

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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 1 of 8, Stream S-1

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Aurora Pond
Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 6, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 323.7 linear feet: 1-3 width (ft) and/or acres.
Wetlands: acres.

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

Elevation of established OHWM (if known): Unknown

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 809 square miles (Cuyahoga River Watershed)

Drainage area: Less than 1 square miles

Average annual rainfall: 41.85 inches

Average annual snowfall: 61.6 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through tributaries before entering TNW.

Project waters are 0 river miles from TNW.

Project waters are 0 river miles from RPW.

Project waters are 0 aerial (straight) miles from TNW.

Project waters are 0 aerial (straight) miles from RPW.

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

Identify flow route to TNW⁵: Stream S-1 flows west directly into Aurora Pond, 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:

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

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

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

Average width: 1-3 feet
Average depth: 1-3 feet
Average side slopes: 2:1

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input checked="" type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary has some erosion/incision due to being on a slope.

Presence of run/riffle/pool complexes. Explain: None observed.

Tributary geometry: Relatively Straight

Tributary gradient (approximate average slope): Less than 2%

(c) **Flow:**

Tributary provides for: Ephemeral Flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Tributary flows ephemerally during and after rain events, during periods of snowmelt, and during periods of overland sheetflow.

Other information on duration and volume: Unknown

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

Subsurface flow: Unknown Explain findings: Unknown

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input checked="" type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input checked="" type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
- Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Tributary was not flowing during site visit. The stream and receiving TNW are part of the Tinkers Creek Watershed, a subwatershed of the Cuyahoga River. "The Tinkers Creek watershed has experienced a high rate of population growth and development expansion. This trend has become particularly apparent in the last twenty years, largely due to the outward migration of people from the traditional urban population centers in the region. One result of this development and growth has been the destruction and degradation of natural areas within the watershed, as land is developed with little regard to the long-term

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

⁷Ibid.

consequences and detrimental impacts that are taking place. Degradation of the watershed and water resources is generally not the result of any single activity taking place on or near water bodies. Instead it is more often related to the cumulative result of many individual activities and impacts throughout an entire natural drainage area, or watershed” (Source: Tinkers Creek Land Conservancy, 2005). The Tinkers Creek Watershed has known impairments including low in-stream dissolved oxygen, toxicity, sedimentation, habitat degradation, and bacteria (Tinkers Creek Watershed Partner, 2009). The Cuyahoga River Watershed has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization).

Identify specific pollutants, if known: No known pollutants within the Stream S-1 drainage area.

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

- Riparian corridor. Characteristics (type, average width): Stream S-1 has a forested riparian corridor ranging from ~150' to 800'+ in 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: Stream S-1 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: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Explain:

Surface flow is:

Characteristics:

Subsurface flow: Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from:

Estimate approximate location of wetland as within the floodplain.

(ii) Chemical Characteristics:

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

Identify specific pollutants, if known:

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

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

Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

Stream S-1 has a surface water connection to a downstream TNW, Aurora Pond. Stream S-1 flows west directly into Aurora Pond and has a clear, traceable hydrologic connection.

Stream S-1 has direct hydrologic connectivity to Aurora Pond, thereby providing a significant nexus between the stream 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). Stream S-1 influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy. Rainfall, snowmelt, and stormwater runoff within the drainage area of Stream S-1 provides hydrology to the downstream receiving waters. The stream contributes to the chemical and physical make-up of Aurora Pond through its ability to convey sediments, chemicals, nutrients, and contaminants downstream to Aurora Pond.

The Cuyahoga River Watershed, in which Aurora Pond is located, has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization). In its current natural state, Stream S-1 is maintaining stream functions that affect the downstream TNW and is not contributing to the urbanization, increasing impervious surfaces, and erosion that contribute to downstream impairments therefor it is aiding in reducing known watershed impairments. A great deal of the surrounding land use around Aurora Pond and its tributaries include development (residential commercial, industrial, roadways, etc.) and residential development is currently occurring and is proposed within the areas adjacent to Stream S-1. The unaltered Stream S-1, which receives the majority of its hydrologic input via precipitation and runoff from relatively undeveloped forested land, is aiding in preventing further water quality impairments by providing Aurora Pond with a relatively clean water source free of the typical human-development-related contaminants (nutrients, stormwater, sediment, road salt, lawn fertilizers, etc.) impairing the watershed. Additionally, maintenance of Stream S-1 also accomplishes numerous priorities set forth by the Tinkers Creek Watershed Land Conservation Priority Plan including protecting water quality, maximizing the recharge of streams, and protecting aquatic habitats (Tinkers Creek Lake Conservancy, 2005).

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 Stream S-1 as described above, it has been determined that Stream S-1 has a significant nexus with the downstream

TNW, Aurora Pond as the functions and services provided by the stream provides more than a speculative effect on the physical integrity of Aurora Pond.

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

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

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

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

- Tributary waters: 323.7 linear feet 1-3 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

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

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

7. **Impoundments of jurisdictional waters.⁹**

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

⁸See Footnote # 3.

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

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

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters:
- Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: 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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.

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.

- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
- or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (Citations/Sources for IIIB1iii and IIIC1):
 1. Alexander, R.B., E.W. Boyer, R.A. Smith, G.E. Schwartz, and R.B. Moore, 2007. The Role of Headwater Streams in Downstream Water Quality. Journal of the American Water Resources Association 43.
 2. Cuyahoga River Community Planning Organization. Tinkers Creek. <http://cuyahogariver.org/tinker-s-creek-watershed.html> Accessed 10 April 2015.
 3. 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.
 4. Meyer, J.L., D.L. Strayer, J.B. Wallace, S.L. Eggert, G.S. Helfman, and N.E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.
 5. Tinkers Creek Land Conservancy. 2005. Tinkers Creek Watershed Plan: Tinkers Creek Watershed Land Conservation Priority Plan. http://www.tinkerscreekwatershed.org/TCLC_final_report.pdf Accessed 5 January 2016.
 6. Tinkers Creek Watershed Partners. 2009. Tinkers Creek Watershed Action Plan. <http://www.tinkerscreekwatershed.org/documents/Tinkers%20Creek%20WAP%20Final.pdf> Accessed 5 January 2016. Stream S-1 flows west directly into Aurora Pond, a TNW.
 7. USEPA. 2013. Streams. <http://water.epa.gov/type/rsl/streams.cfm>. Accessed 6 February 2013.
 8. 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.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016

Date

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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 2 of 8, Stream S-2, Wetlands N and O

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Aurora Pond
Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 6, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 302.2 linear feet: 2-3 width (ft) and/or acres.
Wetlands: Wetland N (0.461 acre), Wetland O (0.124 acre)

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

Elevation of established OHWM (if known): Unknown

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 809 square miles (Cuyahoga River Watershed)

Drainage area: Less than 1 square mile

Average annual rainfall: 41.85 inches

Average annual snowfall: 61.6 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through 2 tributaries before entering TNW.

