

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): August 27, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

DISTRICT: NAO

FILE NAME: Tri-City Properties, LLC

PROJECT NUMBER: NAO-2006-5097

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: VA

County/parish/borough:

City: Chesapeake

Center coordinates of site (lat/long in degree decimal format): Lat. 36 45 32° **N**, Long. -76 10 50° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Stumpy Lake/Gum Swamp

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: North Landing River

Name of watershed or Hydrologic Unit Code (HUC): 03010205 (Albemarle)

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: Numerous

Field Determination. Date(s): 7/8/14, 7/9/14, 7/10/14, 12/19/14, 2/6/15, 3/2/15, 3/24/15, 4/14/15, 5/4/15, 5/14/15

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: 5,200 linear feet: width (ft) and/or acres.

Wetlands: 47.1 acres.

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

Elevation of established OHWM (if known): n/a.

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).

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

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: 2,768,020 acres
Drainage area: 3,750 square miles
Average annual rainfall: approx 45 inches
Average annual snowfall: 8 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

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

Project waters are 5-10 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 2-5 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: North Landing River Crosses the Virginia/North Carolina state boundary. Project wetlands/waters are tributaries to the North Landing River.

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

Identify flow route to TNW⁵: The majority of the non-tidal forested wetlands (46 acres) on the property abut a man-altered perennial tributary which is the western tributary of North Landing River. This tributary of the North Landing River flows to Stumpy Lake; a man-made lake which was created by damming the tributary. The spillway at Stumpy Lake flows into "Gum Swamp", which flows to the North Landing River, a TNW. The North Landing River is part of the Intracoastal Waterway and flows into North Carolina, and becomes the Currituck Sound in North Carolina. Within the review area, there are several small areas of forested wetlands (approximately 1.1 acres total) located along the northern property line. Two of these wetlands (1 acre total) do not abut any wetlands or tributaries due to the presence of a dirt road and some old berms. These wetlands are adjacent to the other wetlands, and a 1,300 linear foot long seasonal RPW tributary, but do not abut these waters due to the presence of the dirt road/berms. The 1.0 acres of wetlands are adjacent to, but do not abut the 1,300 linear foot seasonal RPW located at the northern end of the property line. The other three very small wetlands (0.1 acres total) abut an RPW. The 1,300 linear foot seasonal RPW flows into a perennial RPW when it connects downstream with a man-altered natural tributary, and flows into the western tributary of the North Landing River. The flow route continues from this point to the TNW, as identified above. Note: These wetlands may abut wetlands and an RPW located off the project site, further to the north, but the presence of wetlands on these properties to the north have not been determined. The RPW to the north, off the project site, is a man-altered natural tributary and is shown as a solid "blue line" tributary on quad sheets dating back to 1965. Tributary stream order, if known: .

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

Tributary is: Natural
 Artificial (man-made). Explain: The seasonal RPW adjacent to the 1.1 acres of wetlands on the north site was excavated from wetlands.
 Manipulated (man-altered). Explain: The man-altered perennial tributary which is part of the western tributary of North Landing River is depicted as a natural waterway on historical quad sheets dating to 1907. Current aerial photos and site visits indicate the upstream portions of the tributary have been excavated/dredged and the lower portions may have also been man-altered.

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

Average width: 5 feet (seasonal RPW) perennial tributary: 20-60 feet
 Average depth: 1-4 feet
 Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Banks are stable and vegetated.

