TNW Stream 1 (East Branch Tioughnioga River), Non-RPW Stream 3, Adjacent Wetland A, Abutting Wetland F

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): November 16, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Buffalo District; Suit-Kote Corporation (Truxton Mine) - #2009-00200.

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Terrestrial Environmental Specialists, Inc., on behalf of Suit-Kote Corporation, is requesting an approved jurisdictional determination for an area approximately 77 acres in size, which is a portion of a property located south of NYS Route 13 between the East Branch Tioughnioga River and Cheningo Creek. Portions of the site were previously used for mining purposes, although no mining has occurred since at least 1990.

State: **New York** County: **Cortland** City: **Town of Truxton**
Center coordinates of site (lat/long in degree decimal format): **Lat. 42.68023° N, Long. -76.05517° W**
Universal Transverse Mercator: **Zone 18; Y=4725845.22099209; X=413549.45822922**
Name of nearest waterbody: **East Branch Tioughnioga River**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **East Branch Tioughnioga River**
Name of watershed or Hydrologic Unit Code (HUC): **2050102**
☒ 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: **October 24, 2012**
☒ Field Determination. Date(s): **May 8, 2009 and July 12, 2011**

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 **(Stream 1 - East Branch Tioughnioga River)**
   - ☒ Wetlands adjacent to TNWs **(Wetlands A &F)**
   - ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☒ Non-RPWs that flow directly or indirectly into TNWs **(Stream 3/Area E)**
   - ☐ 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: **TNW Stream 1 (East Branch Tioughnioga River) – 6,314 linear feet.**
   Ephemeral Stream 3 – 219 linear feet.

   Wetlands: **Wetland A (PSS - adjacent to a TNW): 0.17 acres**
   Wetland F (PEM – adjacent/abutting TNW): 0.08 acre

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual & NC/NE Supplement**

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[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).

Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: .

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: **Stream 1 – East Branch Tioughnioga River.**

   Summarize rationale supporting determination: **This determination is based on the review and compilation of published information, reports/studies, and field observations to characterize the historical, present and/or potential use of this water body for navigation, including consideration of its use or potential susceptibility to use in interstate and foreign commerce. During this process the following information was documented:**

   1. **The physical characteristics, including its depth and size, indicate that the waterbody has the capacity to be navigated by watercraft.**
      i. **The Tioughnioga River is a tributary of the Chenango River, approximately 70 miles long, in central New York in the United States. (http://en.wikipedia.org/wiki/Tioughnioga_River)**
      ii. **The East Branch of the Tioughnioga River begins east of the Finger Lakes in Madison County, where it is called the Tioughnioga Creek. As the Tioughnioga Creek, it flows into Cortland County, increasing in size with the addition of Labrador Creek at Truxton. (http://www.ilovethefingerlakes.com/rivers/tioughnioga-eastbranch.htm)**
      iii. **The NYSDEC considers the East Branch of the Tioughnioga River navigable in accordance with the state regulations from the main stem to the confluence with Labrador Creek in the Town of Truxton, which is upstream of the review area.**
      iv. **Visual observations by USACE staff confirmed that the river within the review area exhibits the width and depth necessary to accommodate navigation by small watercraft.**

   2. **The East Branch Tioughnioga River is currently used for recreational activities including canoeing and fishing.**
      i. **There are at least three public launch sites for canoes on the East Branch of the Tioughnioga River upstream of the project site.**
      ii. **There is at least one canoe/kayak rental facility along the East Branch of the Tioughnioga. (http://www.ilovethefingerlakes.com/rivers/tioughnioga-eastbranch.htm) (http://www.lighthouselandings.org/index.htm)**
      iii. **The East Branch Tioughnioga River is a frequent destination for paddling enthusiasts and is featured in the book "Take A Paddle" by Rich and Sue Freeman. It shows navigability and boat launch sites from Cuyler to Cortland on the East Branch with 2 sites noted upstream of the review area. (Take a Paddle)**
      iv. **NYS DEC annually stocks the East Branch Tioughnioga River in the Town of Truxton. (http://www.dec.ny.gov/outdoor/23328.html) A DEC fishing access point is noted between Truxton and Cuyler in the Take a Paddle publication.**