Project waters are 1 (or less) river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 1 (or less) 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 TNW⁵: Stream S-2 flows southwest into Wetland Q where it then loses bed and banks, is then conveyed through Wetland Q for approximately 50 feet, and then flows into Aurora Pond.

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:

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

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

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

Average width: 2-3 feet
Average depth: 1-3 feet
Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input checked="" type="checkbox"/> Other. Explain: Leaves/detritus | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary appeared stable
Presence of run/riffle/pool complexes. Explain: None observed
Tributary geometry: Relatively Straight
Tributary gradient (approximate average slope): Less than 2%

(c) Flow:

Tributary provides for: Ephemeral Flow
Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Tributary flows ephemerally during and after rain events, during periods of snowmelt, and during periods of overland sheetflow.

Other information on duration and volume: Unknown

Surface flow is: Confined Characteristics: Surface flow is confined to a defined bed and banks. Stream S-2 flow into Wetland Q where it loses bed and bank and is conveyed through Wetland Q into Aurora Pond.

Subsurface flow: Unknown Explain findings: Unknown

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input checked="" type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input checked="" type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
- Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Tributary was not flowing during site visit. The stream and receiving TNW are part of the Tinkers Creek Watershed, a subwatershed of the Cuyahoga River. "The Tinkers Creek watershed has experienced a high rate of population growth and development expansion. This trend has become particularly apparent in the last twenty years, largely due to the outward migration of people from the traditional urban population centers in the region. One result of this development and growth has been the destruction and degradation of natural areas within the watershed, as land is developed with little regard to the long-term

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

⁷Ibid.

consequences and detrimental impacts that are taking place. Degradation of the watershed and water resources is generally not the result of any single activity taking place on or near water bodies. Instead it is more often related to the cumulative result of many individual activities and impacts throughout an entire natural drainage area, or watershed” (Source: Tinkers Creek Land Conservancy, 2005). The Tinkers Creek Watershed has known impairments including low in-stream dissolved oxygen, toxicity, sedimentation, habitat degradation, and bacteria (Tinkers Creek Watershed Partner, 2009). The Cuyahoga River Watershed has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization).

Identify specific pollutants, if known: No known pollutants within the Stream S-2 drainage area.

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

- Riparian corridor. Characteristics (type, average width): Stream S-2 has a predominantly forested riparian width of ~600+ feet.
- Wetland fringe. Characteristics: Wetlands O and Q/R directly abut Stream S-2.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Stream S-2 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 N (0.461 acre), Wetland O (0.124 acre)

Wetland type. Explain: Wetland N (PFO), Wetland O (predominantly PFO, some PEM component)

Wetland quality. Explain: Wetlands N and O are of low to moderate quality (scored using Ohio Rapid Assessment Method).

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

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral Flow Explain: Wetlands N and O flow during and after precipitation, during snowmelt, and during periods of overland sheet flow to the TNW.

Surface flow is: Confined

Characteristics: Wetlands N and O are one wetland connected by a culvert; Wetlands N and O drain downslope southwest into Stream S-2. Wetlands N and O drain to stream S-2 via Wetland O which is linear in nature; the flow path is confined to the Wetland N limits and connection point to Stream S-2.

Subsurface flow: Unknown Explain findings: Unknown

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting- Wetland N and O are a single wetland connected by a culvert and have been separated historically by a road.

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are 1 (or less) river miles from TNW.

Project waters are 1 (or less) 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: No standing water observed in wetlands at time of visit. See IIB Iiii for watershed description.

Identify specific pollutants, if known: Unknown

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

- Riparian buffer. Characteristics (type, average width): Wetlands N and O have a riparian buffer of generally forested vegetation ranging up to 700+ feet in width.

- Vegetation type/percent cover. Explain: Wetland N (PFO), Wetland O (PEM/PFO)
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Wetlands N and O provide habitat for aquatic flora and fauna.

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

All wetland(s) being considered in the cumulative analysis: 2
 Approximately (0.585) acres in total are being considered in the cumulative analysis.
 For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland N Y	0.461		
Wetland O Y	0.124		

Summarize overall biological, chemical and physical functions being performed: The wetlands provides 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:
- 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:

Wetlands N and O, being considered one single wetland as they are separated only by a road/culvert, directly abut drain downslope to, and are within the the floodplain Stream S-2. A hydrologic surface connection is visible and traceable between the Stream S-2 and Wetlands N and O. The stream and its adjacent wetlands have hydrologic connectivity to Aurora Pond, thereby providing a significant nexus between the stream and its adjacent wetlands and the downstream TNW. Stream S-2 flows downslope southwest into Wetland Q/R which directly abuts and drains into Aurora Pond, a TNW. S-2 has a traceable surface hydrologic connection to Aurora Pond. Stream S-2 and its adjacent wetlands, Wetland N and O, are in close proximity to Aurora Pond (less than 800 linear feet).

Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). Stream S-2 influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy. Rainfall, snowmelt, and stormwater runoff within the drainage area of Stream S-2 provides hydrology to the downstream receiving waters. The stream contributes to the chemical and physical make-up of Aurora Pond through its ability to convey sediments, chemicals, nutrients, and contaminants downstream to Aurora Pond.

Wetlands N and O directly affect the nature of the water entering Stream S-2 and its downstream receiving waters, both in quantity and chemical/physical attributes. This occurs through the reduction of runoff rates of water received by Stream S-2 resulting from attenuation and storage of floodwaters; capture of water through evapotranspiration; storage of runoff; and filtering and/or storage of nutrients, chemicals, and sediments contained in rainfall, runoff, or other hydrologic inputs. Ultimately, this affects the downstream TNW, Aurora Pond, 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.

The Cuyahoga River Watershed, in which Aurora Pond is located, has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization). In its current natural state, Stream S-2 is maintaining stream functions that affect the downstream TNW and is not contributing to the urbanization, increasing impervious surfaces, and erosion that contribute to downstream impairments therefore it is aiding in reducing known watershed impairments. A great deal of the surrounding land use around Aurora Pond and its tributaries include development (residential commercial, industrial, roadways, etc.) and residential development is currently occurring and is proposed within the areas adjacent to Stream S-2 and Wetlands N and O. The unaltered Stream S-2 and its adjacent wetlands, which receive the majority of their hydrologic input via precipitation and runoff from relatively undeveloped forested land, are aiding in preventing further water quality impairments by providing Aurora Pond with a relatively clean water source free of the typical human-development-related contaminants (nutrients, stormwater, sediment, road salt, lawn fertilizers, etc.) impairing the watershed. Additionally, maintenance of Stream S-2 and its adjacent wetlands also accomplishes numerous priorities set forth by the Tinkers Creek Watershed Land Conservation Priority Plan including protecting water quality, maximizing the recharge of streams, and protecting aquatic habitats (Tinkers Creek Lake Conservancy, 2005).

