#### APPPROVED 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): 01/27/2020

#### B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Nashville District Community Energy Solar, Inc. File No. LRN-2019-00805

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The AJD review area consists of multiple properties containing approximately 1600 acres of land located southwest of Russellville, Kentucky situated between Watermelon and Joe Montgomery Roads. The project location is divided to the point where the east and west sections drain to two different watersheds. Approximately 98 percent of the review area is used in agricultural production and the remaining in scattered forested areas. The review area is located in an area known for having karst features. Multiple sinkholes were observed within project boundaries during the site visit. This AJD form references all waters found within the boundaries of the review area, but discusses only Wetland A that is considered adjacent to Dry Fork which flows into the left descending bank of Whippoorwill Creek Mile 17.5. Whippoorwill Creek is a Traditional Navigable Water (TNW) from the mouth to mile 11.0 at Lickskillet Mill Dam. USACE completed individual AJD forms for each water determined to be a water of the U.S. (WOUS). The aquatic resources identified under Section II(B)(2) are not WOUS and are included on each AJD form for this project.

resources racinifica anaer see.	then $\Pi(B)(2)$ are not $\Pi(B)(B)$ and are included on each $\Pi(B)$ form for all project	
Universal Transverse Mer Name of nearest waterboo Name of nearest Tradition Creek Name of watershed or Hy Check if map/diagran	ody: Whippoorwill Creek onal Navigable Water (TNW) into which the aquatic resource flows: Red River and Water (TNW) into which the aquatic resource flows: Red River and Water (HUC): 051302060205 (HUC 12) and 051302060303 (HUC 12) are of review area and/or potential jurisdictional areas is/are available upon request. (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and a	••
Office (Desk) Deterr	D FOR SITE EVALUATION (CHECK ALL THAT APPLY): rmination. Date: 11/20/2019  n. Date(s): 10/10/2019	
SECTION II: SUMMARY O A. RHA SECTION 10 DETI	OF FINDINGS ERMINATION OF JURISDICTION.	
329) in the review area. [Requiend Waters subject to the	the ebb and flow of the tide.  You used, or have been used in the past, or may be susceptible for use to transport intersta	
B. CWA SECTION 404 DET	TERMINATION OF JURISDICTION.	
There <b>ARE</b> "waters of the U.S [Required]	S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the	e review area.
☐ TNWs, inc ☐ Wetlands a ☐ Relatively ☐ Non-RPW ☐ Wetlands a ☐ Wetlands a ☐ Wetlands a ☐ Impoundm	te of waters of U.S. in review area (check all that apply): 1 cluding territorial seas adjacent to TNWs of permanent waters (RPWs) that flow directly or indirectly into TNWs of that flow directly or indirectly into TNWs directly abutting RPWs that flow directly or indirectly into TNWs adjacent to but not directly abutting RPWs that flow directly or indirectly or indirectly into TNWs adjacent to non-RPWs that flow directly or indirectly into TNWs ments of jurisdictional waters interstate or intrastate) waters, including isolated wetlands	

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

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

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

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

Wetlands: acres.

#### NOTE:

Each water determined to be a water of the U.S. (WOUS) within the AJD review area are listed below. Separate AJD forms were completed for each one so that the analysis in "Section III: CWA Analysis" is documented for USACE's jurisdictional determination for each water. This particular form only applies to Wetland A.

#### **Non-wetland waters:**

Stream 11 (Non-RPW) Ephemeral, 778 linear feet: 3 width (ft) and/or 0.05 acre Stream 12 (Non-RPW) Ephemeral, 1,466 linear feet: 5 width (ft) and/or 0.17 acre

Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre

#### Wetlands:

Wetland A - PFO, 0.95 acre Wetland H - PSS/PEM 0.47 acre

c. Limits (boundaries) of jurisdiction based on: Established by OHWM and 1987 Delineation Manual Elevation of established OHWM (if known):

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

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The AJD review area located near Russellville, Kentucky is approximately 1600 acres and situated in an area known for having karst features. The aquatic resources listed below do not drain directly or indirectly into any WOUS and do not support a link to interstate or foreign commerce. The aquatic resources flow into karst features and were determined to be non-jurisdictional because of no known hydrologic connection to downstream WOUS. The waters listed below are geographically isolated and therefore are not tributaries of navigable waters.

Stream 1 (Non-RPW, Ephemeral, 207 linear feet: 3 width (ft) and/or 0.014 acre) located at the southwestern boundary carries water flow to Wetland B (PEM, 1.11 acres). These aquatic features have no known hydrologic connection to WOUS.

Stream 2 (RPW, Intermittent, 4,599 linear feet: 11 width (ft) and/or 1.16 acres) located on the northwestern section of the property flows in a westerly direction out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 3 (RPW, Intermittent, 1,537 linear feet: 5 width (ft) and/or 0.18 acre) located on the northwestern section of the property flows in a northwesterly direction into Stream 2 which flows out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 4 (Non-RPW, Ephemeral, 186 linear feet: 3 width (ft) and/or 0.012 acre) flows in a northerly direction from Pond 7 (PUB, 0.81 acre) into Wetland F (PFO, 1.84 acres) which drains into a large karst feature. These aquatic features have no known hydrologic connection to WOUS.

Stream 5 (Non-RPW, Ephemeral, 365 linear feet: 5 width (ft) and/or 0.041 acre) flows directly into a large karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 10 (Non-RPW, Ephemeral, 171 linear feet: 3 width (ft) and/or 0.011 acre) flows in a northwesterly direction from Pond 8 (PUB, 0.23 acre) into Wetland F which drains into a large karst feature. These aquatic features have no known hydrologic connection to WOUS.

Stream 14 (Non-RPW, Ephemeral, 1,109 linear feet: 3 width (ft) and/or 0.076 acre) with abutting wetland — Wetland L, (PEM, 0.74 acre) located in the northwestern section of the property, flows in a northwesterly direction into Stream 2 that flows out of the review area boundaries and into a karst feature. These aquatic features have no known hydrologic connection to WOUS.

<u>Wetland C</u> (PEM, 0.88 acre) abuts <u>Pond 6</u> (PUB, 0.25 acre). These aquatic features have no known hydrologic connection to WOUS.

Wetland D (PEM, 0.09 acre). This aquatic features has no known hydrologic connection to WOUS.

Wetland E (PEM, 0.14 acre). This aquatic feature was determined to be adjacent to Stream 2 that flows out of the review area and into a karst feature. These aquatic features have no known hydrologic connection to WOUS.

<u>Wetland G</u> (PEM, 0.18 acre). This aquatic feature adjacent to Pond 8 has no known hydrologic connection to WOUS.

Wetland J (PFO, 3.27 acres), encompasses Pond 11 (PUB, 0.26 acre). The topography of the area is relatively flat with faint water flow patterns observed adjacent to Wetland J/Pond 11 that suggests water flow would migrate toward the karst feature located southeast of the aquatic features. Review of the area between Joe Montgomery Road and the aquatic resources did not provide any physical indicators that water flows to the roadside ditch. The 6" corrugated metal pipe located underneath the highway carries very little flow. This aquatic feature has no known hydrologic connection to WOUS.