   3. **The Tioughnioga River is currently used and was historically used for activities involving navigation and interstate commerce, such as recreational commercial navigation.**
      i. **There are at least two public boat launches further downstream of the site along the Tioughnioga River maintained by the NY State Department of Parks, Recreation and Historic Preservation located in Broome County on NY State Route 79 and on the Route 12 Bridge.**
      ii. **The Waterfront Development Commission was formed in Cortland, NY to promote economic development, environmental conservation, tourism promotion and community revitalization along the river's 30 mile corridor. Its long term goals are to develop cultural and historic attractions, agri-tourism, and retail and economic development opportunities, as well as outdoor and recreational pursuits such as fishing, canoeing, kayaking and hiking through a trail system with interpretive signage along portions of the scenic river corridor. (http://www.cortlandbusiness.com/TioughniogaOverview.php)**
      iii. **Historically, the Tioughnioga River was used in the early 1800's as a means of transporting goods down river according to an article published in "The Crooked Lake Review" by Richard Palmer in 2005 and was cited as**

[3] Supporting documentation is presented in Section III.F.

having been a "Public Highway" in another article published in 1998. Cortland County History records it as having been the main means of transportation as well as being used for the import and export of products. (http://www.crookedlakereview.com/articles/136_167/137fall2005/137palmer4.htm) (http://www.crookedlakereview.com/articles/101_135/108summer1998/108palmer.html)

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

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent":

Wetland A (0.17 acres) is located approximately 100 feet from Stream 1 (East Branch Tioughnioga River) and about 50 feet from Stream 2 (Cheningo Creek – see JD form 2 of 3) near the confluence of Streams 1 and 2. Wetland A is a matrix of open water and emergent vegetation fringed by willows. The site visit revealed that the upland area between Wetland A and Stream 1 contains hydrophytic vegetation and soils appear to be consistent with recently deposited alluvium. Visual evidence of water flow between Stream 1 and Wetland A was depicted by bent vegetation caused by flood conditions. Further, there have been direct observations by New York State Department of Environmental Conservation (NYSDEC) personnel that flooding and inundation occur in this area. Lastly, the entire site is located within the FEMA mapped floodplain (Zone A), confirming the observations by the NYSDEC.

Wetland F (0.08 acres) is an emergent wetland that immediately abuts Stream 1 (TNW). The wetland is located at the confluence of Stream 4 (See JD Form 3 of 3) flowing out of the Mine Pond into Stream 1. The wetland would be considered an embayment of Stream 1 and experiences inundation by Stream 1 during high water events.

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: **1581 square miles (based on HUC)**
Average annual rainfall: 39.73 inches (http://www.cortland.org/community/tour/map1.htm)
Average annual snowfall: 67.30 inches (http://www.cortland.org/community/tour/map1.htm)

(ii) **Physical Characteristics:**
(a) Relationship with TNW:
☒ Tributary flows directly into TNW. **Stream 3 flows directly into Stream 1(East Branch Tioughnioga River)**
☐ Tributary flows through **Pick List** tributaries before entering TNW.

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

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: **N/A**
Identify flow route to TNW[5]: **Stream 3 is an ephemeral headwater stream originating at a drain tile outfall, flowing directly into Stream 1, a TNW.**

Tributary stream order, if known: **1**

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain:
☒ Manipulated (man-altered). Explain: **Stream 3 originates at the outfall of an agricultural drain tile and is located in an area mapped as hydric soil. Very likely a natural ephemeral stream or wetland existed at this location before the placement of the drain tile. The channel has been modified by excavation and sidecasting of the excavated material on top of the banks. This modification likely occurred as part of the historic/on-going agricultural activities.**

Tributary properties with respect to top of bank (estimate):
Average width: **2 feet**
Average depth: **ranges from 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: **wetland vegetation existing within bed of the channel.**
☐ Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Slightly eroding, but vegetated in most areas**

Presence of run/riffle/pool complexes. Explain: **N/A**
Tributary geometry: **Relatively Straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for **Ephemeral flow**
Estimate average number of flow events in review area/year: **Unknown number of events but would occur after storm events and during spring snow melt.**
Describe flow regime: **agricultural field drainage is conveyed to Stream 1(TNW) through Stream 3. Stream 3 would also experience inundation from Stream 1 during high water events.**
Other information on duration and volume:

Surface flow is **Discrete and Confined.** Characteristics: **Flow is confined to a channel.**

Subsurface flow: **Unknown**. 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

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

☒ sediment deposition
☐ water staining
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

☐ 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: **There was no flow at the time of the 2009 site visit and not reviewed in 2011. The channel bottom was saturated and there were no signs of any oily film.**

Identify specific pollutants, if known: **It is likely that pollutants such as herbicides/pesticides from the agricultural fields enter the waterway and are subsequently carried downstream directly to the TNW. As the bed of Stream 3 is vegetated it is likely that the stream may provide for some sediment and pollutant filtering during lower flows before entering the TNW.**

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

☒ Riparian corridor. Characteristics (type, average width): **Stream 3 buffer contains a mix of trees, shrubs and herbaceous vegetation ranging from 50 to 100+ feet in width. The area provides a buffer between the active agricultural fields and the TNW reducing sediment from erosion of the fields when the soils are exposed. The buffer also provides detritus and organic carbon which is conveyed by the stream to the TNW.**

☒ Wetland fringe. Characteristics: **Portions of the stream 3 bed is vegetated with wetland plant species** .

