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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 15-Jul-2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Kansas City District, NWK-2008-00838-JD1

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State :	MO - Missouri
County/parish/borough:	Andrew
City:	Savannah
Lat:	39.94090785
Long:	-94.81618718
Universal Transverse Mercator:	[ ]
Name of nearest waterbody:	Dillon Creek
Name of nearest Traditional Navigable Water (TNW):	Missouri River
Name of watershed or Hydrologic Unit Code (HUC):	10240013

☑ 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 the action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION:

☑ Office Determination Date: 30-Jun-2008

☐ ☐ Field Determination Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION

There [ ] "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area:[1]

Water Name	Water Type(s) Present
08-838	Non-RPWs that flow directly or indirectly into TNWs

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

Area: (m²)
Linear: 4565.9 (m)

c. Limits (boundaries) of jurisdiction:

based on: Established by OHWM.
OHWM Elevation: (if known)

2. Non-regulated waters/wetlands:[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

1.TNW

Not Applicable.

2. Wetland Adjacent to TNW
Not Applicable.

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

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

(i) General Area Conditions:

Watershed size:	885 acres
Drainage area:	885 acres
Average annual rainfall:	33 inches
Average annual snowfall:	19 inches

(ii) Physical Characteristics
(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☑ Tributary flows through [ ] tributaries before entering TNW.

:Number of tributaries

Project waters are 10-15 river miles from TNW.
Project waters are 2-5 river miles from RPW.
Project Waters are 5-10 aerial (straight) miles from TNW.
Project waters are 2-5 aerial(straight) miles from RPW.

☐ Project waters cross or serve as state boundaries.

Explain:

Identify flow route to TNW:[5]
This unnamed triubtary flows into Dillon Creek (RPW), then flows into Mace Creek (RPW), then into the Missouri River (TNW).

Tributary Stream Order, if known:

Order	Tributary Name
2	08-838

(b) General Tributary Characteristics:
Tributary is:

Tributary Name	Natural	Artificial	Explain	Manipulated	Explain

08-838	-	-	-	X	Numerous road crossing and water retention basins have been constructed within the drainage area of this reach.

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

Tributary Name	Width (ft)	Depth (ft)	Side Slopes
08-838	10	6	2:1

Primary tributary substrate composition:

Tributary Name	Silt	Sands	Concrete	Cobble	Gravel	Muck	Bedrock	Vegetation	Other
08-838	X	-	-	-	X	-	-	-	-

Tributary (conditions, stability, presence, geometry, gradient):

Tributary Name	Condition\Stability	Run\Riffle\Pool Complexes	Geometry	Gradient (%)
08-838	-	-	Meandering	.5

(c) Flow:

Tributary Name	Provides for	Events Per Year	Flow Regime	Duration & Volume
08-838	Intermittent but not seasonal flow	-	-	-

Surface Flow is:

Tributary Name	Surface Flow	Characteristics
08-838	Confined	-

Subsurface Flow:

Tributary Name	Subsurface Flow	Explain Findings	Dye (or other) Test
08-838	-	-	-

Tributary has:

Tributary Name	Bed & Banks	OHWM	Discontinuous OHWM[7]	Explain
08-838	X	X	-	-

Tributaries with OHWM[6] - (as indicated above)

Tributary Name	OHWM	Clear	Litter	Changes in Soil	Destruction Vegetation	Shelving	Wrack Line	Matted\Absent Vegetation	Sediment Sorting	Leaf Litter	Scour	Sediment Deposition	Flow Events	Water Staining	Changes Plant	Other
08-838	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction:

High Tide Line indicated by:
Not Applicable.

Mean High Water Mark indicated by:
Not Applicable.

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

Tributary Name	Explain	Identify specific pollutants, if known
08-838	-	-

(iv) Biological Characteristics. Channel supports:

Tributary Name	Riparian Corridor	Characteristics	Wetland Fringe	Characteristics	Habitat
08-838	X	This reach is surrounded by a riparian area supporting an uneven aged mix of woody trees and herbaceous plant species. Riparian conditions consist of at least a 50-foot vegetative buffer on each side of the channel for approximately 70% of the length of the channel.	-	-	X

Habitat for: (as indicated above)

Tributary Name	Habitat	Federally Listed Species	Explain Findings	Fish\Spawn Areas	Explain Findings	Other Environmentally Sensitive Species	Explain Findings	Aquatic\Wildlife Diversity	Explain Findings
08-838	X	-	-	-	-	-	-	X	Due to the intermittent nature of this tributary, this reach has the potential to provide moderate habitat for terrestrial and

									aquatic species.

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

(i) Physical Characteristics:
(a) General Wetland Characteristics:
Properties:
Not Applicable.