Presence of run/riffle/pool complexes. Explain: Leaf packs present in perennial tributary- see photos.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 0-1 %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: The western tributary of the North Landing River, which abuts most of the wetlands within the review area, has perennial flow. The northern 1,300 linear feet long channel adjacent to the 1.1 acres of wetlands is not perennial but has at least seasonal flow, which varies in speed and volume with rainfall events. However, structure (consisting of woody debris, debris dams, sediment dams and leaf packs) in the channel slows all flows to allow sediments and pollutants to be removed from the system before being carried downstream. The western tributary of the North Landing River has perennial flow, and is shown as a "blue line" waterway on current and historical quad sheets, and generally has a slow flow which would increase somewhat with rainfall events. Much of this channel has been maintained, however, there is some limited structure (such as large woody debris, debris dams, sediment dams and leaf packs) further downstream to slow flow. In addition, the natural gradient of the waterbody slows water flow, providing time for many pollutants (sediments and nutrients bound to the sediments) to drop out of the water column before being carried downstream. The creation of beaver dams has been documented in this tributary, which would slow flow to allow sediments and pollutants to be removed before being carried downstream.

Other information on duration and volume: .

Surface flow is: **Confined**. Characteristics: The manipulated tributary contains flow within the banks. An ordinary high water mark is present in this channel and varies by location, but includes bed and bank, natural lines impressed in the bank, shelving, vegetation bent due to flow, presence of litter and debris, and blackened leaves and water staining along the ditch bank/bottom indicating prolonged water presence in channel bottom.

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.

Subsurface flow: **Yes**. Explain findings: Groundwater is present in the wetlands immediately adjacent to the tributary. The wetlands on the project site are likely to slowly release groundwater into the tributary which is important for maintaining base flows to the tributary itself and downstream waters.

Dye (or other) test performed: .

Tributary has (check all that apply):

- Bed and banks
- OHWM⁶ (check all indicators that apply):
 - clear, natural line impressed on the bank
 - changes in the character of soil
 - shelving
 - vegetation matted down, bent, or absent
 - leaf litter disturbed or washed away
 - sediment deposition
 - water staining
 - other (list):
- Discontinuous OHWM.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: water in the tributary is clear enough to notice fallen leaves beneath the surface. The watershed at the upper reaches of the perennial tributary (western tributary of the North Landing River) is developed as residential, and has been converted to a stormwater management canal system for the residences. The lower reaches of the perennial tributary are primarily undeveloped adjacent forested wetlands.

Identify specific pollutants, if known: While there are no documented pollutants, the residential developments likely contribute pollutants from the roads and lawns which drain into the upstream canals. The tributary and adjacent wetlands are likely to remove some of these pollutants from the upstream watershed.

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): the tributary generally contains a forested wetland or upland buffer on both sides, with the exception of the dirt road and areas of old fill. The width averages 75 feet on the north side, and on the south side, the forested habitat extends well beyond the tributary. The majority of the review area contains forested wetlands.

Wetland fringe. Characteristics:

Habitat for:

Federally Listed species. Explain findings: A report from the US Fish and Wildlife Service's IPaC (Information for Planning and Conservation) website dated July 22, 2012, indicates that the Northern long-eared Bat (*Myotis septentrionalis*), a species listed as Threatened under the Endangered Species Act (ESA), should be considered as part of an effect analysis for this project location. The species is not documented to occur on the site, but the channel could contain a source of water for this threatened bat.

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings: The same IPaC report noted above, indicates the potential presence of several species of migratory birds, which could use the tributary as a source of water.

Aquatic/wildlife diversity. Explain findings: While aquatic/wildlife species were not directly observed using the tributary, the wetlands and ditches provide suitable habitat for a variety of species common to the area. In addition, the wetland and ditches are structurally different from the surrounding uplands and clearly contribute to the overall habitat diversity of the site. Deer are likely utilize the wetlands for food and bedding down and the tributaries as a water source. Beaver activity has been documented in the western tributary to the North Landing River.

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: 47.1 acres

Wetland type. Explain: 47.1 acres of wetlands within the review area, extensive wetlands within the relevant reach.

All wetlands are forested mineral flats.

Wetland quality. Explain: High quality older growth forested wetland system. The wetlands are generally undisturbed except for the past ditching and dirt roads which have been constructed on the site. Wetlands provide water quality functions such as pollutant retention and removal as well as stormwater retention.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Flow is primarily driven by precipitation and into the RPW ditch running along the northern property boundary.