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

- Wetland K (PFO, 1.22 acres). The topography of the area is relatively flat and faint water flow patterns were observed that suggests water flow would migrate to the karst feature located to the west of the aquatic feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland M (PEM, 0.05 acre), is a small wetland located approximately 100 feet north of a karst feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland N (PFO, 0.30 acre), is a depressional wetland that has the appearance of a karst feature. No water flow patterns were observed outside the delineated boundaries. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 1</u> (PUB, 0.92 acre), is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 2</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 3(PUB, 0.42 acre)</u> is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 4</u> (PUB, 0.46 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 5</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 6 (PUB, 0.25 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 7</u> (PUB, 0.81 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 8</u> (PUB, 0.23 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 9</u> (PUB, 0.70 acre) is a constructed open water aquatic feature constructed before 1981 with approximately 6 feet of freeboard and no discharge outlet identified. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 10</u> (PUB, 0.31 acre) is an excavated open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 11 (PUB, 0.26 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 12 (PUB, 0.05 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 13</u> (PUB, 0.29 acre) is an open water aquatic feature constructed prior to 1950. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 14 (PUB, 0.35 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 15</u> (PUB, 0.74 acre) is an open water aquatic feature constructed prior to 1998. This aquatic feature has no known hydrologic connection to WOUS.

#### **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<sup>4</sup> 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)	Wat Dra Ave	neral Area Conditions: tershed size: Pick List inage area: Pick List trage annual rainfall: inches trage annual snowfall: inches
(ii)		rsical Characteristics:  Relationship with TNW: ☐ Tributary flows directly into TNW. ☐ Tributary flows through Pick List tributaries before entering TNW.  Project waters are Pick List river miles from TNW.
		Project waters are Pick List river miles from RPW.  Project waters are Pick List aerial (straight) miles from TNW.  Project waters are Pick List aerial (straight) miles from RPW.  Project waters cross or serve as state boundaries. Explain:  Identify flow route to TNW <sup>5</sup> :  Tributary stream order, if known:
	(b)	General Tributary Characteristics (check all that apply):  Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate):  Average width: feet  Average depth: feet  Average side slopes: Pick List.
		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: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List Tributary gradient (approximate average slope):  %
	(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:

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

<sup>&</sup>lt;sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	Surface flow is: Pick List. Characteristics:
	Subsurface flow: Pick List. Explain findings:
	Tributary has (check all that apply):
	□ Bed and banks □ OHWM <sup>6</sup> (check all indicators that apply): □ clear, natural line impressed on the bank □ changes in the character of soil □ shelving □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition □ water staining □ other (list): □ Discontinuous OHWM. <sup>7</sup> Explain: □ the presence of litter and debris □ destruction of terrestrial vegetation □ the presence of wrack line □ sediment sorting □ scour □ multiple observed or predicted flow events □ abrupt change in plant community
If factors	s 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) Cho	emical Characteristics:
Cha	aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:
Ide	ntify specific pollutants, if known:
	logical Characteristics. Channel supports (check all that apply):  Riparian corridor. Characteristics (type, average width):  Wetland fringe. Characteristics:  Habitat for:  Federally Listed species. Explain findings:  Fish/spawn areas. Explain findings:  Other environmentally-sensitive species. Explain findings:  Aquatic/wildlife diversity. Explain findings:
	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	vsical Characteristics:  General Wetland Characteristics:
	Properties: Wetland size: 0.95 acres Wetland type. Explain: Palustrine Forested (PFO). Wetland quality. Explain: Wetland A is situated in an agricultural setting and the surrounding area is manipulated by agricultural practices. Project wetlands cross or serve as state boundaries. Explain: N/A.
(b)	General Flow Relationship with Non-TNW: Flow is: <b>Ephermeral flow</b> . Explain: Flow from the wetland is through a swale before connecting with non-TNW.
	Surface flow is: <b>Discrete</b> Characteristics: Overland sheet flow.

2.

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

		Subsurface flow: <b>Unknown</b> . Explain findings:  Dye (or other) test performed:
	(c)	Wetland Adjacency Determination with Non-TNW:  ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: Connects to non-TNW through a grassy swale and culvert underneath Watermelon Road. ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:
	(d)	Proximity (Relationship) to TNW Project wetlands are 5-10 river miles from TNW. Project waters are 5-10 aerial (straight) miles from TNW. Flow is from: Wetland to navigable water. Estimate approximate location of wetland as within the 100-500 floodplain.
	Ch	emical Characteristics: aracterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Depressional wetland that does not maintain surface water. ntify specific pollutants, if known: Pollutants would consist of runoff from adjacent agricultural field.
	(iii) Bio	Dological Characteristics. Wetland supports (check all that apply):  Riparian buffer. Characteristics (type, average width):  Vegetation type/percent cover. Explain: PFO, 100%.  Habitat for:  Federally Listed species. Explain findings:  Fish/spawn areas. Explain findings:  Other environmentally-sensitive species. Explain findings:  Aquatic/wildlife diversity. Explain findings:
3.	Charac	teristics of all wetlands adjacent to the tributary (if any)
	All	wetland(s) being considered in the cumulative analysis: 1
	Ap	proximately (0.95) acres in total are being considered in the cumulative analysis.
	For each	n 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: Wetland A (0.95 acre) is a palustrine forested depressional wetland adjacent to an offsite non-RPW by connection of a grassy swale with agricultural fields located to the east and west. The application fertilizers and pesticides on the agricultural field, as well as the loss of soil during rain events would impact the wetland. The grassy swale has the potential to carry pollutants, as well as organic carbon to support foodwebs downstream during rain events. The wetland has limited capacity to impact downstream waters by sequestering nutrients. The wetland could provide habitat to support terrestrial species.
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:  TNWs: linear feet width (ft), Or, acres.  Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs.  ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  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: linear feet width (ft).
	Other non-wetland waters: acres.  Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

<sup>&</sup>lt;sup>8</sup>See Footnote # 3.

		■ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
		Provide acreage estimates for jurisdictional wetlands in the review area: acres.
	5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are 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:  Wetland A - PFO, 0.95 acre
	7.	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.	DE INC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, CLUDING 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:
	Ide	ntify water body and summarize rationale supporting determination:
		vide 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.		N-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): See SECTION II(B)(2) for non-wetland aquatic features that were identified and found not to flow directly or indirectly into a TNW or other WOUS.
	MB	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the R factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.  SECTION IV: DATA SOURCES.  A. SUPPORTING DATA. Data reviewed for JD (check all that apply) - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Office concurs with data sheets/delineation report.  Office does not concur with data sheets/delineation report.  Office does not concur with data sheets/delineation report.  U.S. Geological Survey Hydrologic Atlas:  U.S. Geological Survey Hydrologic Atlas:  U.S. Geological Survey Hydrologic Atlas:  U.S. Geological Survey map(s). Cite scale & quad name: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Mational wetlands inventory map(s). Cite name: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Mational wetlands inventory map(s).  State-Local wetlands inventory map(s).  EFEMA/FIRM maps: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July		Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.
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	wh De pre De pre Ru Coo Sol Inc Ru Ru Re Re Re Re	ere checked and requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland lineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, pared by Terracon Consultants, Inc.  Data sheets prepared/submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland lineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, pared by Terracon Consultants, Inc.  Office does not concur 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 8 and 12 digit HUC maps.  U.S. Geological Survey map(s). Cite scale & quad name: Reference JD report titled, "Wetland Delineation Report, sesliville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon nsultants, Inc.  USDA Natural Resources Conservation Service Soil Survey. Citation: Reference JD report titled, "Wetland Delineation port, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  National wetlands inventory map(s). Cite name: Reference JD report titled, "Wetland Delineation Report, Russellville lar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  National wetland inventory map(s):  FEMA/FIRM maps: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, sesellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)  Photographs: Aerial (Name & Date): Photos taken during site visit, Reference JD report titled, "Wetland Delineation po

## B. ADDITIONAL COMMENTS TO SUPPORT JD:

#### APPPROVED 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): 01/27/2020

#### B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Nashville District Community Energy Solar, Inc. File No. LRN-2019-00805

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The AJD review area consists of multiple properties containing approximately 1600 acres of land located southwest of Russellville, Kentucky situated between Watermelon and Joe Montgomery Roads. The project location is divided to the point where the east and west sections drain to two different watersheds. Approximately 98 percent of the review area is used in agricultural production and the remaining in scattered forested areas. The review area is located in an area known for having karst features. Multiple sinkholes were observed within project boundaries during the site visit. This AJD form references all waters found within the boundaries of the review area, but discusses only Stream 11 that flows indirectly into Pleasant Grove Creek which flows directly into Red River, a Traditional Navigable Water (TNW). USACE completed individual AJD forms for each water determined to be a water of the U.S. (WOUS). The aquatic resources identified under Section II(B)(2) are not WOUS and are included on each AJD form for this project.

