APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 31, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2001-02048, Drees Homes- Krebs Road Subdivision, Form 1 of 1

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Lorain City: Avon Lake
Center coordinates of site (lat/long in degree decimal format): Lat. 41.479459 °, Long. -81.977207 °
Universal Transverse Mercator: 17
Name of nearest waterbody: Porter Creek (off-site)
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Erie
Name of watershed or Hydrologic Unit Code (HUC): 041100010204

☑ 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: February 6, 2017

☑ Field Determination. Date(s): July 27, 2016

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: *Click here to enter text.*

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]

☐ TNWs, including territorial seas

☐ Wetlands adjacent to TNWs

☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs

☐ Non-RPWs that flow directly or indirectly into TNWs

☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

☑ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

☐ Impoundments of jurisdictional waters

☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: # linear feet: # width (ft) and/or # acres.
   Wetlands: Wetland 1 (1.898 acres), Wetland 2 (0.237 acre), Wetland 3 (0.037 acre), Wetland 4 (0.055 acre), Wetland 5 (0.015 acre) Wetland 6 (0.575 acre), Wetland 7 (0.347 acre)

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

   Elevation of established OHWM (if known): *Click here to enter text.*

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

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: *Click here to enter text.*

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: *Click here to enter text.*

Summarize rationale supporting determination: *Click here to enter text.*

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": *Click here to enter text.*

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

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

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

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:

Watershed size: 8.48 square miles
Drainage area: 8.48 square miles

Average annual rainfall: 38.03 inches
Average annual snowfall: 44.20 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☑ Tributary flows directly into TNW.

☐ Tributary flows through *Choose an item.* tributaries before entering TNW.

Project waters are 2-5 river miles from TNW.
Project waters are 1-2 river miles from RPW.
Project waters are 1-2 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: No

Identify flow route to TNW[5]: Porter Creek (off-site) flow northeast into Lake Erie
Tributary stream order, if known: 3

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

Tributary is:

☑ Natural

☐ Artificial (man-made). Explain: *Click here to enter text.*

☑ Manipulated (man-altered). Explain: Porter Creek has been manipulated, culverted, and straightened along some portions of the reach.

Tributary properties with respect to top of bank (estimate):
Average width: 15-40 feet
Average depth: Unknown

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Average side slopes: Unknown

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☑ Cobbles	☑ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover: *Click here to enter text.*	
☐ Other. Explain: *Click here to enter text.*		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary is generally stable with some localized area of erosion.

Presence of run/riffle/pool complexes. Explain: Unknown

Tributary geometry: Relatively Straight

Tributary gradient (approximate average slope): Less than 3%

(c) Flow:

Tributary provides for: Perennial Flow

Estimate average number of flow events in review area/year: 1

Describe flow regime: Porter Creek flows year round with no cessation in flow. Porter Creek is a blue line tributary on the USGS quadrangle and is visible on NHD maps. Aerial photographs during leaf-on and leaf-off conditions indicate water in the channel during multiple years and seasons.

Other information on duration and volume: Unknown

Surface flow is: Confined Characteristics: Surface flow is confined to a defined bed and bank.

Subsurface flow: Unknown Explain findings: Unknown

☐ Dye (or other) test performed: *Click here to enter text.*

Tributary has (check all that apply):

☑ Bed and banks

☑ OHWM[6] (check all indicators that apply):

☑ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☑ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☑ water staining	☐ abrupt change in plant community *Click here to enter text.*
☐ other (list): *Click here to enter text.*	

☐ Discontinuous OHWM.[7] Explain: *Click here to enter text.*

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

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

(iii) Chemical Characteristics:

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

Explain: Porter Creek is surrounded by roads, agriculture, residential and commercial development, and undeveloped land. Known impairments within the Lake Erie watershed include land development, siltation and sedimentation, loss of wetlands, flow alteration, enrichment of nutrients, changes in fish populations, presence of exotic species, PCBs, phosphorus, and effects of certain chemicals on human health (Binational, 2014; OEPA, 2004; USEPA, 2008). Known causes of impairment include but are not limited to: agriculture, loss of riparian and forested habitat, development, wastewater treatment, and channelization of streams (OEPA, 2004).