Surface flow is: **Overland sheetflow**

Characteristics: The site is generally flat but hummocky with overland sheetflow of excess water to the tributary which flows south and ultimately to the North Landing River. During heavy rainfall events surface water from the wetland areas will sheet flow over the wetland surface and utilize berm breaks to flow into the tributary.

Subsurface flow: **Unknown**. 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: Despite the dirt road and berms the 1.0 acres of wetlands on the north side still have a high degree of connectivity to the RPW's as well as all other wetlands adjacent to the relevant reach. The dirt road/berm is neither a barrier to wildlife movement nor an inhibitor of wetland functions when compared to the other adjacent wetlands in the review area and relevant reach.

Separated by berm/barrier. Explain: Spoil material from the ditch excavation was placed alongside the south side of the upper reaches of the RPW tributary that separates the northwestern-most portion of the 1.0 acre wetland area from the RPW. In addition, these wetlands are separated by a dirt road which runs parallel to the tributary. This tributary was excavated from wetlands or channelized from prior naturally defined geographic features.

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **2-5** 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: The wetland areas in question are typically seasonally saturated, but during heavy rainfall events will have standing/ponding water. Runoff from the wetlands travels by overland sheetflow to the RPW. Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width): Buffer along tributary is a mix of forested wetlands and uplands. The width averages 75 feet on the north side, and on the south side, the forested habitat extends well beyond the tributary.
- Vegetation type/percent cover. Explain: Mature forested wetland (the wetlands contains a mixed pine/hardwood tree canopy as well as sapling/shrub and emergent layer vegetation), generally 100% cover.
- Habitat for:
 - Federally Listed species. Explain findings: A report from the US Fish and Wildlife Service's IPaC (Information for Planning and Conservation) website dated July 22, 2012, indicates that the Northern long-eared Bat (*Myotis septentrionalis*), a species listed as Threatened under the Endangered Species Act (ESA), should be considered as part of an effect analysis for this project location. The speices is not documented to occur on the site, but the forest could contain habitat for this threatened bat.
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: The same IPaC report notes above, indicates the potential prescence of several species of migratory birds, which could use wetlands for food and habitat.
 - Aquatic/wildlife diversity. Explain findings: While aquatic/wildlife species were not directly observed using the tributary, the wetlands and ditches provide suitable habitat for a variety of species common to the area. In addition, the wetland and ditches are structurally different from the surrounding uplands and clearly contribute to the overall habitat diversity of the site. Deer are likely utilize the weltands for food and bedding down and the tributaries as a water source. Beaver activity has been documented in the western tributary to the North Landing River.

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

All wetland(s) being considered in the cumulative analysis: **7**
Approximately (700) 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>
1. Forested mineral flat wetland, 46		Yes	46
2. Forested mineral flat wetland, 0.5		No	0.5
3. Forested mineral flat wetland, 0.5		No	0.5
4. Forested mineral flat wetland, < 0.1		Yes	< 0.1
5. Forested mineral flat wetland, < 0.1		Yes	< 0.1
6. Forested mineral flat wetland, < 0.1		Yes	< 0.1
7. Forested mineral flat wetland (Relevant Reach) 650		Yes	650

Summarize overall biological, chemical and physical functions being performed: See Section IIIC narrative attached in the addendum.

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: See addendum.

