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): March 2, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Kansas City District, Whittaker, Charles, Coal Creek, Douglas County, Kansas, NWK 2011-01654.

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Reach # 1

State: **Kansas** County/parish/borough: **Douglas** City: **N/A**
Center coordinates of site (lat/long in degree decimal format): Lat. **38.884942° N**, Long. **-95.199646° W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Coal Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Wakarusa River**
Name of watershed or Hydrologic Unit Code (HUC): **Lower Kansas, Kansas. 102701040203**

- ☒ 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: **2 February 2012**
- ☒ Field Determination. Date(s): **9 January 2012**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

- ☐ Waters subject to the ebb and flow of the tide.
- ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☐ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: **41,200** linear feet: **35** ave. width (ft) and/or acres.

   RPW Perennial (Coal Creek): **41,200** l.f. x **35** ave. width (ft) and/or acres

   Total Wetlands: **29.28** acres.
   PEMA wetland 1, adjacent to RPW: **1.13** acres.
   PFOA wetland 2a, adjacent to RPW: **0.55** acres.
   PEMA wetland 2b, adjacent to RPW: **3.70** acres.
   PEMA, PSSA, PFOA mix wetland 3, adjacent to RPW: **1.0** acre.
   PEMA wetland 6, adjacent to RPW: **0.98** acres.
   PEMA, PSSA, PFOA mix wetland 7a, adjacent to RPW: **2.00** acres.
   PEMA, PSSA, PFOA mix wetland 7b, adjacent to RPW: **1.86** acres.
   PEMC, PSSC, PFOC mix wetland 8 (ox-bow), adjacent to RPW: **3.19** acres
   PEMC, PSSC, PFOC mix wetland 9 (road ditch expansion), adjacent to RPW: **0.37** acres.
   PEMA wetland 10, adjacent to RPW: **14.50** acres.

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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, including remote sensing for hydrology, and use of reference site (for Atypical conditions). OHWM and other jurisdictional stream characteristics.**

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: .

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: **21,500 acres**
Drainage area: **acres**
Average annual rainfall: **37** inches
Average annual snowfall: **20** inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

[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.

Project waters are **2-5** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **1-2** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.

Identify flow route to TNW[5]: **Coal Creek flows directly into the Wakarusa River (TNW).**
Tributary stream order, if known: **3rd**.

(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: **60** feet
Average depth: **Unknown** feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **The top of the stream banks appear to be stable with vegetation. The lower part appears eroded, and vegetation in some bend areas. A review of historic imagery does not indicate active meandering**.
Presence of run/riffle/pool complexes. Explain: **Most of the reach examined appeared to be mainly pool and run** .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): **0.5-2** %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: **Perennial**.
Other information on duration and volume: **Mean annual flow volume: 4.9 cfs, (UROM)., Mean annual flow velocity: (UROM) 0.7 fps. (from EPA NHD*Plus* Watershed Characterization Report).**

Surface flow is: **Confined.** Characteristics: .

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
☐ sediment deposition	☒ multiple observed or predicted flow events
☐ water staining	☒ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

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

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;

[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.

☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: **Water is slightly discolored and has some sediment turbidity. Watershed is approximately 14% deciduous forest, 4% mixed forest, and other 82% (primarily cool season pasture, hay meadows and crop fields)**.
Identify specific pollutants, if known: **Unknown. Likely to have nutrients from pasture, hayland and crop production.**

(iv) Biological Characteristics. Channel supports (check all that apply):
☒ Riparian corridor. Characteristics (type, average width): **Most riparian areas are forested with mixed deciduous tree species. Some herbaceous openings exists in canopy. The riparian areas average approximatley 60-70 ft. in width**.
☒ Wetland fringe. Characteristics: **Some wetlands are in close proximity to stream. Some wetlands exists as riverine features in meander cutoff or ox-bow areas.**
☒ Habitat for:
☐ Federally Listed species. Explain findings: .
☒ Fish/spawn areas. Explain findings: **Fish are likely to range into Coal Creek from the TNW. Resident fishes are likely to spawn in the stream.**
☒ Other environmentally-sensitive species. Explain findings: **Mussels are also likely to inhabit the stream reach.**
☒ Aquatic/wildlife diversity. Explain findings: **The lower Coal Creek stream reach supports diverse fish and wildlife resources. The area functions as an ecotone of several ecological communities.**

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: **29.28** acres **(11 ea.)**
Wetland type. Explain: **Various. See Part B.1.b**.
Wetland quality. Explain: **Generally most wetlands are impaired by agricultural disturbances. The Reference Site and ox-bow site wetlands are/were of good quality with diverse plant life and wildlife use.**
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: .