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 Stream S-2 and its adjacent wetlands as described above, it has been determined that Stream S-2 and its adjacent wetlands have a significant nexus with the downstream TNW, Aurora Pond as the functions and services provided by the stream provides more than a speculative effect on the physical integrity of Aurora Pond.

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

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

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

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

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 302.2 linear feet 2-3 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

⁸See 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 jurisdictional. 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 N (0.461 acre), Wetland O (0.124 acre)

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain:
 Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters:
 Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:
 Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
 Lakes/ponds: acres.
 Other non-wetland waters: acres. List type of aquatic resource: .
 Wetlands: acres.

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 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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
- or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (Citations/Sources for IIIB 1 iii and IIIC2):
 1. Alexander, R.B., E.W. Boyer, R.A. Smith, G.E. Schwartz, and R.B. Moore, 2007. The Role of Headwater Streams in Downstream Water Quality. Journal of the American Water Resources Association 43.
 2. Cuyahoga River Community Planning Organization. Tinkers Creek. <http://cuyahogariver.org/tinker-s-creek-watershed.html> Accessed 10 April 2015.
 3. 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.
 4. Meyer, J.L., D.L. Strayer, J.B. Wallace, S.L. Eggert, G.S. Helfman, and N.E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.
 5. Tinkers Creek Land Conservancy. 2005. Tinkers Creek Watershed Plan: Tinkers Creek Watershed Land Conservation Priority Plan. http://www.tinkerscreekwatershed.org/TCLC_final_report.pdf Accessed 5 January 2016.
 6. Tinkers Creek Watershed Partners. 2009. Tinkers Creek Watershed Action Plan. <http://www.tinkerscreekwatershed.org/documents/Tinkers%20Creek%20WAP%20Final.pdf> Accessed 5 January 2016. Stream S-1 flows west directly into Aurora Pond, a TNW.
 7. USEPA. 2013. Streams. <http://water.epa.gov/type/rsl/streams.cfm>. Accessed 6 February 2013.
 8. 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.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016
Date

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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 3 of 8, Stream S-3, Wetland P

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond

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

Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 82.8 linear feet: 1 width (ft) and/or acres.

Wetlands: Wetland P (0.098 acre)

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

Elevation of established OHWM (if known): Unknown

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

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

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 809 square miles (Cuyahoga River Watershed)

Drainage area: Less than 1 square mile

Average annual rainfall: 41.85 inches

Average annual snowfall: 61.6 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 1 (or less) river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 1 (or less) 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 TNW⁵: Stream S-3 flows south into Wetland Q/R where it then loses bed and banks, is then conveyed through Wetland Q for approximately 300 feet, and then flows into Aurora Pond.

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:

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

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

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

Average width: 1 feet
Average depth: 1 feet
Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input checked="" type="checkbox"/> Other. Explain: Leaves/detritus | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary appeared stable

Presence of run/riffle/pool complexes. Explain: None observed

Tributary geometry: Relatively Straight

Tributary gradient (approximate average slope): Less than 2%

(c) Flow:

Tributary provides for: Ephemeral Flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Tributary flows ephemerally during and after rain events, during periods of snowmelt, and during periods of overland sheetflow.

Other information on duration and volume: Unknown

Surface flow is: Confined Characteristics: Surface flow is confined to a defined bed and banks. Stream S-3 flow into Wetland Q where it loses bed and bank and is conveyed through Wetland Q into Aurora Pond.

Subsurface flow: Unknown Explain findings: Unknown

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input checked="" type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input checked="" type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
- Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

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

Explain: Tributary was not flowing during site visit. The stream and receiving TNW are part of the Tinkers Creek Watershed, a subwatershed of the Cuyahoga River. "The Tinkers Creek watershed has experienced a high rate of population growth and development expansion. This trend has become particularly apparent in the last twenty years, largely due to the outward migration of people from the traditional urban population centers in the region. One result of this development and growth has been the destruction and degradation of natural areas within the watershed, as land is developed with little regard to the long-term

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

⁷Ibid.

consequences and detrimental impacts that are taking place. Degradation of the watershed and water resources is generally not the result of any single activity taking place on or near water bodies. Instead it is more often related to the cumulative result of many individual activities and impacts throughout an entire natural drainage area, or watershed” (Source: Tinkers Creek Land Conservancy, 2005). The Tinkers Creek Watershed has known impairments including low in-stream dissolved oxygen, toxicity, sedimentation, habitat degradation, and bacteria (Tinkers Creek Watershed Partner, 2009). The Cuyahoga River Watershed has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization).

Identify specific pollutants, if known: No known pollutants within the Stream S-3 drainage area.

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

- Riparian corridor. Characteristics (type, average width): Stream S-3 has a predominantly forested riparian width of ~600+ feet.
- Wetland fringe. Characteristics: Wetlands P and Q/R directly abut Stream S-3.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Stream S-3 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 P (0.098 acre)

Wetland type. Explain: Wetland P (PSS/PFO)

Wetland quality. Explain: Wetland P is moderate quality (scored using Ohio Rapid Assessment Method).

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

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral Flow Explain: Wetlands P flows during and after precipitation, during snowmelt, and during periods of overland sheet flow to the TNW.

Surface flow is: Confined

Characteristics: Wetland P abuts and drains downslope south into Stream S-3 confined to the area in which the wetland abuts the stream.

Subsurface flow: Unknown Explain findings: Unknown

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 1 (or less) river miles from TNW.

Project waters are 1 (or less) 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: No standing water observed in wetlands at time of visit. See IIB liii for watershed description.

Identify specific pollutants, if known: Unknown

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

- Riparian buffer. Characteristics (type, average width): Wetland P has a riparian buffer of generally scrub-shrub and forested vegetation ranging up to 700+ feet in width.
- Vegetation type/percent cover. Explain: 100% forested and/or scrub-shrub
- Habitat for:
 - Federally Listed species. Explain findings:

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings: Wetland provides habitat for aquatic flora and fauna.

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

All wetland(s) being considered in the cumulative analysis: 2
 Approximately (0.098) acres in total are being considered in the cumulative analysis.
 For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland P Y	0.098		

Summarize overall biological, chemical and physical functions being performed: The wetland provides 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:
- 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 P directly abuts and is within the the floodplain Stream S-3. A hydrologic surface connection is visible and traceable between the Stream S-3 and Wetland P. The stream and its adjacent wetland have hydrologic connectivity to Aurora Pond, thereby providing a significant nexus between the stream and its adjacent wetland and the downstream TNW. Stream S-3 flows downslope south into Wetland Q/R which directly abuts and drains into Aurora Pond, a TNW. S-3 has a traceable surface hydrologic connection to Aurora Pond. Stream S-3 and its adjacent wetland, are in close proximity to Aurora Pond (less than 800 linear feet).

Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). Stream S-3 influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy. Rainfall, snowmelt, and stormwater runoff within the drainage area of Stream S-3 provides hydrology to the downstream receiving waters. The stream contributes to the chemical and physical make-up of Aurora Pond through its ability to convey sediments, chemicals, nutrients, and contaminants downstream to Aurora Pond.

Wetland P directly affects the nature of the water entering Stream S-3 and its downstream receiving waters, both in quantity and chemical/physical attributes. This occurs through the reduction of runoff rates of water received by Stream S-3 resulting from attenuation and storage of floodwaters; capture of water through evapotranspiration; storage of runoff; and filtering and/or storage of nutrients, chemicals, and sediments contained in rainfall, runoff, or other hydrologic inputs. Ultimately, this affects the downstream TNW, Aurora Pond, as the wetland alters the amount of flow reaching the TNW and furthermore, any additional matter such as nutrients, chemicals, sediments, and pollutants carried in that flow.

The Cuyahoga River Watershed, in which Aurora Pond is located, has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization). In its current natural state, Stream S-3 is maintaining stream functions that affect the downstream TNW and is not contributing to the urbanization, increasing impervious surfaces, and erosion that contribute to downstream impairments therefore it is aiding in reducing known watershed impairments. A great deal of the surrounding land use around Aurora Pond and its tributaries include development (residential commercial, industrial, roadways, etc.) and residential development is currently occurring and is proposed within the areas adjacent to Stream S-3 and Wetland P. The unaltered Stream S-3 and its adjacent wetland, which receive the majority of their hydrologic input via precipitation and runoff from relatively undeveloped forested land, are aiding in preventing further water quality impairments by providing Aurora Pond with a relatively clean water source free of the typical human-development-related contaminants (nutrients, stormwater, sediment, road salt, lawn fertilizers, etc.) impairing the watershed. Additionally, maintenance of Stream S-3 and its adjacent wetland also accomplishes numerous priorities set forth by the Tinkers Creek Watershed Land Conservation Priority Plan including protecting water quality, maximizing the recharge of streams, and protecting aquatic habitats (Tinkers Creek Lake Conservancy, 2005).

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 Stream S-3 and its adjacent wetland as described above, it has been determined that Stream S-3 and its adjacent wetland have a significant nexus with the downstream TNW, Aurora Pond as the functions and services provided by the stream provides more than a speculative effect on the physical integrity of Aurora Pond.

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

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

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 82.8 linear feet 1 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

⁸See Footnote # 3.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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 P (0.098 acre)

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters:
- Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .

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.

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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
- or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (Citations/Sources for IIIB Iiii and IIIC2):
 1. Alexander, R.B., E.W. Boyer, R.A. Smith, G.E. Schwartz, and R.B. Moore, 2007. The Role of Headwater Streams in Downstream Water Quality. Journal of the American Water Resources Association 43.
 2. Cuyahoga River Community Planning Organization. Tinkers Creek. <http://cuyahogariver.org/tinker-s-creek-watershed.html> Accessed 10 April 2015.
 3. 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.
 4. Meyer, J.L., D.L. Strayer, J.B. Wallace, S.L. Eggert, G.S. Helfman, and N.E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.
 5. Tinkers Creek Land Conservancy. 2005. Tinkers Creek Watershed Plan: Tinkers Creek Watershed Land Conservation Priority Plan. http://www.tinkerscreekwatershed.org/TCLC_final_report.pdf Accessed 5 January 2016.
 6. Tinkers Creek Watershed Partners. 2009. Tinkers Creek Wateshed Action Plan. <http://www.tinkerscreekwatershed.org/documents/Tinkers%20Creek%20WAP%20Final.pdf> Accessed 5 January 2016. Stream S-1 flows west directly into Aurora Pond, a TNW.
 7. USEPA. 2013. Streams. <http://water.epa.gov/type/rsl/streams.cfm>. Accessed 6 February 2013.
 8. 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.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016
Date

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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 4 of 8, Stream S-4, Wetlands E/M and L

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Aurora Pond
Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 601.4 linear feet: 3-4 width (ft) and/or acres.
Wetlands: Wetland E/M (0.175 acre), Wetland L (1.468 acres)

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

Elevation of established OHWM (if known): Unknown

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

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

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 809 square miles (Cuyahoga River Watershed)

Drainage area: Less than 1 square mile

Average annual rainfall: 41.85 inches

Average annual snowfall: 61.6 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through tributaries before entering TNW.

Project waters are 1 (or less) river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 1 (or less) 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 TNW⁵: Stream 4 flows southwest directly into Aurora Pond.

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: The upper limit of Stream S-4 is culverted under the dirt road.

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

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

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

Average width: 3-4 feet
Average depth: 1-3 feet
Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input checked="" type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary appeared stable
Presence of run/riffle/pool complexes. Explain: None observed
Tributary geometry: Relatively Straight
Tributary gradient (approximate average slope): Less than 2%

(c) Flow:

Tributary provides for: Seasonal Flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Tributary flows during and after rain events, during periods of snowmelt, during periods of overland sheetflow, during wet seasons, and during periods of high groundwater. Stream ceases to flow during dry periods.

Other information on duration and volume: Unknown

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

Subsurface flow: Unknown Explain findings: Unknown

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input checked="" type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input checked="" type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
- Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

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

Explain: Tributary was flowing during site visit but water discoloration was not noted. The stream and receiving TNW are part of the Tinkers Creek Watershed, a subwatershed of the Cuyahoga River. "The Tinkers Creek watershed has experienced a high rate of population growth and development expansion. This trend has become particularly apparent in the last twenty years, largely due to the outward migration of people from the traditional urban population centers in the region. One result of this development and growth has been the destruction and degradation of natural areas within the watershed, as land is developed with little regard to the long-term consequences and detrimental impacts that are taking place. Degradation of the watershed and water resources is

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

⁷Ibid.

generally not the result of any single activity taking place on or near water bodies. Instead it is more often related to the cumulative result of many individual activities and impacts throughout an entire natural drainage area, or watershed” (Source: Tinkers Creek Land Conservancy, 2005). The Tinkers Creek Watershed has known impairments including low in-stream dissolved oxygen, toxicity, sedimentation, habitat degradation, and bacteria (Tinkers Creek Watershed Partner, 2009). The Cuyahoga River Watershed has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization).

Identify specific pollutants, if known: No known pollutants within the Stream S-4 drainage area.

