

**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): November 24, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Buffalo District, Arrowhead Ventures LLC, 2009-00901

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: New York County/parish/borough: Tompkins City: Town of Lansing
Center coordinates of site (lat/long in degree decimal format): Lat. 42.48687 ° N, Long. -76.4914 ° W
Universal Transverse Mercator: Zone 18

Name of nearest waterbody: Unnamed tributary to Cayuga Lake

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

Name of watershed or Hydrologic Unit Code (HUC): 04140201

- 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 (Wetlands A and B are included in a Preliminary JD attached to this Approved JD)

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

- Office (Desk) Determination. Date: October 22, 2015
- Field Determination. Date(s): August 11, 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: 27T

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There 27T "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: 27T linear feet: 27T width (ft) and/or 27T acres.

Wetlands: 27T acres.

c. Limits (boundaries) of jurisdiction based on: 27T

Elevation of established OHWM (if known): 27T

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: **Wetlands C and D are outside Department of the Army jurisdiction and do not meet the criteria for a jurisdictional water of the United States according to 33 CFR Part 328.3(a)(1-7) as follows:**

1. do not/have not supported interstate or foreign commerce; **The wetlands do not provide any ecological interconnect to**

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.

downstream waters and is not confined by a berm, dam, or obstruction other than topography.

2. are not an interstate water/wetland; **the wetlands do not cross state boundaries**
3. the degradation or destruction of which would not affect interstate or foreign commerce and do not include such waters:
 - (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) which are used or could be used for industrial purpose by industries in interstate commerce

Wetlands C and D cannot be used by interstate or foreign travelers for recreational or other purposes, fish or shellfish cannot be taken and sold in interstate or foreign commerce, and the wetlands could not be used for industrial purposes by industries in interstate commerce.

4. are not impoundments of water otherwise defined as WOUS under the definition;
5. are not tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. are not a territorial sea;
- 7. are not adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section;**

Wetland C, measuring 0.07 acres and Wetland D, measuring 0.04 acres are small isolated depressions that have no surface hydrological connection to downstream waters. Wetland C is a scrub/shrub wetland located next to Oak Crest Road. There was no swale or drainage feature (hydrological connection) found coming out of Wetland C. Wetland B is evaluated in the Preliminary JD, as the wetland continued downstream in a roadside drainage feature, proceeding to the west. There was no similar feature found between Wetlands C and B. There is an unnamed tributary to Cayuga Lake located directly across Oak Crest Road, only approximately 50 feet from Wetland C. However, there are no culverts or connections from Wetland C to the unnamed tributary. If there were any drainage, it would run west along the south side of Oak Crest Road. Wetland C was found to be an isolated depression, with no hydrologic connection with another water. Wetland D, an emergent wetland dominated by reed canary grass, is located approximately 200 feet from the nearest portion of the unnamed tributary. However, this is located uphill of the wetland. It is located approximately 350 feet from the nearest downstream section of the tributary.

Limited functional attributes for Wetlands C and D include: 1) collection of surface water runoff; 2) storm water retention; and 3) wildlife habitat for mammals, amphibians and migratory birds. The source of hydrology is anticipated to be precipitation and surface water run-off and the potential for groundwater influence is not apparent. Collected water infiltrates or evaporates and does not enter a WOUS. It is highly unlikely that there are any shallow subsurface connections between any of the above waters and a surface water tributary to a navigable WOUS. Given the lack of hydrologic connection, the above-described wetlands do not comprise a component of an ecological continuum and do not contribute to characteristics that would influence the physical, chemical, and biological integrity of downstream waters.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. **TNW**
Identify TNW: 27T
Summarize rationale supporting determination: 27T
2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is "adjacent": 27T

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: 27T 27T

Drainage area: 27T 27T

Average annual rainfall: 27T inches

Average annual snowfall: 27T inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through 27T tributaries before entering TNW.

Project waters are 27T river miles from TNW.

Project waters are 27T river miles from RPW.

Project waters are 27T aerial (straight) miles from TNW.

Project waters are 27T aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: 27T

Identify flow route to TNW⁵: 27T

Tributary stream order, if known: 27T

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

- Tributary is:**
- Natural
 - Artificial (man-made). Explain: 27T
 - Manipulated (man-altered). Explain: 27T

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

Average width: 27T feet

Average depth: 27T feet

Average side slopes: 27T

Primary tributary substrate composition (check all that apply):

- Silts
- Sands
- Concrete
- Cobbles
- Gravel
- Muck
- Bedrock
- Vegetation. Type/% cover: 27T
- Other. Explain: 27T

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: 27T

Presence of run/riffle/pool complexes. Explain: 27T

Tributary geometry: 27T

Tributary gradient (approximate average slope): 27T%

(c) Flow:

Tributary provides for: 27T

Estimate average number of flow events in review area/year: 27T

Describe flow regime: 27T

Other information on duration and volume: 27T

Surface flow is: 27T Characteristics: 27T

Subsurface flow: 27T Explain findings: 27T

- Dye (or other) test performed: 27T

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
 - clear, natural line impressed on the bank
 - the presence of litter and debris

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.

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

- 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): 27T
- Discontinuous OHWM.⁷ Explain: 27T
- destruction of terrestrial vegetation
- the presence of wrack line
- sediment sorting
- scour
- multiple observed or predicted flow events
- abrupt change in plant community 27T

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): 27T
- 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: 27T

Identify specific pollutants, if known: 27T

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

- Riparian corridor. Characteristics (type, average width): 27T
- Wetland fringe. Characteristics: 27T
- Habitat for:
 - Federally Listed species. Explain findings: 27T
 - Fish/spawn areas. Explain findings: 27T
 - Other environmentally-sensitive species. Explain findings: 27T
 - Aquatic/wildlife diversity. Explain findings: 27T

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: 27T acres

Wetland type. Explain: 27T

Wetland quality. Explain: 27T

Project wetlands cross or serve as state boundaries. Explain: 27T

(b) General Flow Relationship with Non-TNW:

Flow is: 27T Explain: 27T

Surface flow is: 27T

Characteristics: 27T

Subsurface flow: 27T Explain findings: 27T

- Dye (or other) test performed: 27T

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain: 27T
 - Ecological connection. Explain: 27T
 - Separated by berm/barrier. Explain: 27T

(d) Proximity (Relationship) to TNW

Project wetlands are 27T river miles from TNW.

Project waters are 27T aerial (straight) miles from TNW.

Flow is from: 27T

Estimate approximate location of wetland as within the 27T 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: 27T

⁷Ibid.

Identify specific pollutants, if known: 27T

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

- Riparian buffer. Characteristics (type, average width): 27T
- Vegetation type/percent cover. Explain: 27T
- Habitat for:
 - Federally Listed species. Explain findings: 27T
 - Fish/spawn areas. Explain findings: 27T
 - Other environmentally-sensitive species. Explain findings: 27T
 - Aquatic/wildlife diversity. Explain findings: 27T

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

All wetland(s) being considered in the cumulative analysis: 27T

Approximately (27T) 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>
27T	27T	27T	27T
27T	27T	27T	27T
27T	27T	27T	27T
27T	27T	27T	27T

Summarize overall biological, chemical and physical functions being performed: 27T

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: 27T
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: 27T
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: 27T

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: 27T linear feet 27T width (ft), Or, 27T acres.
- Wetlands adjacent to TNWs: 27T 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: 27T.
- 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: 27T.

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

- Tributary waters: 27T linear feet 27T width (ft).
- Other non-wetland waters: 27T acres.
Identify type(s) of waters: 27T

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: 27T linear feet 27T width (ft).
- Other non-wetland waters: 27T acres.
Identify type(s) of waters: 27T

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: 27T
- 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: 27T

Provide acreage estimates for jurisdictional wetlands in the review area: 27T 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: 27T 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: 27T 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: 27T
- Other factors. Explain: 27T

Identify water body and summarize rationale supporting determination: 27T

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

- Tributary waters: 27T linear feet 27T width (ft).
- Other non-wetland waters: 27T acres.
Identify type(s) of waters: 27T
- Wetlands: 27T 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.

⁸See Footnote # 3.

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

¹⁰Prior 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.

- 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: 27T
- Other: (explain, if not covered above): 27T

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): 27T linear feet 27T width (ft).
- Lakes/ponds: 27T acres.
- Other non-wetland waters: 27T acres. List type of aquatic resource: 27T.
- Wetlands: 0.11 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): 27T linear feet 27T width (ft).
- Lakes/ponds: 27T acres.
- Other non-wetland waters: 27T acres. List type of aquatic resource: 27T.
- Wetlands: 27T 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: McFarland Johnson, report dated June 2015, and updated in an e-mail dated August 27, 2015.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report. (after revision)
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: 27T
- Corps navigable waters’ study: 27T
- U.S. Geological Survey Hydrologic Atlas: 27T
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Ithaca East. The site contains slight relief, sloping from the east to west. An intermittent tributary is located just north of Oakcrest Road, flowing from east to west, into Cayuga Lake.
- USDA Natural Resources Conservation Service Soil Survey. Citation: USDA NRCS Web Soil Survey. The site is mapped with Hudson silty clay loam and Madalin mucky silty clay loam, of which Madalin is identified as a hydric soil (66-99%). Hudson soils are non-hydric soils. Wetland C is located within hydric soils, but Wetland D is located within non-hydric soils.
- National wetlands inventory map(s). Cite name: Ithaca East. No wetlands are mapped on site.
- State/Local wetland inventory map(s): NYS DEC Regulated Freshwater Wetlands Map. No state wetlands or streams are identified on the project site. However, the stream located north of Oakcrest Road is identified as a classified waterbody.
- FEMA/FIRM maps: 27T
- 100-year Floodplain Elevation is: 27T (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): 2012, 2007, 2002 and 1994 aerial photos obtained from NYS GIS clearinghouse. Note that the house identified on the west side of the site on the aerial photographs on the project site has since been removed.
 - or Other (Name & Date): On-site photos provide with wetland delineation report.
- Previous determination(s). File no. and date of response letter: 2002-00909 dated June 3, 2002; and file no. 2009-00901 dated November 20, 2009. Under the 2009 prior delineation, Wetlands C and D were not identified. Under the 2002 delineation, Wetland C was identified.
- Applicable/supporting case law: 27T
- Applicable/supporting scientific literature: 27T
- Other information (please specify): A NWP 39 was affirmed on August 26, 2010, authorizing 0.26 acres of impact to Wetland A, where it had extended south of the current project area. This work was completed.

B. ADDITIONAL COMMENTS TO SUPPORT JD: 27T