Surface flow is**: Overland sheetflow and confined in drainage features or swales.**
Characteristics**: Hydrologic connections are frequent and occur with many rainfall and stream flooding events.**

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

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☒ Not directly abutting
☒ Discrete wetland hydrologic connection. Explain: **Most wetlands are connected to the RPW by surface drainage features, swales, and ephemeral streams**.
☒ Ecological connection. Explain: **Wetlands occur within general floodplain of the TNW. Hydrologic connections exist with RPW and TNW. The wetland are part of the bottomland floodplain ecological community**.
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **2-5** river miles from TNW.
Project waters are **2-5** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:
Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **Surface water slightly stained likely due to tannin from leaf materials. Water appears to have high levels of nutrients.**
Identify specific pollutants, if known: **Due to agricultural nature of watershed. It is suspected that crop and pasture nutrients are found in wetland waters.**

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

☒ Riparian buffer. Characteristics (type, average width): **Many wetlands have riparian areas of intermixed shrub-scrub, forested and palustrine herbaceous plant communities.**

☒ Vegetation type/percent cover. Explain: **Wetland areas not subject to agricultural disturbances have 100% basal area cover. Agricultural wetlands occasionally have 0% vegetative cover.**

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☒ Other environmentally-sensitive species. Explain findings: **Wetland wildlife such as amphibians, reptiles, insects, birds and mammals find suitable habitat in the wetlands throughout the year or during specific time periods**.

☒ Aquatic/wildlife diversity. Explain findings: **In Kansas, wetland support greater life diversity than other ecological communities.**

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

All wetland(s) being considered in the cumulative analysis: **10**

Approximately (**29.28**) 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)
1 (N)	**1.13**	**7a (N)**	**2.00**
2a (N)	**0.55**	**7b (N)**	**1.86**
2b (N)	**3.70**	**8 (N)**	**3.19**
3 (N)	**1.00**	**9 (N)**	**0.37**
6 (N)	**0.98**	**10 (N)**	**14.50**

Summarize overall biological, chemical and physical functions being performed: **The wetlands provide habitat for migratory birds and resident wildlife. They provide some water quality benefit when wetland plants colonize the sites and some hydrology is stored in the hydric soils and on the soil surface (where depressional)**.

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:

The wetlands are located adjacent to Coal Creek a perennial RPW stream which flows into the Wakarusa River (a TNW). Coal Creek exhibits an ordinary high water mark and has bed and banks. The point of outflow for the stream (from the project area) is approximately 2.73 river miles from the confluence with the Wakarusa River (TNW). The reach consists of a perennial channel within the lower part of the Coal Creek watershed. It has sinuosity throughout nearly all of the evaluated reach. While on the project area only pool and run features were observed, pool, riffle and run features are likely present near the upper end of the reach where the drainage slope increases. The stream slope is approximately 0.5 to 2%. There is no documented record of pollutants transported by this stream reach, however it is likely that fertilizers and pesticides applied on the adjacent crop fields would be conveyed downstream. The stream is a relatively short distance from the nearest TNW, has a geomorphically stable bed and bank showing low amounts of erosion, many adjacent wetlands (within or near the project area), and a mature riparian corridor offering habitat for terrestrial organisms along its entire length. The stream has a large drainage area, gentle slope, and is a relatively short distance to the downstream TNW; therefore, any proposed fill activities may likely have an impact on the chemical, physical, and biological integrity of the downstream TNW.

The adjacent wetlands maintain hydrologic connectivity through drainage patterns to the adjacent downstream RPW. The wetlands have the ability to filter pollutants and sediments from the surrounding agricultural property and they maintain hydrologic connection with the downstream TNW. Based upon the information provided, we have determined that the reach containing Coal Creek, a perennial RPW stream and the adjacent wetlands have a significant chemical, physical, and biological nexus to the downstream TNW.

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

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

2. **RPWs that flow directly or indirectly into TNWs.**
   ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **The tributary has a large watershed and the EPA NHDPlus Watershed Characterization Report indicates adequate flow volume and velocity to indicate the stream is perennial. A site visit conducted on 9 January 2012. At that time, the area had a dry record of precipitation during the fall and winter. Still, the stream exhibited quantity and flow to suggest it 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: **41,200** linear feet **35** 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: **.**

[8]See Footnote # 3.

