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): October 13, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
DISTRICT: Norfolk
FILE NAME: Thornton Violation
PROJECT NUMBER: NAO-2017-00033

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:VA County/parish/borough: Accomack City: Chincoteague
Center coordinates of site (lat/long in degree decimal format): Lat. 37.9452° **N**, Long. -75.3572° **W**.
Universal Transverse Mercator: NAD 83
Name of nearest waterbody: Chincoteague Bay
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Chincoteague Channel/Bay
Name of watershed or Hydrologic Unit Code (HUC): 02040303
☒ 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: March 10, 2017, June 8, 2017, August 24, 2017
☒ Field Determination. Date(s): February 28, 2017

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: linear feet: width (ft) and/or acres.
      Wetlands: 1.49 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]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: **Chincoteague Channel/Bay**.

Summarize rationale supporting determination: Chincoteague Channel/Bay is a daily tidal waterbody that is a tributary to the Atlantic Ocean.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": The "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" dated December 2 2008 states (page 1) that the agencies (Corps and EPA) will assert jurisdiction over wetlands adjacent to traditional navigable waters. On page 5 of the guidance it states that a continuous surface connection between a wetland and a downstream TNW is not required. The guidance then defines adjacency and states that the agencies consider wetlands adjacent if one of three criteria are met: unbroken surface connection or shallow sub-surface connection, physically separated from jurisdictional waters by man-made dikes or other barriers such as natural berms and finally proximity to a jurisdictional water is reasonably close.

In this case, all three criteria are met. Chincoteague Island is a barrier island. Unique coastal circumstances were involved in its formation. A study by the Environmental Protection Agency (EPA) was conducted on Chincoteague Island, entitled "The Functional Assessment of Selected Wetlands of Chincoteague Island, Virginia" dated May 1986. On page 4, they conclude that precipitation does not run off but instead infiltrates the sandy soil and drains vertically to the water table and then moves laterally towards interior wetland swales or towards the tidal waters surrounding the island. It is this shallow subsurface connection that meets the adjacency definition. The topography on barrier islands is typically ridges and swales with the swales being seasonally to semipermanently flooded wetland areas. The authors note the topography on the island has been extensively modified by grading and filling and state that dredging, drainag andd road construction have altered natural drainage on the island (page 5). Rich Whittecar supports many of these same findings on Virginia barrier islands in "Geomorphic history controls the locations of fresh-water wetlands on barrier islands, Virginia Atlantic Shore".

The wetlands in the review area are separated from Chincoteague Channel/Bay to the west by houses and Main Street which runs parallel to the shoreline. The wetlands in the review area are part of the dune and swale system on the northern part of the island. The system drains into a roadside ditch located north of Hallie Whealton Smith Drive which then drains into Chincoteague Bay.

In addition, the wetlands in the western portion of the review area are between 800 feet from Chincoteague Channel/Bay while the wetlands in the eastern portion of the review area are approximately 1,300 feet from Chincoteague Channel/Bay.

Examining aerial photographs, in the northern portion of the island and in an undisturbed portion in the center of the island, the distinct dune and swale pattern that formerly dominated the islands topography can still be seen. Much of the island has been developed and as such the dunes leveled and the swales filled leaving remnant standing water wetland areas. Many remaining undeveloped areas in the disturbed portions of the island contain wetlands and standing water signatues on numerous years of aerial photographs. Dune and swale systems may not have well defined surface channel connections to TNW's, however, numerous studies have found that the wetlands that form in the swales are generally in close proximity to the TNW's and a unique subsurface freshwater groundwater lens usually forms above higher density saltwater beneath barrier islands and where the lower elevation swales intersect this freshwater is where wetlands form. This shallow subsurface water provides a connection to the nearby TNW.

The Environmental Protection Agency and the Corps have asserted jurisdiction over similar freshwater wetlands on other similar barrier islands on multiple occasssions. See Memorandum to Assert Jurisdiction for 2007-657-1JT regarding wetlands on a barrier island off the coast of South Carolina that are located between 100 and 800 feet from the nearest TNW. In addition, in Memorandum to Assert Jurisdiction for SAS-2007-670 the EPA and Corps asserted jurisdiction over freshwater wetlands on a barrier island system in Georgia. In this instance jurisdiction was asserted on wetlands more than 1800 feet from a TNW

The wetlands in the review area be virtue of being associated with a barrier island system have a shallow subsurface connection to a TNW, the are located in close proximity to a TNW and are separated by man-made disturbances that have severly modified the natural barrier island system.

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: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: 40 inches
Average annual snowfall: 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.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: Ultimately water from this site ends up in Chincoteague Channel which is a daily tidal waterbody (TNW). The wetlands subject to this determination area are djacent to Chincoteague Channel to the west. Chincoteague Island is a barrier island that was once dominated by a dune and swale complex. The dunes historically separated the wetlands from tidal waters but studies show that beneath barrier islands there is a freshwater subsurface water table which is exposed in the swales, creating the wetlands. This water table interacts with tidal waterbodies around the island and as such provides a shallow suburface connection. Since the island has been developed, the wetlands are now separated from these respective waterways by roads and house lots, man-made barriers, rather than dunes. There are no surface tributary channels on site to carry water. A roadside ditch located north of Hallie Whealton Smith Drive dains into Chincoteague Channel. Due to past filling and disturbance, the wetlands in the review area do not directly interact with this ditch. Literature shows a shallow subsurface connect to TNW waters from the wetlands on barrier islands exists. This is detailed in a study entittled "The Functional Assessment of Selected Wetlands of Chincoteague Island, Virginia" dated May 1986. Also, this same subsurface connection is discussed in "Geomorphic history controls the locations of fresh-water wetlands on barrier islands, Virginia Atlantic Shore" by Riche Whittecarr. The Corps and EPA have made determinations in other Corps Regulatory District offices, Savannah and Charleston, that wetlands on barrier islands are adjacent to navigable waters and therefore jurisdictional. See Memorandum to Assert Jurisdiction for 2007-657-1JT and Memorandum to Assert Jurisdiction for SAS-2007-670..
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

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

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

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

☐ Discontinuous OHWM.[7] Explain: .

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

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

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[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.

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

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

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:1.49 acres

Wetland type. Explain:Disturbed and filled area now, formerly an interdunal swale wetland.

Wetland quality. Explain:Remnant wetland associated with a historically much larger wetland complex.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: .

Surface flow is**: Overland sheetflow**

Characteristics: Wetlands were part of dune and swale system, roads and houses have cut off any possible surface connnection to downstream waters, subsurface connection important for barrier island interdunal wetland systems connectivity to downstream TNW waters.

Subsurface flow: **Pick List**. 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: Literature shows barrier island wetlands have a shallow subsurface connection to TNWs.
  - ☒ Separated by berm/barrier. Explain: Constructed raods and houses act as a berm and separate this wetland depressional area from downstream TNW.

(d) Proximity (Relationship) to TNW

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

Project waters are **1 (or less)** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

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

Identify specific pollutants, if known: .

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

- ☐ Riparian buffer. Characteristics (type, average width):Minimal due to development of the area.
- ☐ Vegetation type/percent cover. Explain: Minimal vegetation remainin within area, most of the forested area was removed..
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☒ Aquatic/wildlife diversity. Explain findings:habitat for birds, amphibians, deer, and small mammals.

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

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

Approximately (1.49) 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)
N	1.49		

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

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

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☒ Wetlands adjacent to TNWs: 1.49 acres.

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

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

3. Non-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: .

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

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are 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.

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: .

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Identify water body and summarize rationale supporting determination: .

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☐ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☐ 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:CorpsMap.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: NAO-2017-00033 Thornton Violation.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Digital Globe 3/17/15, 3/19/15, 8/19/15, 3/2/16, 6/20/16, 7/7/16, 9/6/16, 9/28/16, 10/11/16, 10/11/16, 10/16/16; Google Earth Pro 3/19/94, 6/7/05, 1/31/07, 5/18/08, 6/20/11, 3/8/13, 11/4/16.
or ☒ Other (Name & Date):Site photos.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature:Mentioned above.
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Chincoteague Island is a barrier island. Unique coastal circumstances were involved in its formation. A study by the Environmental Protection Agency (EPA) was conducted on Chincoteague Island, entitled "The Functional Assessment of Selected Wetlands of Chincoteague Island, Virginia" dated May 1986. Examining aerial photographs, in the northern portion of the island and in an undisturbed portion in the center of the island the distinct dune and swale pattern that formerly dominated the islands topography can still be seen. Much of the island has been developed and as such the dunes leveled and the swales filled. Remant areas in the disturbed portions of the island contain wetlands and standing water signatues on numerous years of aerial photography. Dune and swale systems may not have well defined surface channel connections to TNW's, however, numerous studies have found that the wetlands that form in the swales are generally in close proximity to the TNW's and a unique subsurface freshwater groundwater lens usually forms above higher density saltwater beneath barrier islands and where the lower elevation swales intersect this freshwater is where wetlands form. This shallow subsurface water provides a connection to the nearby TNW.

The wetlands on this site are remant swale wetlands and instead of a dune separating them from Chincoteague Channel, a daily tidal TNW, it is houses and Main Street that provide a barrier between the wetlands and the TNW post disturbance. Per 33 CFR 328.3 (a)(7) and 33 CFR 328.3(c) wetlands that are adjacent to waters of the US are jurisdictional. In this case, the wetlands are adjacent to Chincoteague Channel/Bay. In addition, per the December 2, 2008 Clean Water Act Jurisdiction Following the U.S. Supreme court's Decision in Rapanos v. United States & Carabell v. United States memorandum wetlands adjacent to a TNW are jurisdictional. On page 5 of this document there is a discussion on adjacency. Page 11 of the EPA study on Chincoteague Island details how rainwater generally does not drain off the island but instead infiltrates the sandy soils and then flows either inland to freshwater wetland systems or to Chincoteague Channel/Bay. The site is currently separated from Chincoteague Channel (Bay) by homes and Main Street. To the east the site is separated from Little Oyster Bay by remaining dune and swale systems and Tom Reed Lane and homes, approximate distance from the site to the open water portion of the Bay is 3,600 feet. The EPA conducted jurisdictional determinations on two parcels on barrier islands, one in Harris Neck in Georgia and Seabrook Island off South Carolina in which they document why barrier island interdunal wetlands are jurisdictional. These are detailed in memorandums entitled "Memorandum to assert Jurisdiciton for SAS-2007-670" and "Memorandum to assert Jurisdiction for 2007-657-1JT". In both of these cases the wetlands are within similar or greater distances to TNW's as the wetlands on this site.

In this review we examined topographic maps, NRCS Websoil survey maps and NWI mapping, numerous years of aerial photography as well as visits to the site and surrounding areas. The USGS topogprahic mapping shows the site as part of the historic dune and swale system. The NRCS Websoil survey maps the site with Fisherman-Camocca complex, 0 to 6 percent slopes, frequently flooded soils (FrB). These soils are mapped over vast areas in all directions around the site, over to Chincoteague Channel/Bay and to Fowling Gut to the southern part of the island. We conclude that the filling and construction of Main Street and houses to the west of the site as well as the filling and construction of Hallie Whealton Smith Drive to the south and construction of Tom Reed Lane and houses to the east of the site have segragated the natural connection between the wetlands on the site and Chincoteague Channel to the west and Little Oyster Bay to the east. There are RPW surface drainage channels between the site and Chincoteage Channel/Bay via the roadside ditch to the north of Hallie Whealton Smith Drive to the south of the site. To the east and south of the site in question, in places where there is undeveloped land wetlands are evident on aerial photography and supported by NWI mapping bordering Main Street and Hallie Whealton Smith Drive, with Chinctoteague Channel/Bay present on the opposite side of Main Street. This supports our contention that wetlands once existed from the site west to Chincoteague Channel. The wetlands on the site have a subsurface hydrologic connnection to Chincoteague Channel/Bay. Per the guidance, wetlands adjacent to an TNW are jurisdictional.