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

- Riparian corridor. Characteristics (type, average width): Stream S-4 has a predominantly forested riparian width of ~600+ feet.
- Wetland fringe. Characteristics: Wetland E/M directly abuts Stream S-4.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Stream S-4 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 E/M (0.175 acre), Wetland L (4.468 acres)

Wetland type. Explain: Wetland E/M (PEM/PFO), Wetland L (PEM/PSS/PFO)

Wetland quality. Explain: Wetlands E/M and L are of moderate quality (scored using Ohio Rapid Assessment Method).

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

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent/Ephemeral Flow Explain: Wetland L drains seasonally to Stream S-4 during wet seasons and during/after precipitation events. Wetland E/M drains ephemerally to Stream 4 via Wetland E/M during and after precipitation events.

Surface flow is: Confined/Overland Sheetflow

Characteristics: Wetland L drains to Stream S-4 confined to the area in which Wetland L abuts Stream S-4. Wetland E/M drains downslope via overland sheetflow into Wetland L and is conveyed into Stream S-4 via Wetland L.

Subsurface flow: Unknown Explain findings: Unknown

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting- Wetland L directly abuts Stream S-4 via a culvert.

Not directly abutting

Discrete wetland hydrologic connection. Explain: Wetland E/M drains downslope via overland sheetflow into Wetland L, and is then conveyed discretely into Stream S-4 via Wetland L.

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are 1 (or less) river miles from TNW.

Project waters are 1 (or less) 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: No standing water observed in wetlands at time of visit. See IIB1iii for watershed description.

Identify specific pollutants, if known: Unknown

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

- Riparian buffer. Characteristics (type, average width): Wetlands E/M and L have a riparian buffer of emergent, scrub-shrub, and forested vegetation ranging from 0-700+ feet in width.
- Vegetation type/percent cover. Explain: Wetland E/M (PEM/PFO), Wetland L (PEM/PSS/PFO)
- Habitat for:
 - Federally Listed species. Explain findings:

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings: Wetlands E/M and L provide habitat for aquatic flora and fauna.

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

All wetland(s) being considered in the cumulative analysis: 2
 Approximately (0.585) acres in total are being considered in the cumulative analysis.
 For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland E/M N	0.175		
Wetland L Y	1.468		

Summarize overall biological, chemical and physical functions being performed: The wetlands 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:
- 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:

A hydrologic surface connection is traceable between the Stream S-4 and Wetlands E/M and L. The stream and its adjacent wetlands have hydrologic connectivity to Aurora Pond, thereby providing a significant nexus between the stream and its adjacent wetlands and the downstream TNW. Wetland E/M flows south downslope into Wetland L and is conveyed through Wetland L to Stream S-4. Wetland L directly abuts Stream 4 via a culvert. Stream S-4 flows downslope directly into Aurora Pond. Wetlands E/M and L are less than 1200 linear feet from Aurora Pond. Stream S-4 is within the mapped FEMA 100-year flood zone.

Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). Stream S-4 influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy. Rainfall, snowmelt, and stormwater runoff within the drainage area of Stream S-4 provides hydrology to the downstream receiving waters. The stream contributes to the chemical and physical make-up of Aurora Pond through its ability to convey sediments, chemicals, nutrients, and contaminants downstream to Aurora Pond.

Wetlands E/M and L directly affect the nature of the water entering Stream S-4 and its downstream receiving waters, both in quantity and chemical/physical attributes. This occurs through the reduction of runoff rates of water received by Stream S-4 resulting from

attenuation and storage of floodwaters; capture of water through evapotranspiration; storage of runoff; and filtering and/or storage of nutrients, chemicals, and sediments contained in rainfall, runoff, or other hydrologic inputs. Ultimately, this affects the downstream TNW, Aurora Pond, 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.

The Cuyahoga River Watershed, in which Aurora Pond is located, has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization). In its current natural state, Stream S-4 is maintaining stream functions that affect the downstream TNW and is not contributing to the urbanization, increasing impervious surfaces, and erosion that contribute to downstream impairments therefore it is aiding in reducing known watershed impairments. A great deal of the surrounding land use around Aurora Pond and its tributaries include development (residential commercial, industrial, roadways, etc.) and residential development is currently occurring and is proposed within the areas adjacent to Stream S-4 and Wetlands E/M and L. The unaltered Stream S-4 and its adjacent wetlands, which receive the majority of their hydrologic input via precipitation and runoff from relatively undeveloped forested land, are aiding in preventing further water quality impairments by providing Aurora Pond with a relatively clean water source free of the typical human-development-related contaminants (nutrients, stormwater, sediment, road salt, lawn fertilizers, etc.) impairing the watershed. Additionally, maintenance of Stream S-4 and its adjacent wetlands also accomplishes numerous priorities set forth by the Tinkers Creek Watershed Land Conservation Priority Plan including protecting water quality, maximizing the recharge of streams, and protecting aquatic habitats (Tinkers Creek Lake Conservancy, 2005).

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 Stream S-4 and its adjacent wetlands as described above, it has been determined that Stream S-4 and its adjacent wetlands have a significant nexus with the downstream TNW, Aurora Pond as the functions and services provided by the stream provides more than a speculative effect on the physical integrity of Aurora Pond.

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: Stream S-4 flows during and after rain events, during periods of snowmelt, during periods of overland sheetflow, during wet seasons, and during periods of high groundwater. Stream ceases to flow only during dry periods. Stream was flowing during April 2014 site visit. Flow is visible in the channel during leaf-off aerial photographs.

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

- Tributary waters: 601.4 linear feet 3-4 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 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:
- 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: Wetland L (1.468 acres)

⁸See Footnote # 3.

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: Wetland E/M (0.175 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:

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters:
- Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

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.

- 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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
 - or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (Citations/Sources for IIIB1iii and IIIC2):
 1. Alexander, R.B., E.W. Boyer, R.A. Smith, G.E. Schwartz, and R.B. Moore, 2007. The Role of Headwater Streams in Downstream Water Quality. Journal of the American Water Resources Association 43.
 2. Cuyahoga River Community Planning Organization. Tinkers Creek. <http://cuyahogariver.org/tinker-s-creek-watershed.html> Accessed 10 April 2015.
 3. 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.
 4. Meyer, J.L., D.L. Strayer, J.B. Wallace, S.L. Eggert, G.S. Helfman, and N.E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.
 5. Tinkers Creek Land Conservancy. 2005. Tinkers Creek Watershed Plan: Tinkers Creek Watershed Land Conservation Priority Plan. http://www.tinkerscreekwatershed.org/TCLC_final_report.pdf Accessed 5 January 2016.
 6. Tinkers Creek Watershed Partners. 2009. Tinkers Creek Watershed Action Plan. <http://www.tinkerscreekwatershed.org/documents/Tinkers%20Creek%20WAP%20Final.pdf> Accessed 5 January 2016. Stream S-1 flows west directly into Aurora Pond, a TNW.
 7. USEPA. 2013. Streams. <http://water.epa.gov/type/rsl/streams.cfm>. Accessed 6 February 2013.
 8. 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.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker Project Manager	February 10, 2016 Date
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PPROVED 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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 5 of 8, Stream S-6, Wetland F

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond

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

Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 182.3 linear feet: 4-6 width (ft) and/or acres.