☒ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ Other environmentally-sensitive species. Explain findings:
- ☒ Aquatic/wildlife diversity. Explain findings: **The ephemeral channel may serve as an aquatic resource for amphibian species and macro invertebrates in early spring when there is sustained hydrology from snowmelt. However, this service is very limited. The main function of the channel is to convey field drainage to the TNW.**

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:
- Wetland size: acres
- Wetland type. Explain: .
- Wetland quality. Explain: .

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

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

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: .
- ☐ Separated by berm/barrier. Explain: .

[7] Ibid.

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

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

(iii) Biological Characteristics. Wetland supports (check all that apply):
- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

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

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

C. SIGNIFICANT NEXUS DETERMINATION

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

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

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

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

   - **Stream 3 does have the capacity to carry pollutants and storm waters to Stream 1, a TNW as it flows directly into the TNW. However, the ephemeral nature of the swale and relatively flat slope of the flow path has the capacity to sustain**

stormwater flow to facilitate filtration and dissipate energy within the channel, effectively reducing the amount of pollutants stormwater ultimately reaching the TNW.

- **As Stream 3 directly receives floodwaters from the TNW, especially in the spring, it may provide for some limited habitat for fish and invertebrates.**
- **As discussed above, Stream 3 does have the capacity to transfer nutrients and organic carbon supporting downstream food webs.**

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: **TNW Stream 1 (East Branch Tioughnioga River) – 6,314 linear feet. Stream 1 flows into the Tioughnioga River, and into the Chenango River (a TNW).**

☒ Wetlands adjacent to TNWs: **Wetland A (PSS adjacent to a TNW) - 0.17 acres & Wetland F (PEM abutting TNW) – 0.08 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: **Stream 3 - 219 linear feet. Stream 3 flows directly into the TNW.**

☐ 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.

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[8]See Footnote # 3.

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: .

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):

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[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: Terrestrial Environmental Services.**
☒ **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. As a result of site inspection conducted on May 8, 2009 the Corps concurred with the identification of the boundaries of Stream 1 (TNW) and adjacent Wetland A, but the Corps requested the consultant add Non-RPW Stream 3. The consultant did not provide a data sheet for Stream 3. In addition, Wetland F which is an embayment of the Stream 1 was not identified in the delineation but located as a result of the July 12, 2011 site inspection. The Corps requested the consultant to add the wetland to the delineation which they subsequently added to the map with revision date of August 4, 2011. The revised map was submitted to the Corps on November 18, 2011 but they did not provide a data sheet. However, the Corps personnel had determined during the site inspection that the area met the parameters of the federal delineation manual.**
☐ **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:1:24,000; Truxton, NY.**
☒ **USDA Natural Resources Conservation Service Soil Survey. Citation: Cortland County Soil Survey (1961). An area of hydric soil, Holly silt loam, is mapped as occurring in the current location of Stream 3.**
☒ **National wetlands inventory map(s). Cite name: Truxton, NY. Stream 1 (Tioughnioga River) is identified as a R2UBH (slow moving river with floodplain, H- permanently flooded)**
☒ **State/Local wetland inventory map(s): New York State Environmental Resources Mapper – no state wetlands identified.**
☒ **FEMA/FIRM maps: The entire project area is located within Zone A (100 year flood) of the FEMA mapped floodplain.**
☐ **100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)**
☒ **Photographs: ☒ Aerial (Name & Date): Aerial photos were provided by the consultant for years 1936, 1955, 2003, and 2006. The Corps also pulled aerial photos from the NYSGIS Clearinghouse for 1994, 2011 and reviewed current aerials from Bing maps. Wetland A and Stream 3 evident in aerials after 1994.**
or ☒ Other (Name & Date): Site photos submitted with delineation report.
☐ **Previous determination(s). File no. and date of response letter: .**
☐ **Applicable/supporting case law: .**
☐ **Applicable/supporting scientific literature: .**
☒ **Other information (please specify): Site visits of May 8, 2009 and July 12, 2011. Information provided by NYSDEC personnel regarding state navigability of Stream 1 (Mike Barylski and Joe Dlugolenski) and observed flooding of Stream 1 into the review area (Mike Barylski).**