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

[7]Ibid.

Identify specific pollutants, if known: Porter Creek receives runoff from roads, agriculture, golf courses, and development including agricultural chemicals, lawn fertilizers, and road sand/salt.

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

- ☑ Riparian corridor. Characteristics (type, average width): Porter Creek has a variable riparian corridor along its reach ranging from 0 feet in width to 1000+ feet in width. The riparian corridor varies from cleared land to forested habitat.
- ☑ Wetland fringe. Characteristics: According to NWI maps, several wetlands directly abut Porter Creek in the mid to lower portion of the reach.
- ☑ Habitat for:
  - ☐ Federally Listed species. Explain findings: *Click here to enter text.*
  - ☑ Fish/spawn areas. Explain findings: Porter Creek provides perennial tributary habitat for fish species.
  - ☐ Other environmentally-sensitive species. Explain findings: *Click here to enter text.*
  - ☑ Aquatic/wildlife diversity. Explain findings: Porter Creek provides habitat for aquatic flora and fauna.

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: Wetland 1 (1.898 acres), Wetland 2 (0.237 acre), Wetland 3 (0.037 acre), Wetland 4 (0.055 acre), Wetland 5 (0.015) Wetland 6 (0.575 acre), Wetland 7 (0.347 acre)

Wetland type. Explain: Wetland 1 (PEM/PSS/PFO), Wetland 2 (PEM/PFO), Wetland 3 (PEM/PFO), Wetland 4 PEM/PFO), Wetland 5 (PEM/PFO) Wetland 6 (PFO), Wetland 7 (PFO)

Wetland quality. Explain: Wetlands 2, 3, 4, and 5 are of relatively low quality due to their small size. Wetlands 6, and 7 are of low to moderate quality. Wetland 1 is of moderate to high quality. Wetland quality established as per Ohio EPA ORAM Methodology.

Project wetlands cross or serve as state boundaries. Explain: No

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral Flow Explain: The on-site wetlands flows after snowmelt, rain events, and wet periods to Porter Creek (off site).

Surface flow is: Discrete and Confined & Overland Sheetflow

Characteristics:

Wetlands 3, 4, 5, 6, and 7 all drain south downslope via overland sheetflow and drainage patterns in the landscape into a storm drain along Krebs Road. The storm drain continues south under Krebs Road and the railroad tracks and then drains east via the railside ditch into Porter Creek. Wetlands 3, 4, 5, 6, and 7 function as part of an upland-wetland complex.

Wetland 2 drains north downslope into Wetland 2 via overland sheetflow and is conveyed through Wetland 1. Wetland 1 drains south along the eastern property line into a storm drain. The storm drain continues south under Krebs Road and the railroad tracks and then drains east via the railside ditch into Porter Creek.

Subsurface flow: Unknown Explain findings: *Click here to enter text.*

- ☐ Dye (or other) test performed: *Click here to enter text.*

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☑ Not directly abutting
  - ☑ Discrete wetland hydrologic connection. Explain: The wetlands have a traceable hydrologic connection to Porter Creek via overland sheet flow, a storm drain, and drainage ditches.
  - ☑ Ecological connection. Explain: The wetlands provide habitat for aquatic flora and fauna that also use Porter Creek. The wetlands also store, filter, and transport nutrients/sediments/pollutants that will ultimately enter Porter Creek
  - ☐ Separated by berm/barrier. Explain: *Click here to enter text.*

(d) Proximity (Relationship) to TNW

Project wetlands are 2-5 river miles from TNW.

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

Flow is from: Wetland to Navigable Waters

Estimate approximate location of wetland as within the 100 - 500-year floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Standing water in wetland was mucky due to recent snowfall

Identify specific pollutants, if known: Road salt and agricultural runoff from the adjacent road, railroad, and agricultural fields flow into the wetland.

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

- ☑ Riparian buffer. Characteristics (type, average width): Forested buffer 10-500+ feet in width.