Wetlands: 0.017 acre.

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

Elevation of established OHWM (if known):

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size:

Drainage area:

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through tributaries before entering TNW.

Project waters are river miles from TNW.

Project waters are river miles from RPW.

Project waters are aerial (straight) miles from TNW.

Project waters are aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

Tributary stream order, if known:

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

- Tributary is:**
- Natural
 - Artificial (man-made). Explain:
 - Manipulated (man-altered). Explain:

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

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

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

Average width: feet
Average depth: feet
Average side slopes:

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry:

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for:

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

Describe flow regime:

Other information on duration and volume:

Surface flow is: Characteristics:

Subsurface flow: Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- | | | |
|---|---|--|
| <input type="checkbox"/> Bed and banks | | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris | |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation | |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line | |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting | |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour | |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events | |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community | |
| <input type="checkbox"/> other (list): | | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | | |

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

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

(iii) Chemical Characteristics:

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

Explain:

Identify specific pollutants, if known:

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

⁷Ibid.

(iv) Biological 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:

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Explain:

Surface flow is:

Characteristics:

Subsurface flow: Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting

- Not directly abutting

- Discrete wetland hydrologic connection. Explain:

- Ecological connection. Explain:

- Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from:

Estimate approximate location of wetland as within the floodplain.

(ii) Chemical Characteristics:

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

Identify specific pollutants, if known:

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

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

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

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

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

For each wetland, specify the following:

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

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 - TNWs: linear feet width (ft), Or, acres.
 - Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Stream S-6 is a perennial tributary which flows year-round with no cessation in flow. Leaf-on and leaf-off aerial photographs indicate water in the channel. Water was observed in the channel during the April 2014 and 2015 site visits. Fish were observed in the channel during the site visits. The channel is identified on the USGS quadrangle as well as in the USGS NHD. Stream S-6 flows in a westerly direction directly into Aurora Pond.
 - 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: 182.3 linear feet 4-6 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 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: Wetland F physically touches and directly abuts Stream S-6 with no upland barrier, berm, or separation.
- 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: 0.017 acre

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

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

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

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).

- Other non-wetland waters: acres.

Identify type(s) of waters:

- Wetlands: acres.

⁸See Footnote # 3.

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): 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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
 - or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016
Date

Islands
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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 6 of 8, Stream S-12, Wetland B

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Aurora Pond
Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 163.8 linear feet: 1 width (ft) and/or acres.
Wetlands: Wetland B (0.199 acre)

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

Elevation of established OHWM (if known): Unknown

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

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

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 809 square miles (Cuyahoga River Watershed)

Drainage area: Less than 1 square mile

Average annual rainfall: 41.85 inches

Average annual snowfall: 61.6 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 1 (or less) river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 1 (or less) 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 TNW⁵: Stream S-12 flows north into an open roadside ditch which turns west flows for about 750 feet and then discharges into Aurora Pond.

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: Stream 12 is culverted at Aurora Lake Road.

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

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

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

Average width: 1 feet
Average depth: 1 feet
Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input checked="" type="checkbox"/> Other. Explain: Leaves/detritus | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary appeared stable

Presence of run/riffle/pool complexes. Explain: None observed

Tributary geometry: Relatively Straight

Tributary gradient (approximate average slope): Less than 2%

(c) Flow:

Tributary provides for: Ephemeral Flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Tributary flows ephemerally during and after rain events, during periods of snowmelt, and during periods of overland sheetflow.

Other information on duration and volume: Unknown

Surface flow is: Confined Characteristics: Surface flow is confined to a defined bed and banks through the tributary and the roadside ditch.

Subsurface flow: Unknown Explain findings: Unknown

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input checked="" type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input checked="" type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
- Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

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

Explain: Tributary was flowing during site visit and water appeared clear. The stream and receiving TNW are part of the Tinkers Creek Watershed, a subwatershed of the Cuyahoga River. "The Tinkers Creek watershed has experienced a high rate of population growth and development expansion. This trend has become particularly apparent in the last twenty years, largely due to the outward migration of people from the traditional urban population centers in the region. One result of this development and growth has been the destruction and degradation of natural areas within the watershed, as land is developed with little regard to the long-

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

⁷Ibid.

term consequences and detrimental impacts that are taking place. Degradation of the watershed and water resources is generally not the result of any single activity taking place on or near water bodies. Instead it is more often related to the cumulative result of many individual activities and impacts throughout an entire natural drainage area, or watershed” (Source: Tinkers Creek Land Conservancy, 2005). The Tinkers Creek Watershed has known impairments including low in-stream dissolved oxygen, toxicity, sedimentation, habitat degradation, and bacteria (Tinkers Creek Watershed Partner, 2009). The Cuyahoga River Watershed has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization).

Identify specific pollutants, if known: Stream S-12 received road runoff which includes winter road sand and salt.

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

- Riparian corridor. Characteristics (type, average width): Stream S-12 has a mixed forested, scrub-shrub, and emergent riparian width ranging from 0-500 feet.
- Wetland fringe. Characteristics: Wetland B directly abuts Stream S-12.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Stream S-12 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 B (0.199)

Wetland type. Explain: Wetland B (PEM/PSS)

Wetland quality. Explain: Wetland B is of moderate quality (scored using Ohio Rapid Assessment Method).

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

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral Flow Explain: Wetlands B flows during and after precipitation, during snowmelt, and during periods of overland sheet flow to the TNW.

Surface flow is: Confined

Characteristics: Wetland B abuts and drains downslope north into Stream S-12 confined to the area in which the wetland abuts the stream.

Subsurface flow: Unknown Explain findings: Unknown

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 1 (or less) river miles from TNW.

Project waters are 1 (or less) 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: No standing water observed in wetlands at time of visit. See IIB Iiii for watershed description.

Identify specific pollutants, if known: Unknown

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

- Riparian buffer. Characteristics (type, average width): Wetland B has a riparian buffer of generally scrub-shrub and forested vegetation ranging up to 150-500+ feet in width.
- Vegetation type/percent cover. Explain: 100% emergent and/or scrub-shrub
- Habitat for:
 - Federally Listed species. Explain findings:

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings: Wetland provides habitat for aquatic flora and fauna.