Web Sites utilized in TNW determination:
http://en.wikipedia.org/wiki/Tioughnioga_River
http://www.cortlandbusiness.com/TioughniogaOverview.php
http://www.dec.ny.gov/outdoor/23328.html
http://www.crookedlakereview.com/articles/136_167/137fall2005/137palmer4.htm
http://www.crookedlakereview.com/articles/101_135/108summer1998/108palmer.html
http://www.ilovethefingerlakes.com/rivers/tioughnioga-eastbranch.htm
http://www.lighthouselandings.org/index.htm
http://www.cortland.org/community/tour/map1.htm

Book: Freeman, Rich and Sue, "Take a Paddle" 2004 ISBN# - 1-930480-24-5

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Cheningo Creek Drainage: Stream 2 - Perennial RPW Cheningo Creek, Abutting Wetland B/C, Swale 2 upland, Area D (isolated pond)

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): November 16, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Buffalo District; Suit-Kote Corporation (Truxton Mine) - 2009-00200.

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Terrestrial Environmental Specialists, Inc., on behalf of Suit-Kote Corporation, is requesting an approved jurisdictional determination for an area approximately 77 acres in size, which is a portion of a property located south of NYS Route 13 between the East Branch Tioughnioga River and Cheningo Creek. Portions of the site were previously used for mining purpose although no mining has occurred since at least 1990.

State: **New York** County: **Cortland** City: **Town of Truxton**
Center coordinates of site (lat/long in degree decimal format): Lat. **42.68023**°N, Long. **-76.05517**°W.
Universal Transverse Mercator: **Zone 18; Y=4725845.22099209; X=413549.45822922**
Name of nearest waterbody: **Cheningo Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **East Branch Tioughnioga River**
Name of watershed or Hydrologic Unit Code (HUC): **2050102**

- ☒ 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: **October 24, 2012**
- ☒ Field Determination. Date(s): **May 8, 2009 and July 12, 2011**

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 **(Cheningo Creek)**
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs **(Wetlands B and C)**
   - ☐ 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: **Perennial RPW Stream 2 (Cheningo Creek) – 5,946 linear feet.**
   Wetlands: **PSS/PFO Wetland B and C (directly abutting Stream 2) 8.57 acres. (Note that Wetland B/C was delineated as two separate wetlands. However, the two areas were found to connect via a 34 foot long by 2-3 foot wide linear wetland during the 2009 site inspection and are hereafter referred to as Wetland B/C in this document.)**

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[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).

c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual & NE/NC Regional Supplement**
Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Swale 2: approximately 139 linear feet

Swale 2 provides a surface hydrologic connection from Wetland B/C to Stream 1 (Tioughnioga River) a perennial TNW. Swale 2 conveys ephemeral flow, but does not exhibit stream channel characteristics and, in general, does not meet the definition of a WOUS according to 33 CFR Part 328.3(a)(1-7). The swale exhibited erosion features (i.e. lack of vegetation and sorted stones) which provided evidence of water flow although none was observed during the 2009 site inspection when it was identified. The swale extended down slope from Wetland B/C directly to Stream 1.

Area D: 0.17 acre

Area D was excavated in an upland area with the excavated material used to construct steep banks which completely surround the pond. No wetland vegetation was present in the pond due to the lack of shallow water. The pond does not have an outlet or an inlet. It is approximately 600 feet from Stream 2 (Cheningo Creek). There is no surface water connection between Area D and Cheningo Creek, or Wetland B/C.

Significant nexus for jurisdiction by adjacency for Area D is not met because this waterbody has no surface water connection and does not contribute to the physical, biological, or chemical attributes to downstream navigable waters. Therefore, Area D is outside Department of the Army jurisdiction as it does not meet the criteria for jurisdictional WOUS according to 33 CFR Part 328.3(a)(1-7) as follows:

1. **do not/have not supported interstate or foreign commerce;**
2. **are not interstate waters/wetlands;**
3. **the degradation or destruction of which would not affect interstate or foreign commerce and does not include such waters:**
   - **(i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or**
   - **(ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or**
   - **(iii) which are used or could be used for industrial purpose by industries in interstate commerce**
4. **are not impoundments of water otherwise defined as WOUS under the definition;**
5. **are not tributaries of waters identified in paragraphs (a)(1)-(4) of this section;**
6. **are not a territorial sea;**
7. **are not wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section;**
8. **are not prior converted cropland.**

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

[3] Supporting documentation is presented in Section III.F.

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: 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 **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .
Identify flow route to TNW[5]: .
Tributary stream order, if known: .

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

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

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[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 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
- ☐ 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):
- ☐ 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

☐ 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:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

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

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

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

(i) Physical Characteristics:
(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .
Surface flow is: **Pick List** .
Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting

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[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.

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

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

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

(iii) Biological Characteristics. Wetland supports (check all that apply):
- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**
All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

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

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

C. SIGNIFICANT NEXUS DETERMINATION

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

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

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

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

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

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

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

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

2. **RPWs that flow directly or indirectly into TNWs.**
   ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **Stream 2 (Cheningo Creek) is depicted as a perennial "blue line" stream on the USGS topographic map as well as on the Soil Survey Map. In addition, on-site observations indicate year-round flow regime.**
   ☐ 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: **5,946** linear feet **~50** 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: **Wetland B/C was delineated using the 1987 delineation manual and is described as being a mixture of wet meadow, scrub/shrub, and deciduous forest. A review of aerial photos reveals that Wetland B/C is very likely an historic remnant of a meander channel of Stream 1. (Note: as discussed above Wetland B/C was originally delineated as two separate wetlands but found to be a contiguous wetland. Also, Wetland B is shown in two sections on the delineation map but both of these sections continue outside of the review area and connect into one contiguous wetland area.) Wetland B was found to directly abut Stream 2 at four different locations in the review area. Wetland C has found to hydrologically connect to Stream 1 (Tioughnioga River -TNW) via upland Swale 2.**

   ☐ 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:
   Wetland B (4.13 + 0.31 acres)/C (4.13 acres) = 8.57acres.

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.

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[8]See Footnote # 3.

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: **Area D is a man-made pond, constructed in an upland area and entirely surrounded by steep banks. Significant nexus for jurisdiction by adjacency are not met because the pond has no surface water connection and does not contribute to the physical, biological, or chemical attributes to downstream navigable waters.**
☒ Other: (explain, if not covered above): **Swale 2 – approximately 139 linear feet – Conveys flow from Wetland B/C to Stream 2 (Tioughnioga River/TNW) but does not exhibit stream channel characteristics and, in general, does not meet the definition of a WOUS according to 33 CFR Part 328.3(a)(1-7).**

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: **0.17 acres. (Area D)**
☐ 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: **0.17 acres. (Area D)**
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

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[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.***

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: **Terrestrial Environmental Services.**

☒ 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. **As a result of site inspection conducted on May 8, 2009 the Corps concurred with the delineation (2009 report) of Wetlands B/C, with the exception of the needed addition of a 34 foot by 2-3 foot wide linear wetland, connecting Wetlands B and C. An additional data sheet for this linear wet meadow connection was subsequently submitted on September 7, 2010. Corps concurred with the data provided.**

At the May 2009 site visit, Swale 2 was also identified, hydrologically connecting Wetland C to Stream 1. Wetland C was originally identified in the delineation report as a potentially isolated wetland.

Also, isolated Area D was not identified on the original 2009 delineation map although it was mentioned in the report text. It was subsequently added to the delineation map in order to assess potential adjacency to on-site streams.

☐ 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:**1:24,000; Truxton, NY. Both Cheningo Creek and the East Br. Tioughnioga identified as perennial waters.**

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **Cortland County Soil Survey (1961) Sheet 13 – hydric soil Papakating indicated as occurring within approximate location of wetland C and hydric soil Birdsall and inclusion soil Wallington located in location of Wetland B.**

☒ National wetlands inventory map(s). Cite name: **Truxton, NY. PFO and PSS wetlands identified within approximate location of wetland B/C.**

☒ State/Local wetland inventory map(s): **New York State Environmental Resources Mapper – no state wetland identified, Cheningo Creek and East Br. Tioughnioga River listed as a Class C stream.**

☒ FEMA/FIRM maps: **The FEMA map identifies that the entire site is located within FEMA mapped floodplain (Zone A-100 year flood).**

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): **Aerial photos were provided by the consultant for years 1936, 1955, 2003, and 2006. The Corps also pulled aerial photos from the NYSGIS Clearinghouse for 1994, 2011 and current aerials on Bing Maps.**

or ☒ Other (Name & Date): **Submitted with delineation report.**

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify): **Site Inspections conducted on May 8, 2009 and July 12, 2011.**

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Non-RPW Stream 4, Adjacent Wetland MP2, RPW Mine Pond, Swale 1 (upland)

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): November 16, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Buffalo District; Suit-Kote Corporation (Truxton Mine) - 2009-00200.

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Terrestrial Environmental Specialists, Inc., on behalf of Suit-Kote Corporation, is requesting an approved jurisdictional determination for an area approximately 77 acres in size, which is a portion of a property located south of NYS Route 13 between the East Branch Tioughnioga River and Cheningo Creek. Portions of the site were previously used for mining purposes. Mining has not occurred on the site since at least 1990.

State: **New York** County: **Cortland** City: **Town of Truxton**
Center coordinates of site (lat/long in degree decimal format): **Lat. 42.68023° N, Long. -76.05517° W**
Universal Transverse Mercator: **Zone 18; Y=4725845.22099209; X=413549.45822922**
Name of nearest waterbody: **East Branch Tioughnioga River**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **East Branch Tioughnioga River**
Name of watershed or Hydrologic Unit Code (HUC): **2050102**
☒ 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: **October 24, 2012**
☒ Field Determination. Date(s): **May 8, 2009 and July 12, 2011**

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 **(Mine Pond)**
   - ☒ Non-RPWs that flow directly or indirectly into TNWs **(Stream 4/Area G)**
   - ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs **(Wetland MP2)**
   - ☐ 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: **Non-RPW Stream 4 – 114 linear feet.**
   Mine Pond – 5.47 acres

   Wetlands: **Wetland MP2 (PEM/SS abuts mine pond – RPW): 0.19 acres**

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual & NC/NE Supplement**
   Elevation of established OHWM (if known): .

[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).

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:

Swale 1 (Area H): approximately 42 linear feet

Swale 1 provides a surface hydrologic connection from Mine Pond and Wetland MP2 to Stream 1 (Tioughnioga River) a perennial TNW (See form 1 of 3). Swale 1 conveys ephemeral flow, but does not exhibit stream channel characteristics and, in general, does not meet the definition of a WOUS according to 33 CFR Part 328.3(a)(1-7). The swale exhibited erosion features (i.e. lack of vegetation). Minor water flow was observed during the 2009 site inspection when it was identified. In addition, evidence of greater water flow from the Mine pond to Stream 1was identified through observation of bent vegetation surrounding the swale resulting from recent high water event. The swale extended down slope from the Mine pond directly to Stream 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: **square miles**
   Drainage area: **1581 square miles (note this is drainage area of Chenango River HUC 2050102)**

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[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Average annual rainfall: 39.73 inches (http://www.cortland.org/community/tour/map1.htm)
Average annual snowfall: 67.30 inches (http://www.cortland.org/community/tour/map1.htm)

(ii) Physical Characteristics:

(a) Relationship with TNW:
☒ Tributary flows directly into TNW. **Stream 4 (Area G) flows directly into East Branch Tioughnioga River**
☐ 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: **N/A**
Identify flow route to TNW[5]: **Stream 4 is an ephemeral stream flowing out of the mine pond, through wetland F (see JD Form 1 of 3), and directly into Stream 1, a TNW.**

Tributary stream order, if known: **1**

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain:
☒ Manipulated (man-altered). Explain: **Stream 4 originates at a pond constructed from mining sometime between 1966 and 1990. It is unclear if Stream 4 has formed as a result of natural water flow between the Stream 1 and the Mine pond or if it was constructed when the mine pond was excavated as an outlet. No mining has occurred since a least 1990. The channel is evident on aerial photos dating back to 1994 and has been unaltered since then. Aerial photos showing the site from construction of the pond to 1994 were not located through on-line resources. Older aerials (pre-1966) are of poor resolution so specific site details are inconclusive. The channel is also used by wildlife (i.e. muskrat, etc.) as a travel corridor between pond and river which may have also affected the channel profile. Since it has been at least 22 years since disturbance, the area appears to have naturalized.**

Tributary properties with respect to top of bank (estimate):
Average width: **1 feet**
Average depth: **ranges from 3-6** inches deep
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: **The channel had very little bank as it is in a shallow channel within a very flat area except directly at the mine pond which has an eroding bank. The channel extends through thickly vegetated areas and outlets through Wetland F (see JD Form 1 of 3) into Stream 1 (TNW).**
Presence of run/riffle/pool complexes. Explain: **N/A**
Tributary geometry: **Relatively Straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for **Ephemeral flow**
Estimate average number of flow events in review area/year: **Unknown number of events but would occur after storm events and during spring snow melt.**
Describe flow regime: .
Other information on duration and volume: **Based upon visual observation, it appears that this channel serves as a tributary to Stream 1 when levels in the Mine Pond are high and also from Stream 1 into the Mine Pond when Stream 1 levels are high. NYSDEC personnel have observed flooding of this portion of the site by Stream 1 &2 (See NYSDEC photos taken March 9, 2009). The entire site is located within the FEMA mapped floodplain zone A (100 year flood).**

[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.

