

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

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): May 24, 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRN, Kordsa, Inc: Invista Parcels B,C, & D, LRN-2021-00876

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Tennessee County/parish/borough: Hamilton City: Chattanooga
Center coordinates of site (lat/long in degree decimal format): Lat. 35.10718° N, Long. 85.242455° W.
Universal Transverse Mercator:

Name of nearest waterbody: Tennessee River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: WTL-2 does not have surface flow to any other waters

Name of watershed or Hydrologic Unit Code (HUC): 060200011202: Upper Nickajack Lake-Tennessee River

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: 13-Apr-2022

Field Determination. Date(s): 21-Oct-2021

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 no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.
Wetlands: acres.

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

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: **Wetland-2 was identified to be geographically isolated in a jurisdictional determination request submitted by Barge Design Solutions. Upon review of submitted information along with multiple aerial imagery and LiDar resources the feature does not have an inlet or outlet and there is no evidence that the feature was constructed in waters of the U.S. A follow-up site visit was conducted on 21-Oct-2021 that confirmed the feature is geographically isolated**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

depressional area with no hydrologic connection to any other waters of the U.S. Additionally, the sites are not mapped on the USGS 7.5-minute topographic quadrangle map and the National Wetlands Inventory Maps. There is no indication of any discrete surface water connection or sheet flow from the feature to into a TNW or used by interstate or foreign commerce. This wetland is not used by interstate or foreign travelers for recreation purposes (this area is located in a secured parcel and lacks resources features that would attract visitors for recreation). Therefore Wetland-2 is not jurisdictional .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: _____ .

Summarize rationale supporting determination: _____ .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:
_____ .

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:

Watershed size: **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 TNW⁵: _____ .
Tributary stream order, if known: _____ .

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.

(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**

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: .

(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: .
 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-RPWs⁸ that flow directly or indirectly into TNWs.

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

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

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

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

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

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

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. 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: .

⁸See Footnote # 3.

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

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

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): **Wetland-2 was identified to be geographically isolated in a jurisdictional determination request submitted by Barge Design Solutions. Upon review of submitted information and multiple aerial imagery and LiDar resources the features do not appear to contain any inlet or outlet areas and no evidence that the feature was constructed in waters of the U.S. A follow-up site visit was conducted on 21-Oct-2021 that confirmed the features are geographically isolated. There is no indication of any discrete surface water connection or sheet flow from the feature to into a TNW that is used by interstate or foreign commerce. Additionally, the site is not mapped on the USGS 7.5-minute topographic quadrangle map, the National Wetlands Inventory Maps. Therefore Wetland-2 is not jurisdictional.**

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: 1.11 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: Submitted by Submitted by Barge Design Solutions, “Approved Jurisdictional Determination Request Package, Invista Properties B, C and D, Hamilton County, Tennessee, dated October, 2021” (JD Report) and supplemental information provided on October 28, 2021 and and revised March 23, 2022.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters’ study: .
- U.S. Geological Survey Hydrologic Atlas: Access vai ORM2 20-Oct-2021.
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24K TN-East Chattanooga.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Accessed via National Regulatory Viewer 20-Oct-2021.
- National wetlands inventory map(s). Cite name: Accessed via National Regulatory Viewer 20-Oct-2021.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Accessed via National Regulatory Viewer 20-Oct-2021.
or Other (Name & Date): On site photos 21-Oct-2021.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .

Applicable/supporting scientific literature:

Other information (please specify): 3DEPElevation LiDAR & 3DEP Hillshade USGS accessed via National Regulatory Viewer October 20, 2021 .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Waters_Name	Latitude	Longitude	Waters Size	Type Of Aquatic Resource	Geographic Authority
WTL-2	35.10716	-85.24411	1.11 ACRES	ISOLATE	None

1. Absence of any surface drainage features between the isolated water and the nearest water of the U.S.

- Wetland 2 depressional with no surface outlet. No flowing surface water was observed leaving any the wetland during the site assessment in October 2021. This was after a period of wetter than normal precipitation for the previous 60 days. No signs of flowing water such as scour, sediment deposits, defined channels, or ditches were observed anywhere on-site.

2. Absence (or presence) of any berms between the isolated water and the nearest water of the U.S.

- No berms were observed between or near any on-site wetland and the nearest water of the U.S.

3. Horizontal and vertical distance to the nearest water of the U.S.

- The nearest water of the U.S. is a small tributary of the Tennessee River, located approximately 700 feet south of the site. The site is approximately 1050 feet from the Nickajack Reservoir of Tennessee River. This tributary is approximately 10 feet lower in elevation than Wetland 2 which is approximately 680 feet elevation. The Nickajack Reservoir is approximately 56 feet lower than the tributary at its normal summer pool elevation.

4. Source of hydrology for the isolated water

a. Precipitation, seeps? Overland flow?

- o Hydrology for the on-site wetlands is provided by seasonally perched / high ground water levels, surface/subsurface stormwater runoff from immediate adjacent buffer areas, and by direct precipitation.

b. Could the nearest water of the U.S. could, during extreme floods, overflow into the isolated water?

- o No, the nearest water of the U.S. is a small stream (tributary to the Tennessee River) that is substantially lower in elevation than the site.

5. During extreme storm/flood conditions, could the isolated water “overflow” into the nearest water of the U.S.?

- There is no observable physical evidence that on-site wetlands ever “overflow”.

6. Description of the intervening land between the isolated water and the nearest water of the U.S. (potential for shallow subsurface connection)

a. Is it all forested? Is it 50% forested and 50% residential?

- o Intervening land between the on-site wetlands and the small tributary to the Tennessee River consists of several land uses. On-site upland areas consist of a forested plant community. The topography of the site is relatively flat due to historic alterations from the adjacent industry. The site is crossed by a railroad that parallels the Tennessee River and there is an access road for the use of the adjacent industry and railroad maintenance immediately adjacent to the wetland. Beyond the forested properties the site is mowed grass.

b. If vegetated, with what species?

- o On-site upland vegetation is dominated by deciduous hardwood and mowed grass consisting predominately of fescue and crab grass.

c. If the land provides habitat, describe type and quality.

- o The on-site deciduous forest provides some forest habitat. This habitat can be described as moderate to low quality, as the forest is only approximately 30 acres in size with minimal corridors to adjacent woodlands. The site is in an urban industrial area and connectivity to other habitats is generally interrupted by development and roads.

7. Mapped or actual soil types on- and off-site (potential for shallow subsurface connection)

- The soil series identified across the entire site is Sequatchie loam, 2 to 7 percent slopes (SeB).

a. Permeability :

- o Sequatchie loam, 2 to 7 percent slopes (SeB) is a well drained soil.

b. Impermeable layer – e.g., hard pan at 3 feet

- o Sequatchie loam, 2 to 7 percent slopes: Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

8. Floodplain designation, if any, of the area where the isolated water is located in relation to the nearest water of the U.S.

- The site is not located in a floodplain. There is no floodplain designation.

9. Proof of absence of shallow subsurface connection (e.g., waterwells, geologic analysis, dye test, etc)

- It is highly unlikely that the wetland has any subsurface connection to the small unnamed tributary. The tributary is a considerable distance (700 feet) from the site. In addition, an access drive exists between the site and the tributary. This road has compacted surface soils, preventing any lateral subsurface flow. In addition, historic earth moving has substantially altered natural drainage flow patterns at this location.

Lack of interstate commerce connection:

1. Lack of interstate use by interstate or foreign travelers for recreational purposes

a. Lack of habitat or resources of special significance which would attract interstate or foreign travelers.

- o Wetland 2 is a shrub-scrub seasonally inundated wetland surrounded by deciduous forest. Neither of these provides significant habitats or are special resources that would attract interstate or foreign travelers.

b. Lack of bird and wildlife species of special significance which would attract interstate or foreign travelers

- o No bird or wildlife species of special significance were observed or known to occur in any onsite wetland that would attract interstate or foreign travelers.

2. Lack of fish or shellfish which could be taken or sold in interstate or foreign commerce.

- None of the on-site wetlands contain habitat that can support fish or shellfish species.

3. Lack of industrial purposes (e.g., water withdrawal for industrial use)

- The on-site wetlands lack any industrial use. On-site wetlands are small and seasonally flooded and therefore are not a significant water source for industrial use. In addition, the City of Chattanooga provides water to adjacent industrial/commercial properties.

4. Lack of agriculture which is sold interstate/foreign

- No past, present, or future agricultural practices have or will take place within the on-site wetlands.

5. Lack of silviculture which is sold interstate/foreign

- No evidence of past silviculture practices (roads and skid roads) was seen on the site. There are no species of tree used for silviculture practices in wetland2.

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