State: Kentucky County/parish/borough: Logan City: Russellville Center coordinates of site (lat/long in degree decimal format): Latitude: 36.793005°; Longitude -86.937504° Universal Transverse Mercator: 16 Name of nearest waterbody: Whippoorwill Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Red River and Whippoorw Creek Name of watershed or Hydrologic Unit Code (HUC): 051302060205 (HUC 12) and 051302060303 (HUC 12)  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 record on a different JD form.
D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):  Office (Desk) Determination. Date: 11/20/2019  Field Determination. Date(s): 10/10/2019
SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.
There <b>ARE NO</b> "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR paragraph of 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 fore commerce. Explain:
B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
There <b>ARE</b> "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review a [Required]
1. Waters of the U.S.  a. Indicate presence of waters of U.S. in review area (check all that apply):  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

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

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

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 ${
m USACE}$ 's jurisdictional determination for each water. This particular form only applies to Stream 11. AJD forms were completed for each one so that the analysis in "Section III: CWA Analysis" is documented for Each water determined to be a water of the U.S. (WOUS) within the AJD review area are listed below. Separate **NOLE:** 

Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre Stream 12 (Non-RPW) Ephemeral, 1,466 linear feet: 5 width (ft) and/or 0.17 acre Stream 11 (Non-RPW) Ephemeral, 778 linear feet: 3 width (ft) and/or 0.05 acre Non-wetland waters:

Wetland H - PSS/PEM 0.47 acre Wetland A - PFO, 0.95 acre Wetlands:

Elevation of established OHWM (if known): c. Limits (boundaries) of jurisdiction based on: Established by OHWM and 1987 Delineation Manual

acres and situated in an area known for having karst features. The aquatic resources listed below do not jurisdictional. Explain: The AJD review area located near Russellville, Kentucky is approximately 1600 Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not Von-regulated waters/wetlands (check if applicable):3

known hydrologic connection to downstream WOUS. The waters listed below are geographically isolated The aquatic resources flow into karst features and were determined to be non-jurisdictional because of no drain directly or indirectly into any  ${
m WOUS}$  and do not support a link to interstate or foreign commerce.

and therefore are not tributaries of navigable waters.

hydrologic connection to WOUS. boundary carries water flow to Wetland B (PEM, 1.11 acres). These aquatic features have no known Stream I (Non-RPW, Ephemeral, 207 linear feet: 3 width (ft) and/or 0.014 acre) located at the southwestern

section of the property flows in a westerly direction out of the review area into a karst feature. This Stream 2 (RPW, Intermittent, 4,599 linear feet: 11 width (ft) and/or 1.16 acres) located on the northwestern

area into a karst feature. This aquatic feature has no known hydrologic connection to  ${
m WOUS}_{
m s}$ section of the property flows in a northwesterly direction into Stream 2 which flows out of the review Stream 3 (RPW, Intermittent, 1,537 linear feet: 5 width (ft) and/or 0.18 acre) located on the northwestern aquatic feature has no known hydrologic connection to WOUS.

karst feature. These aquatic features have no known hydrologic connection to WOUS. direction from Pond 7 (PUB, 0.81 acre) into Wetland E (PFO, 1.84 acres) which drains into a large Stream 4 (Non-RPW, Ephemeral, 186 linear feet: 3 width (ft) and/or 0.012 acre) flows in a northerly

<u> Stream 10</u> (Моп-RPW, Ерћетега), 171 linear feet: 3 width (ft) and/or 0.011 acre) flows in a northwesterly karst feature. This aquatic feature has no known hydrologic connection to WOUS. Stream 5 (Non-RPW, Ephemeral, 365 linear feet: 5 width (ft) and/or 0.041 acre) flows directly into a large

aquatic features have no known hydrologic connection to  $\overline{\mathrm{WOUS}}.$ direction from Pond 8 (PUB, 0.23 acre) into Wetland F which drains into a large karst feature. These

northwesterly direction into Stream 2 that flows out of the review area boundaries and into a karst Wetland L, (PEM, 0.74 acre) located in the northwestern section of the property, flows in a Stream 14 (Non-RPW, Ephemeral, 1,109 linear feet: 3 width (ft) and/or 0.076 acre) with abutting wetland –

Wetland C (PEM, 0.88 acre) abuts Pond 6 (PUB, 0.25 acre). These aquatic features have no known feature. These aquatic features have no known hydrologic connection to WOUS.

of the review area and into a karst feature. These aquatic features have no known hydrologic Wetland E (PEM, 0.14 acre). This aquatic feature was determined to be adjacent to Stream 2 that flows out  $\overline{Wetland D}$  (PEM, 0.09 acre). This aquatic features has no known hydrologic connection to WOUS. hydrologic connection to WOUS.

.SUOW of Wetland G (PEM, 0.18 acre). This aquatic feature adjacent to Pond 8 has no known hydrologic connection connection to WOUS.

were observed that suggests water flow would migrate to the karst feature located to the west of the Wetland K (PFO, 1.22 acres). The topography of the area is relatively flat and faint water flow patterns highway carries very little flow. This aquatic feature has no known hydrologic connection to WOUS. indicators that water flows to the roadside ditch. The 6" corrugated metal pipe located underneath the the area between Joe Montgomery Road and the aquatic resources did not provide any physical water flow would migrate toward the karst feature located southeast of the aquatic features. Review of relatively flat with faint water flow patterns observed adjacent to Wetland J/Pond 11 that suggests Wetland J (PFO, 3.27 acres), encompasses Pond 11 (PUB, 0.26 acre). The topography of the area is

aquatic feature. This aquatic feature has no known hydrologic connection to WOUS.

Supporting documentation is presented in Section III.F.

- Wetland M (PEM, 0.05 acre), is a small wetland located approximately 100 feet north of a karst feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland N (PFO, 0.30 acre), is a depressional wetland that has the appearance of a karst feature. No water flow patterns were observed outside the delineated boundaries. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 1</u> (PUB, 0.92 acre), is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 2</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 3(PUB, 0.42 acre)</u> is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 4</u> (PUB, 0.46 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 5</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 6</u> (PUB, 0.25 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 7</u> (PUB, 0.81 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 8</u> (PUB, 0.23 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 9</u> (PUB, 0.70 acre) is a constructed open water aquatic feature constructed before 1981 with approximately 6 feet of freeboard and no discharge outlet identified. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 10</u> (PUB, 0.31 acre) is an excavated open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 11 (PUB, 0.26 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 12 (PUB, 0.05 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 13 (PUB, 0.29 acre) is an open water aquatic feature constructed prior to 1950. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 14 (PUB, 0.35 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 15 (PUB, 0.74 acre) is an open water aquatic feature constructed prior to 1998. This aquatic feature has no known hydrologic connection to WOUS.