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

All wetland(s) being considered in the cumulative analysis: 2
 Approximately (0.199) acres in total are being considered in the cumulative analysis.
 For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland B Y	0.199		

Summarize overall biological, chemical and physical functions being performed: The wetland provides 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:
- 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 B directly abuts and is within the the floodplain Stream S-12. A hydrologic surface connection is visible and traceable between the Stream S-12 and Wetland B. The stream and its adjacent wetland have hydrologic connectivity to Aurora Pond, thereby providing a significant nexus between the stream and its adjacent wetland and the downstream TNW. Stream S-12 flows north downslope into Wetland a roadside ditch which outlets directly into Aurora Pond, a TNW. S-12 has a traceable surface hydrologic connection to Aurora Pond. Stream S-12 and its adjacent wetland, are in close proximity to Aurora Pond (less than 800 linear feet).

Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). Stream S-12 influences the chemistry and physical conditions of the downstream TNW through its hydrologic input, storage, and transport of sediments and energy. Rainfall, snowmelt, and stormwater runoff within the drainage area of Stream S-12 provides hydrology to the downstream receiving waters. The stream contributes to the chemical and physical make-up of Aurora Pond through its ability to convey sediments, chemicals, nutrients, and contaminants downstream to Aurora Pond.

Wetland B directly affects the nature of the water entering Stream S-12 and its downstream receiving waters, both in quantity and chemical/physical attributes. This occurs through the reduction of runoff rates of water received by Stream S-12 resulting from attenuation and storage of floodwaters; capture of water through evapotranspiration; storage of runoff; and filtering and/or storage of nutrients, chemicals, and sediments contained in rainfall, runoff, or other hydrologic inputs. Ultimately, this affects the downstream TNW, Aurora Pond, as the wetland alters the amount of flow reaching the TNW and furthermore, any additional matter such as nutrients, chemicals, sediments, and pollutants carried in that flow.

The Cuyahoga River Watershed, in which Aurora Pond is located, has impairments including increasing urbanization bringing impervious surfaces, construction at headwaters reducing stream function, increased erosion, sediment which impairs aquatic life and widens flood areas, habitat loss, and loss of wetlands (Cuyahoga River Community Planning Organization). In its current natural state, Stream S-12 is maintaining stream functions that affect the downstream TNW and is not contributing to the urbanization, increasing impervious surfaces, and erosion that contribute to downstream impairments therefore it is aiding in reducing known watershed impairments. A great deal of the surrounding land use around Aurora Pond and its tributaries include development (residential commercial, industrial, roadways, etc.) and residential development is currently occurring and is proposed within the areas adjacent to Stream S-12 and Wetland B. The unaltered Stream S-12 and its adjacent wetland, which receive the majority of their hydrologic input via precipitation and runoff from relatively undeveloped forested land, are aiding in preventing further water quality impairments by providing Aurora Pond with a relatively clean water source free of the typical human-development-related contaminants (nutrients, stormwater, sediment, road salt, lawn fertilizers, etc.) impairing the watershed. Additionally, maintenance of Stream S-12 and its adjacent wetland also accomplishes numerous priorities set forth by the Tinkers Creek Watershed Land Conservation Priority Plan including protecting water quality, maximizing the recharge of streams, and protecting aquatic habitats (Tinkers Creek Lake Conservancy, 2005).

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 Stream S-12 and its adjacent wetland as described above, it has been determined that Stream S-12 and its adjacent wetland have a significant nexus with the downstream TNW, Aurora Pond as the functions and services provided by the stream provides more than a speculative effect on the physical integrity of Aurora Pond.

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

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

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 163.8 linear feet 1 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

⁸See Footnote # 3.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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 B (0.199 acre)

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters:
- Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .

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.

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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
- or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (Citations/Sources for IIIB Iiii and IIIC2):
 1. Alexander, R.B., E.W. Boyer, R.A. Smith, G.E. Schwartz, and R.B. Moore, 2007. The Role of Headwater Streams in Downstream Water Quality. Journal of the American Water Resources Association 43.
 2. Cuyahoga River Community Planning Organization. Tinkers Creek. <http://cuyahogariver.org/tinker-s-creek-watershed.html> Accessed 10 April 2015.
 3. 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.
 4. Meyer, J.L., D.L. Strayer, J.B. Wallace, S.L. Eggert, G.S. Helfman, and N.E. Leonard. 2007. The Contribution of Headwater Streams to Biodiversity in River Networks. Journal of the American Water Resources Association. 43: 86-103.
 5. Tinkers Creek Land Conservancy. 2005. Tinkers Creek Watershed Plan: Tinkers Creek Watershed Land Conservation Priority Plan. http://www.tinkerscreekwatershed.org/TCLC_final_report.pdf Accessed 5 January 2016.
 6. Tinkers Creek Watershed Partners. 2009. Tinkers Creek Watershed Action Plan. <http://www.tinkerscreekwatershed.org/documents/Tinkers%20Creek%20WAP%20Final.pdf> Accessed 5 January 2016. Stream S-1 flows west directly into Aurora Pond, a TNW.
 7. USEPA. 2013. Streams. <http://water.epa.gov/type/rsl/streams.cfm>. Accessed 6 February 2013.
 8. 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.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016
Date

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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 7 of 8, Wetland U

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond

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

Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

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

Wetlands: Wetland U 0.0002 acre.

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

Elevation of established OHWM (if known):

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

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size:

Drainage area:

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through tributaries before entering TNW.

Project waters are river miles from TNW.

Project waters are river miles from RPW.

Project waters are aerial (straight) miles from TNW.

Project waters are aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

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

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:

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry:

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for:

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

Describe flow regime:

Other information on duration and volume:

Surface flow is: Characteristics:

Subsurface flow: Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

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

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

(iii) Chemical Characteristics:

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

Explain:

Identify specific pollutants, if known:

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
- Federally Listed species. Explain findings:

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

⁷Ibid.

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings:

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Explain:

Surface flow is:

Characteristics:

Subsurface flow: Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from:

Estimate approximate location of wetland as within the floodplain.

(ii) Chemical Characteristics:

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

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain:

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations

when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Stream S-5 is a perennial tributary which flows year-round with no cessation in flow. Leaf-on and leaf-off aerial photographs indicate water in the channel. Water was observed in the channel during the April 2014 and 2015 site visits. Fish were observed in the channel during the site visits. The channel is identified on the USGS quadrangle as well as in the USGS NHD. Stream S-5 flows in a southwesterly direction directly into Aurora Pond.
- 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: Stream S-5 is off-site
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

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

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

- Tributary waters: 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: Wetland U extends off-site where it physically touches and directly abuts Stream S-5 (Stream S-5 is also off-site) with no upland barrier, berm, or separation.

⁸See 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: 0.0002 acre

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

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

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

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain:
 Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters:
 Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:
 Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
 Lakes/ponds: acres.
 Other non-wetland waters: acres. List type of aquatic resource: .
 Wetlands: acres.