Surface flow is **Discrete and Confined.** Characteristics: **Flow is confined to a channel, but also overtops the channel during high water events as the entire area is within the floodplain of Stream 1.**

Subsurface flow: **Unknown**. 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
- ☐ 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):
- ☐ 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

☐ 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:
- ☐ 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: **No flow was observed at the time of the 2011site inspection when the channel was walked, but channel bottom was saturated. The area around the stream and mine pond are relatively undisturbed and have been such since at least 1994 based on available aerial photos.**
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☒ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **The ephemeral stream may serve as an aquatic resource for amphibian species and macro invertebrates in early spring when there is sustained hydrology from higher water events from the snowmelt and spring rains. The stream also serves as a connection from the pond and the river for fish species during high water events and year round for invertebrates and aquatic mammals such as muskrat. Stream 4 buffer contains a mix of trees, shrubs and herbaceous vegetation and provides detritus and organic carbon which is conveyed by the stream to the TNW.**

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

(i) Physical Characteristics:
(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain:
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is Explain:

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[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.

Surface flow is: **Pick List**
Characteristics: wetland is inundated by the pond when water levels are high.

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: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

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

(iii) Biological Characteristics. Wetland supports (check all that apply):
☐ Riparian buffer. Characteristics (type, average width): .
☐ Vegetation type/percent cover. Explain: .
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

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

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

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

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

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

   - **Stream 4 does have the capacity to carry pollutants and storm waters to Stream 1, a TNW as it flows directly into the TNW and also directly receives flood waters from Stream 1.**

   - **Stream 4 may provide for some limited habitat for invertebrates especially in the spring. Stream 4 transports flow between Stream 1 and the Mine pond/Wetland MP2. These waters contain fish, invertebrates and macro invertebrates.**

   - **As discussed above, Stream 4 does have the capacity to transfer nutrients and organic carbon supporting downstream foodwebs.**

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:

   ☐ Wetlands adjacent to TNWs:

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 5.47 acre mine pond was excavated adjacent to the TNW, partially within an area mapped as hydric soils. The soil mapping was published in 1961 and was overlaid on the 1955 photos. The 1955 aerials do show agricultural use of the area but this does not preclude the mapped hydric soil area as being wetland. Numerous wetlands in NY are located within agricultural fields and are able to support a crop during the drier summer months. Therefore, it is not conclusive that the entire pond was excavated in uplands, although the majority of the pond is located within areas mapped as upland soil. According to the NYSDEC Mining Section, the site has not been mined since at least 1990. The pond has now developed features, including an adjacent contiguous wetland, that exhibit conditions of a water of the US. The wetland area is located at the north end of the pond within a peninsula and contains hydric soil as confirmed by a USACE 2011 site visit. The northern end is shallower and contains areas of emergent aquatic vegetation with numerous invertebrates (i.e. frogs). The pond has hydrological connections to the TNW in at least two locations, where it is apparent that water flows in and out of the pond into and out of the TNW. At its closest location, the pond is ~30 feet from the TNW as measured from the 2011 aerial photo. The mine pond has been identified as containing open water continuously. In addition, the pond is located within zone A of the floodplain maps and is inundated by Stream 1 as documented by NYSDEC. For these reasons, the mine pond is considered to be an RPW tributary flowing into the 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:

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☒ Other non-wetland waters: **5.47** acres.
   Identify type(s) of waters: **mine pond constructed partially in hydric soils.**

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: **Stream 4 - 114 linear feet. Stream 4 flows directly into the TNW.**
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetland MP2 is a 0.19 acre wetland that directly abuts the Mine Pond (RPW) as it is located along the fringe of the open water and is regularly inundated by the pond. In addition, the wetland is located in close proximity (less than 40') to Stream 1 (TNW) and receives floodwaters directly from the TNW.**

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

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.19** 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: .

   Identify water body and summarize rationale supporting determination: .