#### **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 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

#### Stream 11

(i)		neral Area Conditions:
		tershed size: 15,584 <b>Acres</b> inage area: 75 <b>Acres</b>
		erage annual rainfall: 50.66 inches
		erage annual snowfall: 6 inches
(ii)		resical Characteristics:  Relationship with TNW:  ☐ Tributary flows directly into TNW.  ☐ Tributary flows through 2 tributaries before entering TNW.
		Project waters are 5-10 river miles from TNW.  Project waters are 5-10 river miles from RPW.  Project waters are 5-10 aerial (straight) miles from TNW.  Project waters are 5-10 aerial (straight) miles from RPW.  Project waters cross or serve as state boundaries. Explain: N/A.  Identify flow route to TNW <sup>5</sup> : Stream 11 flows through the review area which flows into an unnamed tributary, which flows into Pleasant Grove Creek which flows into Red River, a TNW.  Tributary stream order, if known:
	(b)	General Tributary Characteristics (check all that apply):  Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: Tributary has been manipulated by agricultural practices.
		Tributary properties with respect to top of bank (estimate): Average width: 3 feet Average depth: 24 inches Average side slopes: Vertical 1:1.
		Primary tributary substrate composition (check all that apply):  Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is stable due to slope, ephemeral flow, and riparian corridor.  Presence of run/riffle/pool complexes. Explain: N/A.  Tributary geometry: <b>Relatively Straight</b> Tributary gradient (approximate average slope): 2 %

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

<sup>&</sup>lt;sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	(c)	Tributary provides for: Ephemeral flow Estimate average number of flow events in review area/y Describe flow regime: Response to rainfall. Other information on duration and volume:  Surface flow is: Confined. Characteristics:  Subsurface flow: Unknown. Explain findings: Dye (or other) test performed:  Tributary has (check all that apply):  Bed and banks OHWM <sup>6</sup> (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil	the presence of litter and debris
		shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. Explain:	
	If factor	ors other than the OHWM were used to determine lateral ext  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):	ent of CWA jurisdiction (check all that apply): lean High Water Mark indicated by: survey to available datum; physical markings; vegetation lines/changes in vegetation types.
	Ch	haracterize tributary (e.g., water color is clear, discolored, of characteristics, etc.). Explain: The color of the water wo (i.e. crop planting season) and amount of rainfall. The natural during rain events from the adjacent farm field. The and would transport any material and/or pollutants down tentify specific pollutants, if known: Pollutants would consist the control of the color of the water would color of the color of the water would be color of the color of the water would color of the color of the water would color of the color of the water would color of the water wou	uld be relatively clear depending on the time of year arrow riparian zone would reduce the amount of silt the tributary receives water from Streams 11 and 12 stream.  It of substances leached from Joe Montgomery Road,
	(iv) Bio	Its, fertilizers, and/or pesticides received by runoff from adjactiological Characteristics. Channel supports (check all the Riparian corridor. Characteristics (type, average width): stends approximately 25 - 30 feet from top of each bank.  Wetland fringe. Characteristics:.  Habitat for:  Federally Listed species. Explain findings:  Fish/spawn areas. Explain findings:  Other environmentally-sensitive species. Explain fin Aquatic/wildlife diversity. Explain findings: The ripaterrestrial species, such as deer, birds, raccoons, opossun	at apply): The riparian corridor consists of broadleaf trees and dings: arian corridor would provide habitat for various
2.		hysical Characteristics:  Output  Output  Description:  Output  De	rectly or indirectly into TNW
		Wetland type. Explain: N/A Wetland quality. Explain: N/A.	

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

(b) General Flow Relationship with Non-TNW: Flow is: Pick List Explain: N/A. 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 floodplain. Pick List (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: 0 Approximately (N/A) 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: The 0.47 acre wetland is situated at the head of Stream 11 consisting emergent and scrub-shrub vegetation that has the potential to provide habitat for terrestrial species. The wetland would provide limited flood storage during rainfall events and assist in

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

#### 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

nutrient cycling or sequestration of pollutants from the adjacent agricultural field.

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: Stream 11 is adjacent to an agricultural field and the application of fertilizers and pesticides, as well as the loss of soil during rain events would impact the stream. The tributary has the potential to carry pollutants, as well as organic carbon to support foodwebs downstream during rain events. The tributary and narrow riparian corridor provides habitat to terrestrial species. The relevant reach extends 778 linear feet from the eastern review area boundary upstream past the confluence with Stream 12 (Reference Figure 2 Sheet 5 of 5). The stream adjacent to agricultural fields and receiving water from Streams 12 and 13 could transport pollutants and organic carbon downstream and potentially affect the chemical, physical and biological integrity of Red River, a TNW located approximately 8 miles downstream.
- 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.	<ul> <li>RPWs that flow directly or indirectly into TNWs.</li> <li>☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:</li> <li>☐ 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:</li> </ul>
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  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: linear feet width (ft).  Stream 11 (Non-RPW) Ephemeral, 778 linear feet: 3 width (ft) and/or 0.05 acre

<sup>&</sup>lt;sup>8</sup>See Footnote # 3.

		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. <sup>9</sup> As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.  Demonstrate that impoundment was created from "waters of the U.S.," or  Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  Demonstrate that water is isolated with a nexus to commerce (see E below).
Е.	INC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, CLUDING 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:
	Ide	ntify water body and summarize rationale supporting determination:
		vide 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.

Other non-wetland waters:

acres.

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

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

<ul> <li>□ 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.</li> <li>□ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.</li> <li>□ 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).</li> <li>□ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:</li> <li>○ Other: (explain, if not covered above): See SECTION II(B)(2) for non-wetland aquatic features that were identified and found not to flow directly or indirectly into a TNW or other WOUS.</li> </ul>
Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.
SECTION IV: DATA SOURCES.
A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Data sheets prepared/submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Goffice concurs 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: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  USDA Natural Resources Conservation Service Soil Survey. Citation: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by
Terracon Consultants, Inc.  National wetlands inventory map(s). Cite name: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc
<ul> <li>□ State/Local wetland inventory map(s):</li> <li>□ FEMA/FIRM maps: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc</li> <li>□ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)</li> <li>□ Photographs: □ Aerial (Name &amp; Date):</li> </ul>
or 🖸 Other (Name & Date): Photos taken during site visit, Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by
Terracon Consultants, Inc  Previous determination(s). File no. and date of response letter:  Applicable/supporting case law:  Applicable/supporting scientific literature:  Other information (please specify):

#### APPPROVED 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): 01/27/2020

#### B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Nashville District

Community Energy Solar, Inc.

File No. LRN-2019-00805

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The AJD review area consists of multiple properties containing approximately 1600 acres of land located southwest of Russellville, Kentucky situated between Watermelon and Joe fo pr dis Na (W pro

Montgomery Roads. The project location is divided to the point where the east and west sections drain to two different
watersheds. Approximately 98 percent of the review area is used in agricultural production and the remaining in scattered
forested areas. The review area is located in an area known for having karst features. Multiple sinkholes were observed within
project boundaries during the site visit. This AJD form references all waters found within the boundaries of the review area, but
discusses only Stream 12 that flows indirectly into Pleasant Grove Creek which flows directly into Red River, a Traditional
Navigable Water (TNW). USACE completed individual AJD forms for each water determined to be a water of the U.S.
(WOUS). The aquatic resources identified under Section II(B)(2) are not WOUS and are included on each AJD form for this
project.
State: Kentucky County/parish/borough: Logan City: Russellville
Center coordinates of site (lat/long in degree decimal format): Latitude: 36.793005°; Longitude -86.937504°
Universal Transverse Mercator: 16
Name of nearest waterbody: Whippoorwill Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Red River and Whippoorwill
Creek
Name of watershed or Hydrologic Unit Code (HUC): 051302060205 (HUC 12) and 051302060303 (HUC 12)
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: 11/20/2019
Field Determination. Date(s): 10/10/2019
Tield Betermination: Bute(s): 10/10/2019
SECTION II: SUMMARY OF FINDINGS
A. RHA SECTION 10 DETERMINATION OF JURISDICTION.
THE TAIL OF THE PROPERTY OF TH
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:
2.4
B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
b. CWI SECTION 404 BETERMINATION OF COMSDICTION.
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 <sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
Non-RPWs that flow directly or indirectly into TNWs
Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands directly abutting RPWs that flow directly into TNWs  Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to but not directly abutting Rt ws that now directly or indirectly into TNWs  Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  Impoundments of jurisdictional waters
we change adjacent to non-ret we that now directly of indirectly into 114 we
I I Impoundments of jurisdictional waters
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:

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

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

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NOTE: Lach water determined to be a water of the U.S. (WOUS) within the AJD review area are listed below. Separate AJD forms were completed for each one so that the analysis in "Section III: CWA Analysis" is documented for

Non-wetland waters:
Stream 11 (Non-RPW) Ephemeral, 778 linear feet: 3 width (ft) and/or 0.05 acre Stream 12 (Non-RPW) Ephemeral, 1,466 linear feet: 5 width (ft) and/or 0.17 acre Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre

c. Limits (boundaries) of jurisdiction based on: Established by OHWM and 1987 Delineation Manual Elevation of established OHWM (if known):

 ${
m USACE}$ 's jurisdictional determination for each water. This particular form only applies to Stream 12.

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

Wetland A - PFO, 0.95 acre Wetland H - PSS/PEM  $0.47~\mbox{acre}$ 

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The AJD review area located near Russellville, Kentucky is approximately 1600 acres and situated in an area known for having karst features. The aquatic resources listed below do not drain directly or indirectly into any WOUS and do not support a link to interestate or foreign commerce. The aquatic resources flow into karst features and were determined to be non-jurisdictional because of no known hydrologic connection to downstream WOUS. The waters listed below are geographically isolated and therefore are not tributaries of navigable waters.

Stream I (Non-RPW, Ephemeral, 207 linear feet: 3 width (ft) and/or 0.014 acre) located at the southwestern boundary carries water flow to <u>Wetland B</u> (PEM, 1.11 acres). These aquatic features have no known hydrologic connection to WOUS.

Stream 2 (RPW, Intermittent, 4,599 linear feet: 11 width (ft) and/or 1.16 acres) located on the northwestern section of the property flows in a westerly direction out of the review area into a karst feature. This

section of the property flows in a westerly direction out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

sam 3 (RPW, Intermittent, 1.537 linear feet; 5 width (ft) and/or 0.18 acre) located on the northwestern.

Stream 3 (RPW, Intermittent, 1,537 linear feet: 5 width (ft) and/or 0.18 acre) located on the northwestern section of the property flows in a northwesterly direction into Stream 2 which flows out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 4 (Non-RPW, Ephemeral, 186 linear feet: 3 width (ft) and/or 0.012 acre) flows in a northerly

Stream 4 (Non-RPW, Ephemeral, 186 linear feet: 3 width (ft) and/or 0.012 acre) flows in a northerly direction from Pond 7 (PUB, 0.81 acre) into Wetland E (PFO, 1.84 acres) which drains into a large baye no brown protection to Wolfs acres have no brown protection to Wolfs.

karst feature. These aquatic features have no known hydrologic connection to WOUS.

<u>Stream 5</u> (Non-RPW, Ephemeral, 365 linear feet: 5 width (ft) and/or 0.041 acre) flows directly into a large karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 10 (Non-RPW, Ephemeral, 171 linear feet: 3 width (ft) and/or 0.011 acre) flows in a northwesterly direction from Pond 8 (PUB, 0.23 acre) into Wetland F which drains into a large karst feature. These aquatic features have no known hydrologic connection to WOUS.

Stream 14 (Non-RPW, Ephemeral, 1,109 linear feet: 3 width (ft) and/or 0.076 acre) with abutting wetland – Wetland L, (PEM, 0.74 acre) located in the northwestern section of the property, flows in a northwesterly direction into Stream 2 that flows out of the review area boundaries and into a karst

feature. These aquatic features have no known hydrologic connection to WOUS. Wetland C (PEM, 0.88 acre) abuts Pond 6 (PUB, 0.25 acre). These aquatic features have no known bydeland C.

hydrologic connection to WOUS.

Wetland D (PEM, 0.09 acre). This aquatic features has no known hydrologic connection to WOUS.

Weiland E (FEM, 0.05 acre). This aquatic feature was determined to be adjacent to Stream 2 that flows out of the review area and into a karst feature. These aquatic features have no known hydrologic

connection to WOUS. Wetland G (PEM, 0.18 acre). This aquatic feature adjacent to Pond 8 has no known hydrologic connection to WOUS.

Wetland J (PFO, 3.27 acres), encompasses Pond 11 (PUB, 0.26 acre). The topography of the area is relatively flat with faint water flow patterns observed adjacent to Wetland J/Pond 11 that suggests water flow would migrate toward the karst feature located southeast of the aquatic features. Review of the area between Joe Montgomery Road and the aquatic resources did not provide any physical indicators that water flows to the roadside ditch. The 6" corrugated metal pipe located underneath the highway carries very little flow. This aquatic feature has no known hydrologic connection to WOUS. Wetland K (PFO, 1.22 acres). The topography of the area is relatively flat and faint water flow patterns were observed that suggests water flow would migrate to the karst feature located to the west of the were observed that suggests water flow would migrate to the karst feature located to the west of the

aquatic feature. This aquatic feature has no known hydrologic connection to WOUS.

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

- Wetland M (PEM, 0.05 acre), is a small wetland located approximately 100 feet north of a karst feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland N (PFO, 0.30 acre), is a depressional wetland that has the appearance of a karst feature. No water flow patterns were observed outside the delineated boundaries. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 1</u> (PUB, 0.92 acre), is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 2</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 3(PUB, 0.42 acre)</u> is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 4</u> (PUB, 0.46 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 5</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 6</u> (PUB, 0.25 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 7</u> (PUB, 0.81 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 8</u> (PUB, 0.23 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 9</u> (PUB, 0.70 acre) is a constructed open water aquatic feature constructed before 1981 with approximately 6 feet of freeboard and no discharge outlet identified. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 10</u> (PUB, 0.31 acre) is an excavated open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 11 (PUB, 0.26 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 12 (PUB, 0.05 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 13 (PUB, 0.29 acre) is an open water aquatic feature constructed prior to 1950. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 14 (PUB, 0.35 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 15 (PUB, 0.74 acre) is an open water aquatic feature constructed prior to 1998. This aquatic feature has no known hydrologic connection to WOUS.