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: The waterway is depicted on historical quad sheets as far back as 1907, and newer topographic maps depict the waterway as perennial (“blue line”). This tributary is visible on aerial photos, and the upstream, excavated portion along the project site is clearly visible as a waterway. A review of aerial photos from 1994-2014 on Google Earth, depict the presence of water in the canal over different years and time of year. Flow was present in this tributary during two site visits conducted on December 19, 2014 and March 2, 2015. Perennial flow is present within this western tributary to the North Landing River upstream of the project site and continuing downstream to the confluence with Stumpy Lake, into Gum Swamp, and the North Landing River (a traditionally navigable water (TNW)).
- 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: Photographs of the RPW ditch were taken on April 14, 2015 and all photographs show water in the ditch. Rainfall for the 3 month antecedent time frame of January to March, 2015 was below the 30th percentile at the Norfolk Airport WETS station. Rainfall for the month of April up to the day of the site visit was only 0.27 inches (1.8 inches of rain fell in the afternoon and evening on April 14; after the site visit). This indicates that even during lower than normal precipitation, water is present in the tributary, indicating at least seasonal flow. In addition, an ordinary high water mark is present in this ditch and blackened leaves and water staining along the ditch bank/bottom indicate prolonged water presence in the channel bottom.

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: **46 acres of wetlands on the project site are contiguous to, and abut each other and the western tributary to the North Landing River. The information examined shows the majority of the site and areas to the south and south east contain hydric soils (mapped by NRCS as Acredale and Nawney) and are mapped on National Wetland Inventory (NWI) maps as PFO (palustrine forested) wetlands. The current project limits do not extend to the tributary and this area was not officially delineated as part of this review. However, information examined and previous wetland delineations indicate that wetlands are present in a continuous connection from the tributary throughout the project site. The area that directly abuts the canal is mapped as containing Nanwey soils (0-1% slopes, frequently flooded) and mapped as PFO1C wetlands (palustrine, broad-leaved deciduous forested, seasonal hydrology). In addition, the area directly abutting the canal was delineated as wetlands per the 1987 Corps of Engineers Wetland Delineation Manual in a previous jurisdictional determination confirmed by the Corps in 2007. In addition, recent visits to this portion of the project site indicate that this area, which is at a lower elevation than the majority of the project site, is clearly a wetland, with obvious indicators of wetland hydrology. Three small wetland areas (totally 01. acre) abut the 1,300 linear foot RPW which flows into the western tributary to the North Landing River.**
 - 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: **47.1** 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: **1.1** 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.

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):

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.**

- 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: See addendum.
 - 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: See addendum.
 - Corps navigable waters' study: Albemarle and Chesapeake Canal and the Northwest River are part of the Intracoastal Waterway and are navigable waters.
 - 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: 1902, 1907 Norfolk Topographic Quadrangle maps; 1918, 1919 Cape Henry SE maps; 1948, 1965, 1994 Kempsville maps.
 - USDA Natural Resources Conservation Service Soil Survey. Citation: Natural Resources Conservation Services Web Soil Survey Map, dated December 5, 2013, provided in JD package from Roth Environmental, LLC.
 - National wetlands inventory map(s). Cite name: US Fish and Wildlife Service NWI map dated August 19, 2013, provided in JD package from Roth Environmental, LLC.
 - State/Local wetland inventory map(s): .
 - FEMA/FIRM maps: Most of site is mapped as "Zone X"- Minimal Flood Hazard on FEMA Flood Hazard Zones and Boundaries. .
 - 100-year Floodplain Elevation is: M (National Geodetic Vertical Datum of 1929)
 - Photographs: Aerial (Name & Date): Various aerial photos on Google Earth, and aerial photos on CorpsMaps (1994, 2002, 2007, 2009, 2011, 2013, 2014, Google Hybrid).
 - or Other (Name & Date): Ground photos taken during site visits.
 - Previous determination(s). File no. and date of response letter: See addendum.
 - Applicable/supporting case law: Newdunn, SWANCC and Rapanos.
 - Applicable/supporting scientific literature: .
 - Other information (please specify): See addendum/appendices.

3

B. ADDITIONAL COMMENTS TO SUPPORT JD: See attached Addendum "Addendum to Approved Jurisdictional Determination Form for Tri Cities (NAO-2006-5097)" and Appendices.