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 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: Delineation Map and Location Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report **and subequest updates.**
 - 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: USACE ORM NHD Datasets
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
- or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
- Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016

Date

greengreegeePROVED 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): February 10, 2016

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB-2013-00206, Hawthorn of Aurora LLC, Form 8 of 8, Wetlands A, C, Q/R

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Portage City: Aurora
Center coordinates of site (lat/long in degree decimal format): Lat. 41.33622°, Long. -81.37972°
Universal Transverse Mercator: 17

Name of nearest waterbody: Aurora Pond

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

Name of watershed or Hydrologic Unit Code (HUC): 04110002

- 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 (Phase 5 Preliminary Jurisdictional Determination Dated 12 August 2015)

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: January 7, 2016
- Field Determination. Date(s): 22 April 2014, 25 April 2014, 28 April 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

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

Wetlands: Wetland A (0.767 acre), Wetland C (0.054 acre), Wetland Q/R (1.524 acre on-site)

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

Elevation of established OHWM (if known): Unknown

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

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

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: Aurora Pond (off-site)

Summarize rationale supporting determination: Consistent with the 30JUN2008 TNW designation by USACE LRB, the following rationale supports Aurora Pond being a “navigable-in-fact” water of the U.S.:

The physical characteristics, including its depth and size, indicate that the waterbody has the capacity to be navigated by watercraft. Aurora Pond is 648 acres in area. Its north-south length is approximately 1.35 miles. The east-west length varies, but is greatest in the center of the lake, measuring 0.75 miles. The lake is utilized by recreational watercraft as well as for recreational sporting activities such as fishing and swimming. A public beach is located on the southwestern shore of the lake providing access to non-residents. The waterbody is currently used for activities involving navigation and interstate commerce, such as recreational commercial navigation. The waterbody has been utilized by recreational watercraft for many years and continues to be utilized for this purpose.

Recreational docks and platforms are visible along the Aurora Pond shoreline in Google Earth aerial photography and several years of Google Earth aerial photography identify active recreational boating occurring in Aurora Pond.

The above discussed factors demonstrate that Aurora Pond is navigable-in-fact, resulting in its designation as a TNW for purposes of CWA jurisdictional determinations and is currently used in interstate or foreign commerce associated with commercial recreational navigation activities. This determination establishes Corps jurisdiction over this water body as a TNW under Section 404 of the Clean Water Act, pursuant to 33 C.F.R. Part 328.3(a)(1).

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

Wetland A is approximately 50 feet upslope of Aurora Pond and therefore Wetland A is neighboring/adjacent to Aurora Pond. Wetland A has periodic hydrologic connectivity with Aurora Pond as it drains downslope via overland sheetflow to Aurora Pond (EPA and Department of Army, 2008, p. 5). Also, Wetland A is reasonably close to Aurora pond to support a science-based inference that Wetland A has an ecological interconnection with Aurora Pond (EPA and Department of Army, 2008, p. 5-6).

Wetland C is approximately 250 feet upslope of Aurora Pond therefore Wetland C is neighboring/adjacent to Aurora Pond as it is reasonably close to the TNW. While Wetland C does not have a surface hydrologic connection with Aurora Pond, it is reasonably close to support a science-based inference that Wetland C has an ecological interconnection with Aurora Pond (EPA and Department of Army, 2008, p. 5-6).

Wetland Q/R directly abuts Aurora Pond with no upland separation or barrier therefore Wetland Q/R is bordering/adjacent to Aurora Pond. Wetland Q/R has periodic hydrologic connectivity with Aurora A (abuts and flows intermittently to Aurora Pond) and is reasonably close to Aurora Pond (EPA and Department of Army, 2008, p. 5). Also, Wetland Q/R is reasonably close to Aurora pond to support a science-based inference that Wetland Q/R has an ecological interconnection with Aurora Pond (EPA and Department of Army, 2008, p. 5-6).

Wetlands A, C, and Q/R are adjacent (as defined by 33 CFR 328.3(c) and 33 CFR 328(a)(7)) to Aurora Pond, a TNW.

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary,

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

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:

Drainage area:

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through tributaries before entering TNW.

Project waters are river miles from TNW.

Project waters are river miles from RPW.

Project waters are aerial (straight) miles from TNW.

Project waters are aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

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:

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:

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for:

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

Describe flow regime:

Other information on duration and volume:

Surface flow is: Characteristics:

Subsurface flow: Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks

OHWM⁶ (check all indicators that apply):

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.

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

- 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.⁷ 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 other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

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

(iii) Chemical Characteristics:

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

Explain:

Identify specific pollutants, if known:

(iv) Biological 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:

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Explain:

Surface flow is:

Characteristics:

Subsurface flow: Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

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

(d) Proximity (Relationship) to TNW

⁷Ibid.

Project wetlands are river miles from TNW.
 Project waters are aerial (straight) miles from TNW.
 Flow is from:
 Estimate approximate location of wetland as within the floodplain.

(ii) Chemical Characteristics:

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

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

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

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

All wetland(s) being considered in the cumulative analysis:
 Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
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Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: A (0.767 acre), Wetland C (0.054 acre), Wetland Q/R (1.524 acre on-site)

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: 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:
 - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

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

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

7. Impoundments of jurisdictional waters.⁹

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:

⁸See Footnote # 3.

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

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

- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters:
 Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
 Other: (explain, if not covered above):

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
 Lakes/ponds: acres.
 Other non-wetland waters: acres. List type of aquatic resource: .
 Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): 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: Delineation Map and Location Map
 Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 Office concurs with data sheets/delineation report **and subquest updates.**
 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: USACE ORM NHD Datasets
 USGS NHD data.
 USGS 8 and 12 digit HUC maps.
 U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Twinsburg & Aurora Quadrangles
 USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey
 National wetlands inventory map(s). Cite name: USACE ORM USFWS NWI Dataset
 State/Local wetland inventory map(s):
 FEMA/FIRM maps: USACE ORM FEMA Floodzone Dataset
 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
 Photographs: Aerial (Name & Date): Google Earth (SEP2015, JUN2014, APR2012, OCT2011, DEC2009, MAY2010, JUN2009, JUN2006), Bing Maps Aerial, Bing Maps Bird's Eye, Portage County Auditor Aerials (2011, 2010, 2006)
 or Other (Name & Date): Photographs contained in 2010 Delineation Report and May 2015 Delineation Report Update
 Previous determination(s). File no. and date of response letter: LRB-2013-00206 12 August 2015 PJD (Phase 5 adjacent subject parcel), LRB-2004-00951 30 June 2008 (Aurora Pond TNW designation)

- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information:
 - EPA and Department of Army. 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision In Rapanos v. United States & Carabell v. United States. http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/cwa_juris_2dec08.pdf Accessed 7 January 2016.
 - EPA and Department of Army. 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision In Rapanos v. United States & Carabell v. United States.
http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/app_a_rapanos_guide.pdf Accessed 7 January 2016.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Susan L. Baker
Project Manager

February 10, 2016

Date