(b) General Flow Relationship with Non-TNW:
Flow is:
Not Applicable.

Surface flow is:
Not Applicable.

Subsurface flow:
Not Applicable.

(c) Wetland Adjacency Determination with Non-TNW:
Not Applicable.

(d) Proximity (Relationship) to TNW:
Not Applicable.

(ii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Not Applicable.

(iii) Biological Characteristics. Wetland supports:
Not Applicable.

3. Characteristics of all wetlands adjacent to the tributary (if any):
All wetlands being considered in the cumulative analysis:
Not Applicable.

Summarize overall biological, chemical and physical functions being performed:
Not Applicable.

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.

Findings for: 08-838
The unnamed, non-Relatively Permanent Water (non-RPW) has features of an ephemeral tributary which transitions to an intermittent tributary with an ordinary high water mark (OHWM). Features observed supporting clear evidence of flow and an OHWM throughout the channel include: defined bed and bank and destruction of vegetation. This reach is located in the upper portion of the local watershed and originates to the northwest of the project area. The drainage area for this reach is approximately 885 acres and the local watershed is approximately 885 acres. The drainage area and the watershed area are estimates and may not be accurate due to the modification within the watershed area for roads and residential development. The local watershed was calculated by measuring all of the drainage upstream of the nearest RPW. Based on information provided by the consultant, the nearest estimated RPW is Dillon Creek and the Traditional Navigable Water (TNW) is the Missouri River, which is 11.4 river miles from this reach. Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system. The following outlines how the unnamed non-RPW maintains a significant nexus to the Missouri River through its hydrologic connectivity. There is no interruption of flow or hydrologic connectivity between this unnamed tributary and Dillon Creek. Based on observed conditions, the unnamed tributary has the capacity to carry surface flow hydrology via a confined channel to Dillon Creek, then to Mace Creek, and then into the Missouri River. It has been determined that the non-RPW maintains hydrologic connectivity to the TNW, thereby providing a significant nexus between the non-RPW and a TNW. The unnamed non-RPW has the potential to influence the chemistry of the Missouri River through its transport of sediments and nutrients and geochemical cycling. Rainfall within this area provides a pulse of stormflow, thus providing a source of hydrology to local waterways. It is potential that the tributary contributes to the chemical make up of the Missouri River, through its ability to convey sediments and nutrients during these pulses. These nutrients and chemicals can be transported downstream to the Missouri River as they are carried in suspension in stormwater. This reach is surrounded by a riparian area supporting an uneven aged mix of woody trees and herbaceous plant species. Riparian conditions consist of at least a 50-foot vegetative buffer on each side of the channel for approximately 70% of the length of the channel. The riparian conditions provide a natural filter for water quality, supply a continual source of organic material, dispersion of flow energy, and support channel integrity for the conveyance of flow to downstream waters. Although one wetland has been on the NWI map within this reach, a review of aerial maps indicated that this is an open water feature (pond). Lastly, headwater streams have been documented as providing necessary habitat for a variety of birds, mammals, reptiles, and amphibious populations. Because headwater streams have a small catchment area, they are varied and maintain some of the most diverse habitats within a lotic system. Headwater streams are utilized not only by species unique to headwater streams, but are also used by animals requiring headwater streams for certain life stages and/or are utilized by animals that migrate between headwater environments and larger waters. The delineation of the reach within the project site concluded that no wetlands were present. Review of NWI map indicated that numerous wetlands are potentially present within the drainage area of this reach. But, the review of aerial maps indicates that several of the potential wetlands are open water features such as farm ponds and impoundments. Without a delineation of the wetlands within this reach, it is not possible to evaluate the potential wetlands within this reach. Due to the hydrologic connection, the unnamed tributary has the capacity to contribute hydrology, provide habitat for aquatic life cycles, and provide organic input to downstream waters. Based on these connections, it has been determined that the non-RPW demonstrates a significant nexus to the Missouri River (TNW).

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE:

1. TNWs and Adjacent Wetlands:
Not Applicable.

2. RPWs that flow directly or indirectly into TNWs:
Not Applicable.

Provide estimates for jurisdictional waters in the review area:
Not Applicable.

3. Non-RPWs that flow directly or indirectly into TNWs:[8]
Not Applicable.

Provide estimates for jurisdictional waters in the review area:

Tributary Name	Type	Size (Linear) (m)	Size (Area) (m^2)
08-838	Non-RPWs that flow directly or indirectly into TNWs	4565.904	-
Total:		**4565.904**	**0**

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
Not Applicable.

Provide acreage estimates for jurisdictional wetlands in the review area:
Not Applicable.