☑ Vegetation type/percent cover. Explain: 100% PEM and PFO cover.

☑ Habitat for:

☐ Federally Listed species. Explain findings: *Click here to enter text.*

☐ Fish/spawn areas. Explain findings: *Click here to enter text.*

☐ Other environmentally-sensitive species. Explain findings: *Click here to enter text.*

☑ Aquatic/wildlife diversity. Explain findings: The wetland provides habitat and support for aquatic micro and macro invertebrates, aquatic flora, and other fauna requiring water a source

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

All wetland(s) being considered in the cumulative analysis: 12
Approximately (20.734) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)
Wetland 1 -N	1.898 acres
Wetland 2 -N	0.237 acre
Wetland 3 -N	0.037 acre
Wetland 4 -N	0.055 acre
Wetland 5 -N	0.015 acre
Wetland 6 -N	0.575 acre
Wetland 7 -N	0.347 acre
Adjacent Wetland 1 –Y	10.7 acres
Adjacent Wetland 2 –Y	4.2 acres
Adjacent Wetland 3 –Y	2.5 acres
Adjacent Wetland 4 –Y	0.12 acre
Adjacent Wetland 5 –Y	0.05 acre

Summarize overall biological, chemical and physical functions being performed: Wetlands 1 through 7 and the off-site Adjacent Wetlands 1 thorugh 5 provide the following functions and services: hydrologic flux and storage including floodwater and runoff attenuation and release; sediment and nutrient transport and retention; pollutant attenuation and release; biogeochemical cycling and storage; stream channel stability via serving as a natural buffer; biological productivity of micro/macro flora and fauna, decomposition, and community structure; and wildlife support including providing habitat.

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: *Click here to enter text.*

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: *Click here to enter text.*

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:

Wetlands 3, 4, 5, 6, and 7 all drain south downslope via overland sheetflow and drainage patterns in the landscape into a storm drain along Krebs Road. The storm drain continues south under Krebs Road and the railroad tracks and then drains east via the railside ditch into Porter Creek. Wetlands 3, 4, 5, 6, and 7 function as part of an upland-wetland complex. Wetland 2 drains north downslope into Wetland 2 via overland sheetflow and is conveyed through Wetland 1. Wetland 1 drains south along the eastern property line into a storm drain. The storm drain continues south under Krebs Road and the railroad tracks and then drains east via the railside ditch into Porter Creek. Porter Creek flows northeast for approximately 2.3 miles before flowing into Lake Erie. A surface hydrologic connection is visible and traceable between the wetlands, Porter Creek, and Lake Erie.

Porter Creek and it's similarly situated wetlands ((identified in Section III(B)(3)) have hydrologic connectivity to Lake Erie, thereby providing a significant nexus between the tributary and its adjacent wetlands and the downstream TNW. Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). The tributary influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy.

Sources of impairment within the Lake Erie watershed include land development, loss of wetlands, changes in fish populations, presence of exotic species, PCBs, phosphorus and effects of certain chemicals on human health (USEPA, 2008). Wetlands 1 through 7 are largely surrounded by and receive runoff from residential development and the adjacent horse farm/pasture which includes lawn chemical and fertilizers. The off-site adjacent wetlands are also largely surrounded by and receive runoff from residential development and roadways which includes lawn chemical, fertilizers, and road sand/salt. The wetlands reduce the effects of the runoff containing lawn chemicals, fertilizers, and road sand/salt through trapping and attenuation of these pollutants thereby reducing the effects of runoff on the downstream TNW. By trapping and attenuating these pollutants, the wetlands ultimately supply the downstream TNW with a cleaner source of water that will aid in reducing impairments. Additionally, the conservation of the wetlands aids in reducing the land development (particularly the rapid residential land development in this area) and loss of wetland habitat that impair the Lake Erie Watershed. The wetlands directly affect the nature of the water entering Porter Creek and the downstream receiving TNW, both in quantity and chemical/physical attributes. Ultimately, this affects the downstream TNW, Lake Erie, as the wetlands alter the amount of flow reaching the TNW and furthermore, any additional matter such as nutrients, chemicals, sediments, and pollutants carried in that flow.