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

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[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.***

☐ 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): **Swale 1 was found to provide a hydrological connection between Stream 1 and the mine pond, but did not exhibit features of a water of the US.**

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: Terrestrial Environmental Services.**
☒ **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. The delineation report did not include the mine pond, Wetland MP2, swale 1 or Stream 4. These features were added following the 2009 & 2011 site visits and are contained on the revised January 25, 2012 delineation map. The consultant indicated that they did not include these areas as they were associated with a constructed feature.**
☒ **Data sheets prepared by the Corps: Three data sheets were prepared by the Corps for Wetland MP2 based on July 2011 site visit.**
☐ **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: 1:24,000; Truxton, NY. Stream 1 (East Br. Tioughnioga River) & Stream 2 (Cheningo Creek) are identified. Site is flat with no contours present besides the stream banks.**
☒ **USDA Natural Resources Conservation Service Soil Survey. Citation: Cortland County Soil Survey (1961). A wet spot is identified in the approximate location of Wetland F/Stream 4. The hydric soil, Holly silt loam, is located in the approximate location of wetland MP2 and extends from Stream 1 to Stream 2. Majority of the mine pond was excavated within soils mapped as Middlebury and Tioga silt loams both of which are non-hydric soils.**
☒ **National wetlands inventory map(s). Cite name: Truxton, NY. Two palustrine emergent wetland pockets noted in approximate location of mine pond and/or Stream 4. A palustrine scrub shrub wetland noted in approximate location of Wetland F and Stream 4.**
☒ **State/Local wetland inventory map(s): New York State Environmental Resources Mapper. No state wetlands identified.**
☒ **FEMA/FIRM maps: The entire project area is located within Zone A (100 year flood) of the FEMA mapped floodplain.**
☐ **100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)**
☒ **Photographs: ☒ Aerial (Name & Date):**

Aerial photos were provided by the consultant for years 1936, 1955, 2003, and 2006. The 1936 & 1955 scale and photo quality do not allow accurate determination of minor hydrologic features or vegetation assessment. Majority of site is in active agriculture. 2003 & 2006– mine pond wetland MP2 and Stream 4 evident.
The Corps also viewed the following aerial photos:

- 1955 aerial from 1961 soil survey: scale, photo quality and resolution does not allow accurate determination of minor hydrologic features or vegetation assessment. Mine pond did not exist at this time. Majority of area in agriculture.
- 1966 from Cornell library. http://aerial-ny.library.cornell.edu/ : scale, photo quality and resolution does not allow accurate determination of minor hydrologic features or vegetation assessment. Mine pond did not exist at this time. Majority of area in agriculture.
- NYSGIS Clearinghouse for 1994, 2003 & 2006 mine pond wetland MP2 and Stream 4 evident. No recent mining activity evident.
- Bing maps birds eye view – Stream 4 and Wetland MP2 evident.
- NY 2011 1m aerials – mine pond edge of water within 30 feet of Stream 1.

or ☒ Other (Name & Date): Photos submitted with TES delineation report, photos from July 12, 2011 USACE site visit and photos from NYSDEC from March 9, 2009 showing flood event.

☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify):

- Corps site visits of May 8, 2009 and July 12, 2011. See memorandum for the record (MFR).

- Telephone conversation between Julie Rimbault and Lucas Mahoney, NYSDEC regarding recent history of mining (See MFR). Lucas indicated that Suit-Kote has not mined the site since their purchase. Cortland Ready-Mix obtained a mining permit in 1990 but did not mine the parcel under that permit.

- October 22, 2012 email from Lucas Mahoney providing the following time line for the mining permit history of the subject site:

Effective Date	Expiration Date	Permittee
Jan. 12, 1990	Jan. 12, 1993	Cortland Ready Mix, Inc.; original permit issued for 67 acre life of mine including below water table mining
Jan. 12, 1993	Jan. 12, 1998	Cortland Ready Mix; renewal "authorizes mining activity on 18.9 acres including the extraction of minerals from a a maximum of 8.3 acres of land during the permit term"
May 6, 1998	April 30, 2003	Cortland Ready Mix; renewal for 19.9 acre permit term
Dec. 12, 2003	Nov. 30, 2008	Suit Kote Corp; transfer and renewal for 19.9 acre permit term and 60 acre life of mine

- Telephone conversation between Bridget Brown and Mike Barylski (See MFR) Mike indicated that the site is often flooded by the River (Stream 1).

B. ADDITIONAL COMMENTS TO SUPPORT JD: