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): 6/12/20

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAO-2019-01349

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: **Virginia** County/parish/borough: **N/A** City: **Suffolk**
Center coordinates of site (lat/long in degree decimal format): **Lat. 36.861114° N, Long. -76.460955° W.**
Universal Transverse Mercator: **18 N 369770 4080462**

Name of nearest waterbody: **Knotts Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Knotts Creek**
Name of watershed or Hydrologic Unit Code (HUC): **02080208**
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: **6/12/20**
☒ Field Determination. Date(s): **8/27/19**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☒ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: **Streams = 2,703 linear feet, and Jurisdictional Waters of the U.S. (ditch) = 100.71 linear feet**
      Linear feet: **total = 2,804; 2-5 width (ft.) and/or unknown acres.**

      Wetlands: **Polygon B = 0.4691 acres, Polygon C = 0.6713 acres, Polygon E = 0.1311 acres, Polygon F = 0.1111 acres; Polygon G = 0.9922 acres, Polygon H = 0.4877 acres, and Polygon I = 1.5261 acres**
      Total = 4.4 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual and OHWM observed in streams and ditch**
      Elevation of established OHWM (if known): **Unknown**.

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

[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.

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: ***(See Supplemental Sheet 1)***

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW
Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:
Watershed size: **54 square miles**
Drainage area: **0.78 square miles**
Average annual rainfall: **47.89 inches**
Average annual snowfall: **5 inches**

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **1 (or less)** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW. **Onsite streams are RPW**
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW. **Onsite streams are RPW**
Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW[5]: **North under Bridge Road (Route 17).**
Tributary stream order, if known: **Unknown.**

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

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

Tributary is: ☒ Natural

☒ Artificial (man-made). Explain: **The ditch was man-made, following the creation of the wetland Polygon H impoundment, likely to serve as an outlet for stormwater overflow.**

☒ Manipulated (man-altered). Explain: **The tributary was originally mapped on USGS Topographic Quadrangle maps for Bowers Hill, VA as a perennial stream with adjoining wetlands (natural state), which drained north into Knotts Creek. Sometime between 1952 and 1955, a portion of the stream on site was impounded, which altered the natural flow of water on site, resulting in Polygon I. According to Google Earth aerials, another portion of the stream, upstream and to the southeast of the Polygon I, was impounded sometime between 2011 and 2014, resulting in the Polygon H.**

Tributary properties with respect to top of bank (estimate): ***(See Supplemental Sheet 1 attachment)***

Average width: **2-5 feet**

Average depth: **1-2 feet**

Average side slopes: **4:1 (or greater).**

Primary tributary substrate composition (check all that apply): **(*See Supplemental Sheet 1 attachment)***

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☒ Muck
☐ Bedrock	☐ Vegetation. Type/% cover: N/A	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Banks appeared stable, little erosion observed along intermittent drainage. The impoundments did have areas with active erosion and undercut banks.**

Presence of run/riffle/pool complexes. Explain: Scattered throughout stream system. **(*See Supplemental Sheet 1 attachment)***

Tributary geometry: **Meandering (*See Supplemental Sheet 1 attachment*)**

Tributary gradient (approximate average slope**): 2 %**

(c) Flow:

Tributary provides for: **Seasonal flow (*See Supplemental Sheet 1 attachment)***

Estimate average number of flow events in review area/year: **20 (or greater)** ***(See Supplemental Sheet 1 attachment)***

Describe flow regime: **Perennial in some areas and intermittent in others.**

Other information on duration and volume: **Unknown.**

For additional stream/tributary information, please refer to attached Stream Stats form.

Surface flow is: **Discrete and confined.** Characteristics: **Surface flow is confined to the channel with some discrete input from the abutting wetland areas.**

Subsurface flow: **Unknown**. Explain findings: **N/A**.

☐ Dye (or other) test performed: **N/A.**

Tributary has (check all that apply): ***(See Supplemental Sheet 1 attachment)***

☒ Bed and banks

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

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

☐ Discontinuous OHWM.[7] Explain: N/A.

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

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;

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

[7]Ibid.

☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

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

Explain: ***(See Supplemental Sheet 2 attachment)***

Identify specific pollutants, if known: ***(See Supplemental Sheet 2 attachment)***

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

☒ Riparian corridor. Characteristics (type, average width): ***(See Supplemental Sheet 2 attachment)***

☒ Wetland fringe. Characteristics: ***(See Supplemental Sheet 2 attachment)***

☒ Habitat for:

☒ Federally Listed species. Explain findings: **The Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*) and the Red-cockaded Woodpecker (*Picoides borealis*) were listed as engendered/threatened species under the IPaC review from the USFWS. The NLEB prefers caves and mines as winter habitat (hibernaculum), and cavities of live trees or snags during the summer. There may be suitable habitat present on site for the NLEB. The Red-cockaded Woodpecker prefers old growth pine savannas, which is not present on the site.**

☒ Fish/spawn areas. Explain findings: **Small fish species were observed in the streams and impoundment. They were observed more often in the perennial streams (streams abutting Polygon C, Polygon I, portions of Polygon G, portions of Polygon B, and the ditch, which is connected to Polygon H) than in the remaining intermittent streams and perennial ditch. In-channel structure in the streams, such as riffle pools, may also have provided suitable spawning and/or hunting/foraging habitat for fish species**.

☐ Other environmentally-sensitive species. Explain findings:.

☒ Aquatic/wildlife diversity. Explain findings: **The streams provide habitat to support many aquatic species, especially amphibians and insects, as well as predators that prey on them, such as snakes, birds, and other reptiles.**

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: **Polygon B = 0.4691 acres, Polygon C = 0.6713 acres, Polygon E = 0.1311 acres, Polygon F = 0.1111 acres; Polygon G = 0.9922 acres, Polygon H = 0.4877 acres, and Polygon I = 1.5261 acres Total = 4.4 acres**

Wetland type. Explain**: *(See Supplemental Sheet 2 attachment).***

Wetland quality. Explain: **Unknown; appeared to be in good condition.**

Project wetlands cross or serve as state boundaries. Explain: **No - N/A.**

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent**. Explain: ***(See Supplemental Sheet 2 attachment)*.**

Surface flow is**: Discrete and confined**

Characteristics: **Surface flow in the wetland areas is discrete, and will become confined when it reaches the tributary downstream of the stream abutting Polygon G.**

Subsurface flow: **Unknown.** Explain findings: **Unknown; soil collected on site from Data Point DPD and DPB ranged from mucky loam, silt loam, to sandy loam. Due to the texture of the soil, it is unlikely there would be a significant subsurface flow contribution to the streams. The sandy loam may have more of a contribution given its large particle space for water to flow through the profile, but not as much as a sand.**

☐ Dye (or other) test performed: **None.**

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting **– All wetlands are directly abutting, or touching, streams and/or a ditch on site.**

☐ 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: **Pick List.**

Estimate approximate location of wetland as within the **50 -100 year** floodplain.

The U.S. Department of Homeland Security FEMA Flood Map Service Center (area 5101560127E) depicts the majority of the property within in flood zone X, which is either within an area of 0.2% annual chance of flood, 1% chance of annual flood with average depths that are less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood; or outside the 0.2% annual chance floodplain and in an area of minimal flood hazard. Portions of the study area that contain most of the streams, impoundments, and wetlands within flood zone AE or A, which is within the Special Flood Hazard Area and is subject to a 1% annual chance of flooding, or is within the 100-year floodplain. The estimated elevation flood water above average sea level has been established at 8 feet (based flood elevation) for zone AE; however, no base flood elevations have been determined for zone A.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **Overall all, there is no apparent evidence of poor water quality in any of the wetlands. The wetlands contained clear or slightly murky/brown water with no obvious contaminants or signs of eutrophication, algal blooms, human debris, etc.**

Identify specific pollutants, if known**: Unknown; Neighboring residential development to the southeast may contribute some runoff containing fertilizers, pesticides, etc.; however, evidence of these chemicals (e.g. fertilizer contains nutrients such as nitrogen and phosphorous which may cause eutrophication) was not observed. .**

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

☒ Riparian buffer. Characteristics (type, average width): **A riparian buffer exists along most of the wetlands that abut the stream system on site, and consists of upland forested areas. The vegetation in the forested uplands consisted of sweetgum (*Liquidambar styraciflua*), white oak (*Quercus alba*), and other FAC or drier species. Based on estimation from aerial imagery, the size of the upland riparian corridor is approximately 9 acres. This corridor will help preserve water quality by filtering pollutants before they reach the streams, provide habitat for many species, and help with erosion control. Additionally, all the forested (Polygons G, E, and F) and emergent (Polygons B and C) wetlands themselves serve as a riparian buffer for the streams.**

Polygon H does not have an upland riparian buffer.