#### **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 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

#### Stream 12

(i)	General Area Conditions:  Watershed size: 15,584 Acres  Drainage area: 104 Acres  Average annual rainfall: 50.66 inches  Average annual snowfall: 6 inches			
(ii)	Physical Characteristics:  (a) Relationship with TNW: ☐ Tributary flows directly into TNW. ☐ Tributary flows through 3 tributaries before entering TNW.			
		Project waters are <b>5-10</b> river miles from TNW.  Project waters are <b>5-10</b> river miles from RPW.  Project waters are <b>5-10</b> aerial (straight) miles from TNW.  Project waters are <b>5-10</b> aerial (straight) miles from RPW.  Project waters cross or serve as state boundaries. Explain: N/A.  Identify flow route to TNW <sup>5</sup> : Stream 12 flows through the review area into Stream 11 which flows into an unnamed tributary, which flows into Pleasant Grove Creek which flows into Red River, a TNW.  Tributary stream order, if known: 1.		
	(b)	General Tributary Characteristics (check all that apply):  Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: Tributary has been manipulated by agricultural practices.		
		Tributary properties with respect to top of bank (estimate):  Average width: 5 feet  Average depth: 16 inches  Average side slopes: Vertical 1:1.		
		Primary tributary substrate composition (check all that apply):  Silts Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:		
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is stable due to slope, ephemeral flow, forested area, and riparian corridor.  Presence of run/riffle/pool complexes. Explain: N/A.  Tributary geometry: <b>Relatively Straight</b> Tributary gradient (approximate average slope): 2 %		

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

<sup>&</sup>lt;sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(c)	Flow:  Tributary provides for: Ephemeral flow Estimate average number of flow events in review area/year: 20 (or greater)  Describe flow regime: Response to rainfall. Other information on duration and volume:						
	Surface flow is: <b>Discrete and Confined.</b> Characteristics: Sections of channel outside the forested area and riparian area has been manipulated into a swale by human.						
	Subsurface flow: <b>Unknown</b> . Explain findings:  Dye (or other) test performed:						
	Tributary has (check all that apply):						
	Bed and banks  ☐ OHWM <sup>6</sup> (check all indicators that apply): ☐ clear, natural line impressed on the bank ☐ changes in the character of soil ☐ shelving ☐ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining ☐ other (list): ☐ Discontinuous OHWM. Explain: Sections of channel outside the forested area and riparian area has been manipulated into a swale by human.						
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):    High Tide Line indicated by:						
	(iii) Chemical Characteristics:						
	Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The color of the water would be relatively clear depending on the time of year (i.e. crop planting season) and amount of rainfall. The narrow riparian zone would reduce the amount of silt carried during rain events from the adjacent farm field.						
	Identify specific pollutants, if known: Pollutants would consist of silts, fertilizers, and/or pesticides received by runoff from adjacent agricultural fields and Stream 11.						
	<ul> <li>(iv) Biological Characteristics. Channel supports (check all that apply):</li> <li>☑ Riparian corridor. Characteristics (type, average width): A section of Stream 12 flows along the edge of a forested area where the riparian area is approximately 50 feet on the left descending bank and over 500 feet on the right descending bank. A narrow section of corridor approximately 40 feet wide (20 feet on either side to the stream) is located south of the forested area at the confluence with Stream 11.</li> <li>☐ Wetland fringe. Characteristics:.</li> <li>☑ Habitat for:</li> <li>☐ Federally Listed species. Explain findings:</li> </ul>						
	<ul> <li>☐ Fish/spawn areas. Explain findings:</li> <li>☐ Other environmentally-sensitive species. Explain findings:</li> <li>☐ Aquatic/wildlife diversity. Explain findings: The forested area would provide habitat for various terrestrial species, such as deer, birds, raccoons, opossums, lizards, etc.</li> </ul>						
2.	Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW						
	(i) Physical Characteristics:  (a) General Wetland Characteristics: Properties:						

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

Wetland type. Explain: N/A Wetland quality. Explain: N/A Project wetlands cross or serve as state boundaries. Explain: N/A. (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 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: 0 Approximately (N/A) 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) Wetland H Yes 0.47

Wetland size: N/A acres

Summarize overall biological, chemical and physical functions being performed: The 0.47 acre wetland is situated at the head of Stream 11 consisting emergent and scrub-shrub vegetation that has the potential to provide habitat for terrestrial species. The wetland would provide limited flood storage during rainfall events and assist in nutrient cycling or sequestration of pollutants from the adjacent agricultural field.

#### 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: Stream 12 is adjacent to an agricultural field and the application of fertilizers and pesticides, as well as the loss of soil during rain events would impact the stream. The tributary has the potential to carry pollutants, as well as organic carbon to support foodwebs downstream during rain events. The tributary and forested area provides habitat to terrestrial species. The relevant reach of the tributary extends upstream 1,466 linear feet from the confluence with Stream 11 to terminate at the edge of the forested area (Reference Figure 2, Sheet 5 of 5) past the confluence of Stream 13. The stream adjacent to the forested area and agricultural fields that receives water from Stream 13 could transport pollutants and organic carbon downstream and potentially affect the chemical, physical and biological integrity of Red River, a TNW located approximately 8 miles downstream.
- 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.	<ul> <li>RPWs that flow directly or indirectly into TNWs.</li> <li>☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:</li> <li>☐ 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:</li> </ul>
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  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.

<sup>&</sup>lt;sup>8</sup>See Footnote # 3.

	Provide estimates for jurisdictional waters within the review area (check all that apply):  Tributary waters: linear feet width (ft).  Stream 12 (Non-RPW) Ephemeral, 1,466 linear feet: 5 width (ft) and/or 0.17 acre
	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.	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).
DEC INC	PLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, CLUDING 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:
Idei	ntify water body and summarize rationale supporting determination:
	vide 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.

E.

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

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): See SECTION II(B)(2) for non-wetland aquatic features that were identified and found not to flow directly or indirectly into a TNW or other WOUS.
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
SEC	CTION 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. Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  Data sheets prepared/submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  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: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  □ USDA Natural Resources Conservation Service Soil Survey. Citation: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc.  □ National wetlands inventory map(s). Cite name: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc  □ State/Local wetland inventory map(s):  □ FEMA/FIRM maps: Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc  □ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)  □ Photographs: □ Aerial (Name & Date):
	or ☑ Other (Name & Date): Photos taken during site visit, Reference JD report titled, "Wetland Delineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, prepared by Terracon Consultants, Inc  ☐ Previous determination(s). File no. and date of response letter:  ☐ Applicable/supporting case law:  ☐ Applicable/supporting scientific literature:  ☐ Other information (please specify):

#### APPPROVED 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): 01/27/2020

#### B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Nashville District Community Energy Solar, Inc. File No. LRN-2019-00805

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The AJD review area consists of multiple properties containing approximately 1600 acres of land located southwest of Russellville, Kentucky situated between Watermelon and Joe Montgomery Roads. The project location is divided to the point where the east and west sections drain to two different watersheds. Approximately 98 percent of the review area is used in agricultural production and the remaining in scattered forested areas. The review area is located in an area known for having karst features. Multiple sinkholes were observed within project boundaries during the site visit. This AJD form references all waters found within the boundaries of the review area, but discusses only Stream 13 with adjacent Wetland H that flows indirectly into Pleasant Grove Creek which flows directly into Red River, a Traditional Navigable Water (TNW). USACE completed individual AJD forms for each water determined to be a water of the U.S. (WOUS). The aquatic resources identified under Section II(B)(2) are not WOUS and are included on each AJD form for this project.

-		
Cent Univ Nam Nam Cree Nam	ntucky County/parish/borough: Logan City: Russellville ordinates of site (lat/long in degree decimal format): Latitude: 36.793005°; Longitude -86.937504°  Transverse Mercator: 16 nearest waterbody: Whippoorwill Creek nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Red River and Whippoorwing watershed or Hydrologic Unit Code (HUC): 051302060205 (HUC 12) and 051302060303 (HUC 12) k if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. k if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded different JD form.	
$\boxtimes$	PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): the (Desk) Determination. Date: 11/20/2019  Determination. Date(s): 10/10/2019	
– <u>SECTIO</u>	SUMMARY OF FINDINGS TION 10 DETERMINATION OF JURISDICTION.	
	O "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR parties area. [Required] ers subject to the ebb and flow of the tide. ers are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreignerce. Explain:	
B. CWA	TION 404 DETERMINATION OF JURISDICTION.	
There <b>AF</b> [ <i>Required</i>	raters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review ar	ea.
	dicate presence of waters of U.S. in review area (check all that apply):   TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters <sup>2</sup> (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands	

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

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

Identify (estimate) size of waters of the U.S. in the review area: <u>۔</u>

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

Wetlands:

Each water determined to be a water of the U.S. (WOUS) within the AJD review area are listed below. Separate AJD forms were completed for each one so that the analysis in "Section III: CWA Analysis" is documented for USACE's jurisdictional determination for each water. This particular form only applies to Stream 13 and its adjacent Wetland H.

Stream 12 (Non-RPW) Ephemeral, 1,466 linear feet: 5 width (ft) and/or 0.17 acre Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre Non-wetland waters: Stream 11 (Non-RPW) Ephemeral, 778 linear feet: 3 width (ft) and/or 0.05 acre

Wetland H - PSS/PEM 0.47 acre Wetland A - PFO, 0.95 acre

c. Limits (boundaries) of jurisdiction based on: Established by OHWM and 1987 Delineation Manual Elevation of established OHWM (if known):

# Non-regulated waters/wetlands (check if applicable):3 તં

The aquatic resources flow into karst features and were determined to be non-jurisdictional because of no known hydrologic connection to downstream WOUS. The waters listed below are geographically isolated Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The AJD review area located near Russellville, Kentucky is approximately 1600 acres and situated in an area known for having karst features. The aquatic resources listed below do not drain directly or indirectly into any WOUS and do not support a link to interstate or foreign commerce. and therefore are not tributaries of navigable waters. Stream I (Non-RPW, Ephemeral, 207 linear feet: 3 width (ft) and/or 0.014 acre) located at the southwestern boundary carries water flow to Wetland B (PEM, 1.11 acres). These aquatic features have no known hydrologic connection to WOUS. Stream 2 (RPW, Intermittent, 4,599 linear feet: 11 width (ft) and/or 1.16 acres) located on the northwestern section of the property flows in a westerly direction out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

Stream 3 (RPW, Intermittent, 1,537 linear feet: 5 width (ft) and/or 0.18 acre) located on the northwestern section of the property flows in a northwesterly direction into Stream 2 which flows out of the review area into a karst feature. This aquatic feature has no known hydrologic connection to WOUS.

direction from Pond 7 (PUB, 0.81 acre) into Wetland F (PFO, 1.84 acres) which drains into a large Stream 4 (Non-RPW, Ephemeral, 186 linear feet: 3 width (ft) and/or 0.012 acre) flows in a northerly karst feature. These aquatic features have no known hydrologic connection to WOUS.

Stream 5 (Non-RPW, Ephemeral, 365 linear feet: 5 width (ft) and/or 0.041 acre) flows directly into a large karst feature. This aquatic feature has no known hydrologic connection to WOUS.

<u>Stream 10</u> (Non-RPW, Ephemeral, 171 linear feet: 3 width (ft) and/or 0.011 acre) flows in a northwesterly direction from <u>Pond 8</u> (PUB, 0.23 acre) into Wetland F which drains into a large karst feature. These aquatic features have no known hydrologic connection to WOUS.

<u>Stream 14</u> (Non-RPW, Ephemeral, 1,109 linear feet: 3 width (ft) and/or 0.076 acre) with abutting wetland. Wetland L, (PEM, 0.74 acre) located in the northwestern section of the property, flows in a northwesterly direction into Stream 2 that flows out of the review area boundaries and into a karst feature. These aquatic features have no known hydrologic connection to WOUS.

Wetland C (PEM, 0.88 acre) abuts Pond 6 (PUB, 0.25 acre). These aquatic features have no known hydrologic connection to WOUS.

<u>Wetland D</u> (PEM, 0.09 acre). This aquatic features has no known hydrologic connection to WOUS. <u>Wetland E</u> (PEM, 0.14 acre). This aquatic feature was determined to be adjacent to Stream 2 that flows out

of the review area and into a karst feature. These aquatic features have no known hydrologic connection to WOUS.

Wetland G (PEM, 0.18 acre). This aquatic feature adjacent to Pond 8 has no known hydrologic connection

water flow would migrate toward the karst feature located southeast of the aquatic features. Review of the area between Joe Montgomery Road and the aquatic resources did not provide any physical indicators that water flows to the roadside ditch. The 6" corrugated metal pipe located underneath the highway carries very little flow. This aquatic feature has no known hydrologic connection to WOUS. relatively flat with faint water flow patterns observed adjacent to Wetland J/Pond 11 that suggests Wetland J (PFO, 3.27 acres), encompasses Pond 11 (PUB, 0.26 acre). The topography of the area is

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

- <u>Wetland K</u> (PFO, 1.22 acres). The topography of the area is relatively flat and faint water flow patterns were observed that suggests water flow would migrate to the karst feature located to the west of the aquatic feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland M (PEM, 0.05 acre), is a small wetland located approximately 100 feet north of a karst feature. This aquatic feature has no known hydrologic connection to WOUS.
- Wetland N (PFO, 0.30 acre), is a depressional wetland that has the appearance of a karst feature. No water flow patterns were observed outside the delineated boundaries. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 1</u> (PUB, 0.92 acre), is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 2</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 3(PUB, 0.42 acre)</u> is an open water feature constructed prior to 1980 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 4</u> (PUB, 0.46 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 5</u> (PUB, 0.70 acre) is an open water feature constructed prior to 1955 for agricultural purposes. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 6</u> (PUB, 0.25 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 7 (PUB, 0.81 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- **Pond 8** (PUB, 0.23 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 9</u> (PUB, 0.70 acre) is a constructed open water aquatic feature constructed before 1981 with approximately 6 feet of freeboard and no discharge outlet identified. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 10</u> (PUB, 0.31 acre) is an excavated open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 11</u> (PUB, 0.26 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 12 (PUB, 0.05 acre) is an open water aquatic feature constructed prior to 1955. This aquatic feature has no known hydrologic connection to WOUS.
- <u>Pond 13</u> (PUB, 0.29 acre) is an open water aquatic feature constructed prior to 1950. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 14 (PUB, 0.35 acre) is an open water aquatic feature constructed prior to 1980. This aquatic feature has no known hydrologic connection to WOUS.
- Pond 15 (PUB, 0.74 acre) is an open water aquatic feature constructed prior to 1998. This aquatic feature has no known hydrologic connection to WOUS.