According to the USEPA (2015), "scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the integrity of downstream waters" and that "all tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream" waters. Due to the physical, biological, and chemical connectivity of the tributary and its adjacent wetlands as described above, it has been determined that the tributary and its adjacent wetlands have a significant nexus with the downstream TNW, Lake Erie, as the functions and services provided by the tributary and its adjacent wetlands provide more than a speculative effect on the physical integrity of Lake Erie.

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: *Click here to enter text.*.
- ☐ 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: *Click here to enter text.*.

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: *Click here to enter text.*

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

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

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

- ☐ Tributary waters: # linear feet # width (ft).
- ☐ Other non-wetland waters: # acres.
  Identify type(s) of waters: *Click here to enter text.*

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

[8]See Footnote # 3.

☐ 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: *Click here to enter text.*

☐ 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: *Click here to enter text.*

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: Wetland 1 (1.898 acres), Wetland 2 (0.237 acre), Wetland 3 (0.037 acre), Wetland 4 (0.055 acre), Wetland 5 (0.015 acre) Wetland 6 (0.575 acre), Wetland 7 (0.347 acre)

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

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

Provide estimates for jurisdictional wetlands in the review area: # acres.

7. Impoundments of jurisdictional waters.[9]

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

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

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

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

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

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

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

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

☐ Interstate isolated waters. Explain: *Click here to enter text.*

☐ Other factors. Explain: *Click here to enter text.*

Identify water body and summarize rationale supporting determination: *Click here to enter text.*

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: *Click here to enter text.*

☐ Wetlands: # acres.

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: *Click here to enter text.*

☐ Other: (explain, if not covered above): *Click here to enter text.*

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- ☐ Lakes/ponds: # acres.
- ☐ Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*.
- ☐ 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: *Click here to enter text.*.
- ☐ 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: Location and delineation Map
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☑ Office concurs with data sheets/delineation report (and subsequent revisions)
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: *Click here to enter text.*
- ☐ Corps navigable waters' study: *Click here to enter text.*
- ☑ U.S. Geological Survey Hydrologic Atlas: USGS National Map Viewer
  - ☑ USGS NHD data.
  - ☑ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute,OH-NORTH OLMSTED
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- ☑ National wetlands inventory map(s). Cite name: USACE ORM NWI Dataset
- ☐ State/Local wetland inventory map(s): *Click here to enter text.*
- ☑ FEMA/FIRM maps: USACE ORM FEMA Flood hazard Dataset
- ☐ 100-year Floodplain Elevation is: *Click here to enter text.* (National Geodectic Vertical Datum of 1929)
- ☑ Photographs: ☑ Aerial (Name & Date): Google Earth JUN2009, DEC2010, OCT2011, APR2012, JUL2015, SEP2015, JUN2016; Bing Maps Birds Eye view
  - ☐ or ☑ Other (Name & Date): Google Street View Maps
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Applicable/supporting case law: *Click here to enter text.*
- ☐ Applicable/supporting scientific literature: *Click here to enter text.*
- ☑ Other information (please specify):
  Freeman, M.C., C.M. Pringle, and C.R. Jackson. 2007. Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales. Journal of the American Water Resources Association. 43:5-14.

  USEPA. 2008. Lake Erie Lakewide Management Plan. https://www.epa.gov/sites/production/files/2015-10/documents/lake-erie-lamp-2008.pdf

  USEPA. 2013. Streams. http://water.epa.gov/type/rsl/streams.cfm.

  USEPA. 2015. Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/475F.

  OEPA. 2004. Biological and Water Quality Study of the Vermilion River, Old Woman Creek, Chappel Creek, Sugar Creek, and Select Lake Erie Tributaries. http://www.epa.state.oh.us/portals/35/documents/VermilionTSD2004.pdf.

  Binational. 2014. Lake Erie Lakewide Action and Management Plan- Annual Report 2014. http://www.epa.gov/glnpo/lakeerie/status/lampstat99.pdf.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

March 31, 2017

Susan Baker
Project Manager

Date