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

Provide acreage estimates for jurisdictional wetlands in the review area:
Not Applicable.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs:
Not Applicable.

Provide estimates for jurisdictional wetlands in the review area:
Not Applicable.

7. Impoundments of jurisdictional waters:[9]
Not Applicable.

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:[10]
Not Applicable.

Identify water body and summarize rationale supporting determination:
Not Applicable.

Provide estimates for jurisdictional waters in the review area:
Not Applicable.

F. NON-JURISDICTIONAL WATERS. INCLUDING WETLANDS

☐ 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 soley 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):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (ie., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment:
Not Applicable.

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.
Not Applicable.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD
(listed items shall be included in case file and, where checked and requested, appropriately reference below):

Data Reviewed	Source Label	Source Description
--Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant	Terra Technologies, May 2008	-
--U.S. Geological Survey map(s).	Savannah	-
--National wetlands inventory map(s).	Savannah	-
--Photographs	-	-
----Aerial	Terra Technologies, May 2008	-
----Aerial	1999 Ortho aerial photography, Savannah	-
----Aerial	MSN Live Maps	-
----Aerial	Google Earth, 2007	-

B. ADDITIONAL COMMENTS TO SUPPORT JD:
Not Applicable.

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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).

[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.

[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.

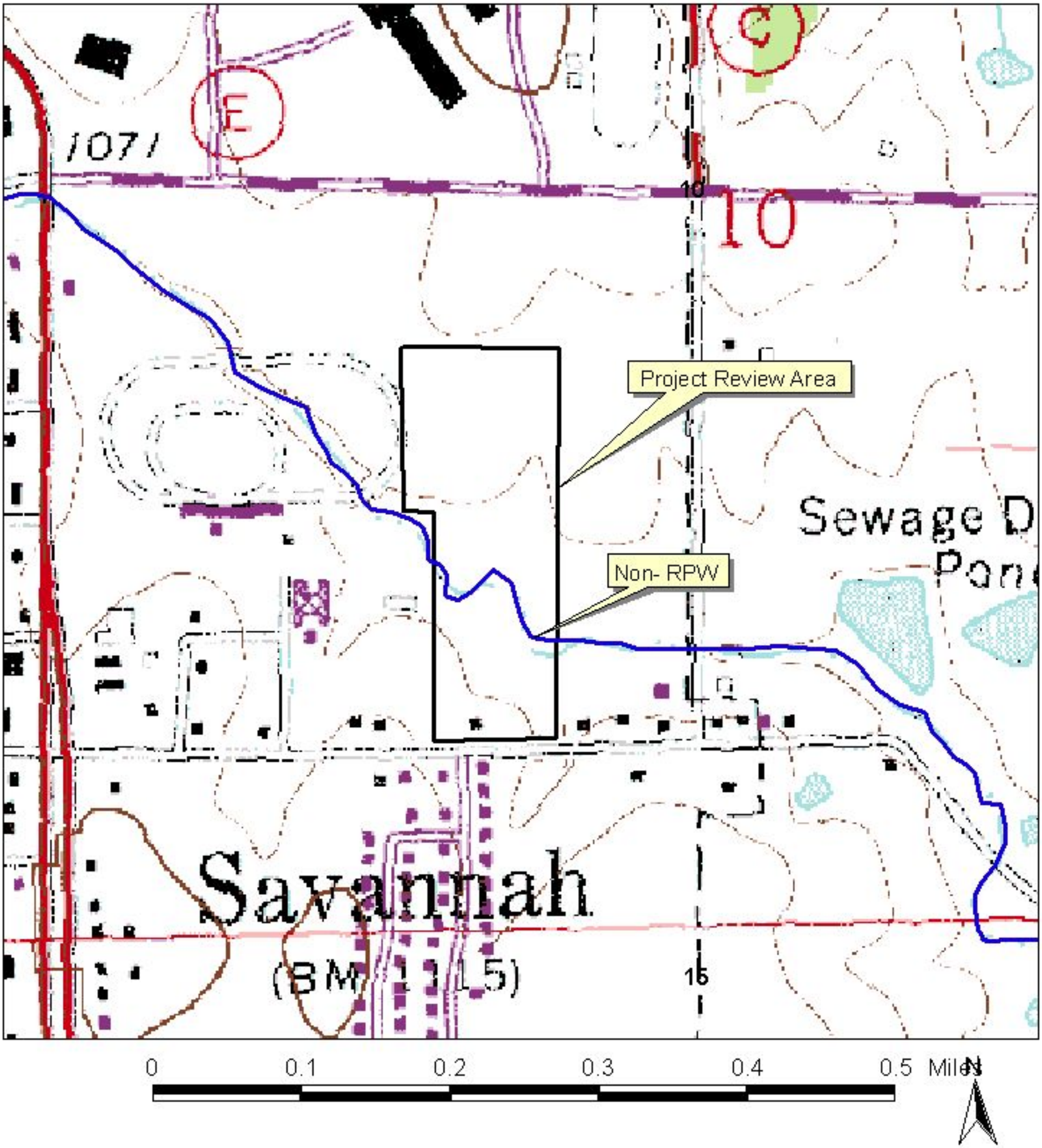
[7]-Ibid.

[8]-See Footnote #3.

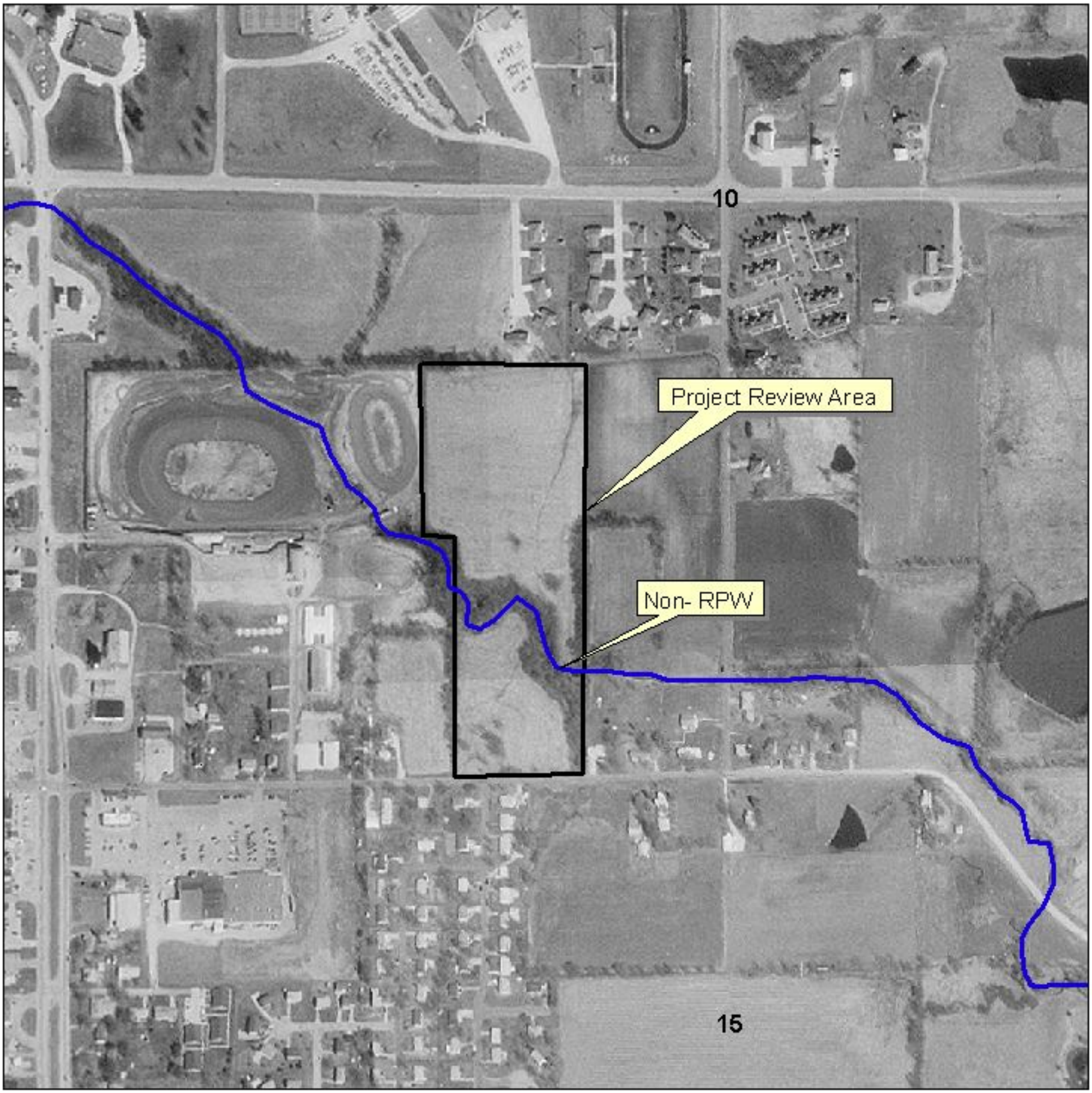
[9] -To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[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.

NWK-2008-0838, Hidden Meadows



NWK-2008-0838, Hidden Meadows



0 0.1 0.2 0.3 0.4 0.5 Miles

N