#### **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<sup>4</sup> 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

#### Stream 13

(i)	Wat Drai Ave	teral Area Conditions: tershed size: 15,584 Acres tinage area: 19.57 Acres trage annual rainfall: 50.66 inches trage annual snowfall: 6 inches
(ii)		sical Characteristics:  Relationship with TNW: ☐ Tributary flows directly into TNW. ☐ Tributary flows through 4 tributaries before entering TNW.
		Project waters are 5-10 river miles from TNW.  Project waters are 5-10 river miles from RPW.  Project waters are 5-10 aerial (straight) miles from TNW.  Project waters are 5-10 aerial (straight) miles from RPW.  Project waters cross or serve as state boundaries. Explain:  Identify flow route to TNW <sup>5</sup> : Stream 13 flows through the review area into Stream 12 which flows into Stream 11 which flows into an unnamed tributary, which flows into Pleasant Grove Creek which flows into Red River, a TNW.  Tributary stream order, if known: 1.
	(b)	General Tributary Characteristics (check all that apply):  Tributary is:  Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: Tributary has been manipulated by agricultural practices by the construction of an unimproved road at the junction of the stream channel and adjacent wetland.
		Tributary properties with respect to top of bank (estimate): Average width: 3 feet Average depth: 16 inches Average side slopes: Vertical 1:1.
		Primary tributary substrate composition (check all that apply):  Silts
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is stable due to ephemeral flow and riparian corridor.  Presence of run/riffle/pool complexes. Explain: N/A.  Tributary geometry: <b>Relatively Straight</b> Tributary gradient (approximate average slope): 2 %

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

<sup>&</sup>lt;sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Other information on duration and volume:  Surface flow is: Confined. Characteristics:	
Surface flow is: <b>Confined.</b> Characteristics:	
Subsurface flow: <b>Unknown</b> . Explain findings:  Dye (or other) test performed:	
Tributary has (check all that apply):	
If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply)    High Tide Line indicated by:	
(iii) Chemical Characteristics:	
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The color of the water would be relatively clear depending on the time of and amount of rainfall. The adjacent wetland (Wetland H – PSS/PEM, 0.47 acre), small riparian zone, forested area would reduce the amount of silt carried during rain events from the adjacent farm field.	
Identify specific pollutants, if known: Pollutants would consist of silts, fertilizers, and/or pesticides received runoff from adjacent agricultural fields.	by
(iv) Biological Characteristics. Channel supports (check all that apply):  □ Riparian corridor. Characteristics (type, average width): The riparian corridor extends approximately 2 from top of each bank along the upper section of Stream 11 before flowing through a forested area into Stream Wetland fringe. Characteristics:.  □ Habitat for: □ Federally Listed species. Explain findings: □ Fish/spawn areas. Explain findings: □ Other environmentally-sensitive species. Explain findings:	m 12.
Aquatic/wildlife diversity. Explain findings: The forested area provides habitat for various terrestri species, such as deer, birds, raccoons, opossums, lizards, etc.	ıl
2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW	
Wetland H	
(i) Physical Characteristics:  (a) General Wetland Characteristics: Properties: Wetland size: 0.47 acres Wetland type. Explain: Palustrine scrub-shrub and emergent.	

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

			Wetland quality. Expla Project wetlands cross or se		xplain:	
		(b)	General Flow Relationship Flow is: <b>Ephemeral</b> . Expla			
			Surface flow is: Confined Characteristics: .			
			Subsurface flow: Unknown  Dye (or other) test p			
		(c)	Wetland Adjacency Determ ☐ Directly abutting ☐ Not directly abutting	nination with Non-TNW:		
for a	agricı	ultura		on. Explain: .	lain: Connection is impacted by	unimproved crossing
		(d)	Proximity (Relationship) to Project wetlands are 5-10 ri Project waters are 5-10 aeri Flow is from: No Flow.	ver miles from TNW.	NW.	
	(ii)	Che		ion of wetland as within the	ne 500 year or greater floodplai	n.
	(11)				wn, oil film on surface; water qu	uality; general
		Iden	tify specific pollutants, if kn			
	(iii)		ogical Characteristics. We Riparian buffer. Characteri Vegetation type/percent con Habitat for:  Federally Listed species Fish/spawn areas. Expla Other environmentally-s Aquatic/wildlife diversi	stics (type, average width ver. Explain:  Explain findings:  in findings: sensitive species. Explain	): .	
3.	Cha	aracto	eristics of all wetlands adja	cent to the tributary (if a	any)	
		All	wetland(s) being considered	in the cumulative analysis	: 1	
		App	roximately (0.47) acres in to	otal are being considered in	the cumulative analysis.	
	For	each	wetland, specify the following	ng:		
			Directly abuts? (Y/N) Wetland H Yes	Size (in acres) 0.47	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: The 0.47 acre wetland is situated at the head of Stream 11 consisting emergent and scrub-shrub vegetation that has the potential to provide habitat for terrestrial species. The wetland would provide limited flood storage during rainfall events and assist in nutrient cycling or sequestration of pollutants from the adjacent agricultural field.

#### 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: Wetland H (0.47 acre) is located at the head of Stream 13 (an ephemeral stream) and adjacent to an agricultural field and approximately 7 aerial miles from Red River. The application fertilizers and pesticides on the agricultural field, as well as the loss of soil during rain events would impact the stream and adjacent wetland. The tributary has the potential to carry pollutants, as well as organic carbon to support foodwebs downstream during rain events. The wetland has the capacity to impact downstream waters by sequestering nutrients. The combination of the tributary and wetland provide habitat to support terrestrial species. The relevant reach of this tributary extends approximately 685 linear feet upstream before terminating at an agricultural crossing (Reference Figure 2, Sheet 5 of 5). The stream adjacent to agricultural fields could transport pollutants and organic carbon downstream and potentially affect the chemical, physical and biological integrity of Red River, a TNW located approximately 8 miles downstream.
- 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.	<ul> <li>RPWs that flow directly or indirectly into TNWs.</li> <li>☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:</li> <li>☐ 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:</li> </ul>
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  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.

<sup>&</sup>lt;sup>8</sup>See Footnote # 3.

	Provide estimates for jurisdictional waters within the review area (check all that apply):  Tributary waters: linear feet width (ft).  Stream 13 (Non-RPW) Ephemeral, 685 linear feet: 3 width (ft) and/or 0.05 acre  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.  Wetland H - PSS/PEM 0.47 acre
7.	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).
DE INC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, CLUDING 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:
Ide	ntify water body and summarize rationale supporting determination:
Pro	vide 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.

E.

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

F.	NO	N-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:
	$\overline{\boxtimes}$	Other: (explain, if not covered above): See SECTION II(B)(2) for non-wetland aquatic features that were
		identified and found not to flow directly or indirectly into a TNW or other WOUS.
	Prov	vide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the
		R 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.
		vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard,
	whe	ere such a finding is required for jurisdiction (check all that apply):
		Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
		Lakes/ponds: acres.
		Other non-wetland waters: acres. List type of aquatic resource: .
		Wetlands: acres.
SE	CTIO	ON IV: DATA SOURCES.
A.		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and,
		ere checked and requested, appropriately reference sources below):
		Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland
	Deli	ineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019,
		pared by Terracon Consultants, Inc.
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	Deli prep	Data sheets prepared/submitted by or on behalf of the applicant/consultant. Reference JD report titled, "Wetland ineation Report, Russellville Solar, Watermelon Road, Russellville, Logan County, Kentucky" dated July 31, 2019, pared by Terracon Consultants, Inc.  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.
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