☒ Vegetation type/percent cover. Explain: **There are forested and emergent wetlands; please refer to the attached Data Forms for specific information regarding type and percent cover.**

☒ Habitat for:

☐ Federally Listed species. Explain findings: **The Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*) and the Red-cockaded Woodpecker (*Picoides borealis*) were listed as engendered/threatened species under the IPaC review from the USFWS. The NLEB prefers caves and mines as winter habitat (hibernaculum), and cavities of live trees or snags during the summer. There may be suitable habitat present on site for the NLEB. The Red-cockaded Woodpecker prefers old growth pine savannas, which is not present on the site.**

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: **The wetlands provide habitat to support many aquatic species, especially amphibians and insects, as well as predators that prey on them, such as snakes, birds, and other reptiles**.

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

All wetland(s) being considered in the cumulative analysis: **7**

Approximately (**4.4**) 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)
Polygon B	**0.4691**	**Yes**	
Polygon C	**0.6713**	**Yes**	
Polygon E	**0.1311**	**Yes**	
Polygon F	**0.1111**	**Yes**	
Polygon G	**0.9922**	**Yes**	
Polygon H	**0.4877**	**Yes**	
Polygon I	**1.5261**	**Yes**	

Summarize overall biological, chemical and physical functions being performed:

Overall, these wetlands act as a buffer around the streams filtering and sequestering pollutants from the adjoining residential matrix. They also provide nutrients, from plant debris, etc. to downstream areas in the stream. They slow down the speed and force of waters flowing into the system, which may help with erosion control and overall stream integrity. They provide numerous habitats for birds, fish, amphibian, reptiles, snails, shellfish and other species. The impoundments (Polygons H and I) provide excellent habitat for fish and turtle species as well.

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:

   There is no significant nexus between Polygons A and D (PEM Wetlands) and the jurisdictional stormwater pond, ditch, or RPWs on site and therefore no significant nexus to a downstream TNW (Knotts Creek). These wetlands are hydrologically isolated in a maintained, upland field.

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:

Several tributaries on site are perennial, with year-round flow. These tributaries include streams abutting Polygon C, Polygon I, portions of Polygon G, portions of Polygon B, and the ditch, which is connected to Polygon H. Flow was observed during the driest time of year (summer), and perennial stream characteristics, such as sinuosity along the thalweg, headcuts, grade control, iron oxidizing bacteria, and aquatic species, were readily observed.

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

The remaining tributaries, and portions of the stream that abut Polygons G and B, are intermittent. These tributaries include streams abutting Polygon E and Polygon F. Flow was not observed all year, and perennial stream characteristics, such as sinuosity along the thalweg, headcuts, grade control, iron oxidizing bacteria, and aquatic species were not readily observed.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **2,804** linear feet **2-5** width (ft).
☒ Other non-wetland waters: **4.4** acres.
Identify type(s) of waters: **Jurisdictional Streams, Jurisdictional PFO Wetlands, Jurisdictional PEM Wetlands, Jurisdictional Impoundment Wetlands, and Jurisdictional Ditch**.

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

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

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

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: **Polygons C, I, portions of B, portions of G, and H directly abut streams or a ditch on site that is perennial.**

☒ 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: **Polygons E, F, portions of B, and portions of G.**

Provide acreage estimates for jurisdictional wetlands in the review area: **4.4** acres.

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

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

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

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

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

[8]See Footnote # 3.

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).

Polygon I Impoundment was created when the tributary was impounded sometime between 1952 and 1955, which is based off of historical USGS Topographic Quadrangle Maps for Bowers Hill.

According to Google Earth aerials, another portion of the stream, upstream and southeast of Polygon I, was impounded sometime between 2011 and 2014 resulting in Polygon H Impoundment.

Both impoundments abut perennial RPWs that drain into TNW.

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:

There is no significant nexus between Polygons A and D (PEM Wetlands) and the jurisdictional stormwater pond, ditch, or RPWs on site and therefore no significant nexus to a downstream TNW (Knotts Creek). These wetlands are hydrologically isolated in a maintained, upland field. These areas are small and concentrate precipitation during the winter months. There is no apparent surface water connection, and a groundwater connection is unlikely due to the soil type and elevation. The soils are loams, and not sand, so groundwater would not flow as easily down slight gradient. These wetlands do not have the capacity to carry pollutants, carbon, or nutrients, downstream due to the lack of a hydrological connection.

These wetlands do not significantly affect the physical, biological, and chemical integrity of the downstream navigable waterway, which is over 1,000 feet away.

- ☐ 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: .

[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.

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: Approximately 0.2542 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: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☒ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: Bowers Hill 1:24000.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☐ Aerial (Name & Date): .
  or ☒ Other (Name & Date):Ground level photos of wetlands and streams.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .