INT-1 is subject to at least some pollutants that leak from automobiles (e.g., hydrocarbon-based lubricants, gasoline, anti-freeze) onto hard surfaces and then are carried downstream by water flows from precipitation events.

Identify specific pollutants, if known: Unknown

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

- ☑ Riparian corridor. Characteristics (type, average width): All of INT-1 (100%) is in a forested riparian community containing American sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), northern spicebush (*Lindera benzoin*) downy yellow violet (*Viola pubescens*), and purple deadnettle (*Lamium purpureum*).
- ☐ Wetland fringe. Characteristics:
- ☑ Habitat for:
  - ☑ Federally Listed species. Explain findings: According to USFWS's IPaC online tool, threatened and endangered (T&E) bats are known to inhabit Benton County, AR. The forested riparian community where INT-1 is located may provide roosting trees for T&E bat species (e.g., Indiana bat, Northern Long-eared bat).
  - ☑ Fish/spawn areas. Explain findings: Fish minnows were observed in the INT-1 stream channel during a late-2020 field visit to an adjacent property to the east.
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☑ Aquatic/wildlife diversity. Explain findings: INT-1 generally maintains sufficient water flow and pooling to provide habitat for fish, amphibians, reptiles, microorganisms, and likely small mammals (e.g., rodents, squirrels) and larger mammals (e.g., deer, raccoons).

**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: Explain:

Surface flow is:

Characteristics:

Subsurface flow: 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 river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from:
Estimate approximate location of wetland as within the 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:
Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

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

Summarize overall biological, chemical and physical functions being performed:

## C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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 National Hydrography Dataset (NHD) and USGS topographic maps indicate that INT-1 is an intermittent stream.

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

☑ Tributary waters: Intermittent stream INT-1 is 534 linear feet in length and 8 feet in width within the project area.

☐ 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:

☐ 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 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: 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.

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[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.*

☐ 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: EPH-1 is a swale lacking a defined bed and bank and ordinary high water mark. Additionally, it does not provide a significant nexus connection between other aquatic resources and a TNW. OW-1 is an isolated man-made pond created for agricultural purposes and having no significant nexus connection to downstream waters. WET-A is an isolated herbaceous wetland adjacent to the eastern edges of OW-1. WET-A also does not have a significant nexus connection with downstream waters. As indicated in the delineation report, no stream channels were observed entering or exiting WET-A or OW-1. Both OW-1 and WET-A are fed by stormwater runoff and possibly ground water depending on water table fluctuations.

☐ 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: OW-1 is 0.41 acres in size.

☐ Other non-wetland waters: acres. List type of aquatic resource:

☑ Wetlands: WET-A is 0.04 acres in size.

**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: See maps in delineation report titled *Delineation of Potential Section 404 Issues Proposed Aurora Phase 2 Subdivision, Bentonville, Benton County Arkansas* (April 27, 2021) provided by FTN Associates Ltd.

☑ 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: Although the USACE-SWL Regulatory Office concurs with most of the aquatic resource typology and jurisdictional assumptions described in the delineation report and data sheets, the Office does not concur with the typology determination of EPH-1 as described in the report. Specifically, in the delineation report, the author describes EPH-1 as both a swale (282 linear feet) and an ephemeral stream (603 linear feet), citing that EPH-1 has an ordinary high water mark for easternmost the 603 linear feet of its total 885-foot length. Although the 603 linear feet of EPH-1 appears to show slightly more channel development (likely from the higher slope gradient for this portion of the stream), the Office Regulator reviewing the delineation report and project area aquatic resources does not observe sufficient development of stream channel characteristics (e.g., ordinary high water mark, defined bed and bank), to indicate that EPH-1 is an ephmeral stream channel.

☐ 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: Centerton, AR (1971, 2011, 2014, 2017, 2020) 7.5 minute quadrangle
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: *Soil Survey of Benton County, Arkansas* (1977); NRCS Web Soil Survey 3.3 (accessed online in 2020); see FTN delineation report
- ☑ National wetlands inventory map(s). Cite name: USFWS National Wetlands Inventory Wetland Mapper (accessed online September 2021)
- ☐ State/Local wetland inventory map(s):
- ☑ FEMA/FIRM maps: FEMA National Flood Hazard Layer Viewer (accessed online September 2021)
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☑ Photographs: ☑ Aerial (Name & Date): Google Earth (1985–2020, accessed in September 2021); DigitalGlobe (Spring 2020 through Summer 2021; accessed online in September 2021); HistoricAerials.com (1968, 1980; accessed online in September 2021)
  - ☐ or ☑ Other (Name & Date): Field photographs from April 19, 2021 field investigations; available in the FTN delineation report
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☑ Other information (please specify): 2015 LiDAR data accessed on the online USGS National Map Viewer in September 2021

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** The review area for this approved jurisdictional determination consists of approximately 40 acres of agricultural and forested property located in a developing area near Centerton, Arkansas. Several aquatic resources and a channel-like geographic feature were observed within the project property, including intermittent stream INT-1, manmade farm pond OW-1, isolated wetland WET-A, and swale EPH-1. A 534-foot-long, southward-flowing meander of INT-1 enters the central west side of the project property, traversing a forested riparian area before exiting the project property and eventually flowing into Osage Creek and then the Illinois River, which becomes a TNW in Oklahoma at river mile 75.7. OW-1 is an isolated, 0.41-acre manmade farm pond located west of the project area's center. WET-A is an isolated, 0.04-acre herbaceous wetland adjacent to the eastern edge of OW-1. There are no significant nexus connections between OW-1 and WET-A and a TNW. EPH-1 is an 885-foot-long swale extending west-southwestward from approximately the center of the project property to INT-1. EPH-1 does not exhibit sufficient stream channel morphology and development (e.g., defined ordinary high water mark and bed and bank) to be considered an ephemeral stream channel. Additionally, EPH-1 does not provide a significant nexus connection between aquatic resources and a jurisdictional water. INT-1 is a jurisdictional intermittent stream and OW-1, WET-a, and EPH-1 are non-jurisdictional aquatic resources.

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James Beers
Project Manager

January 25, 2022
Date