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area:

   1.13 ac. (Wetland 1), 0.55 ac. (Wetland 2a), 3.70 ac. (Wetland 2b), 1.00 ac. (Wetland 3), 0.98 ac. (Wetland 6), 2.00 ac. (Wetland 7a), 1.86 ac. (Wetland 7b), 3.19 ac. (Wetland 8), 0.37 ac. (Wetland 9), 14.50 ac. (Wetland 10). Total: 29.28 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):

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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.***

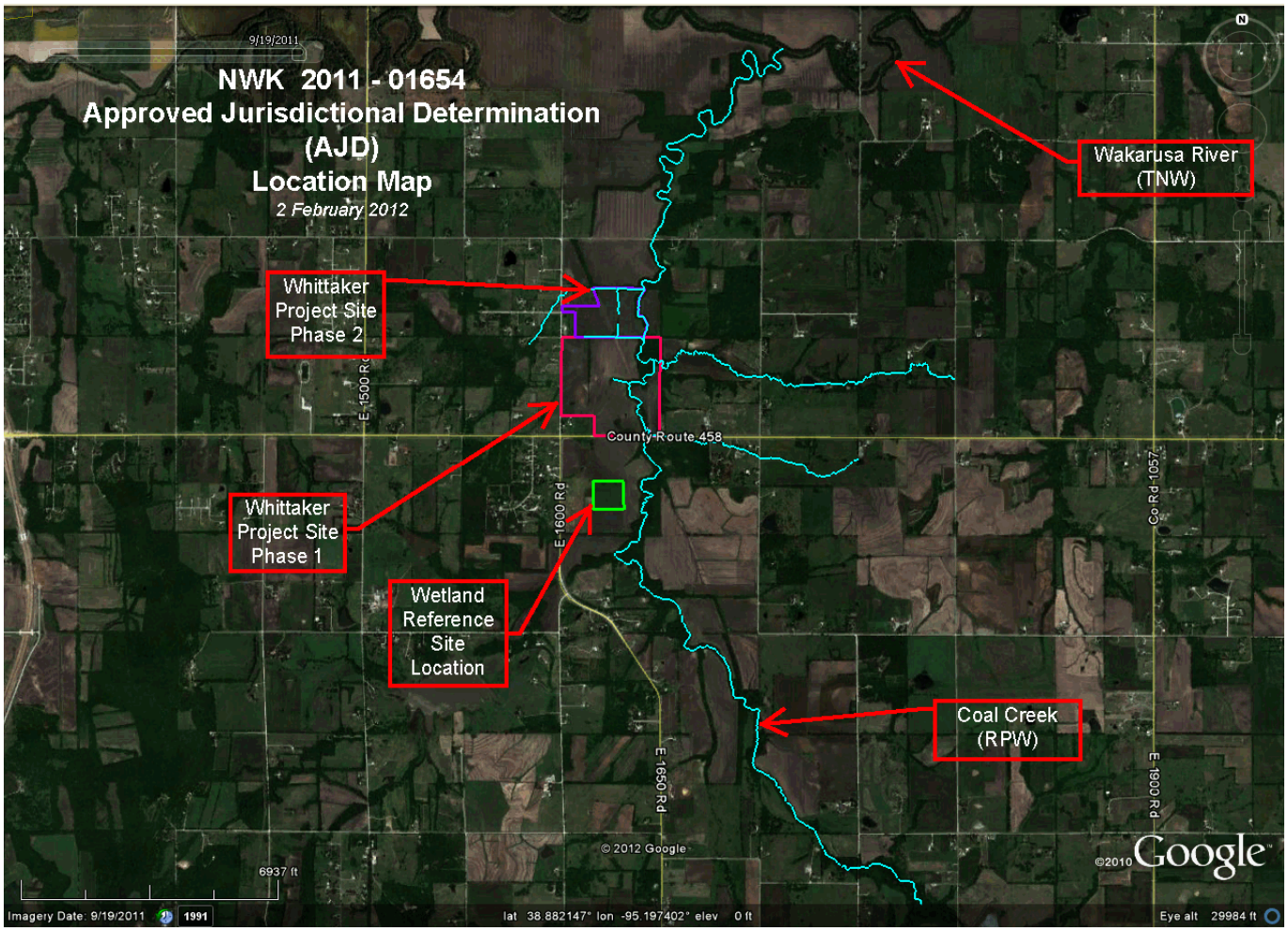
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

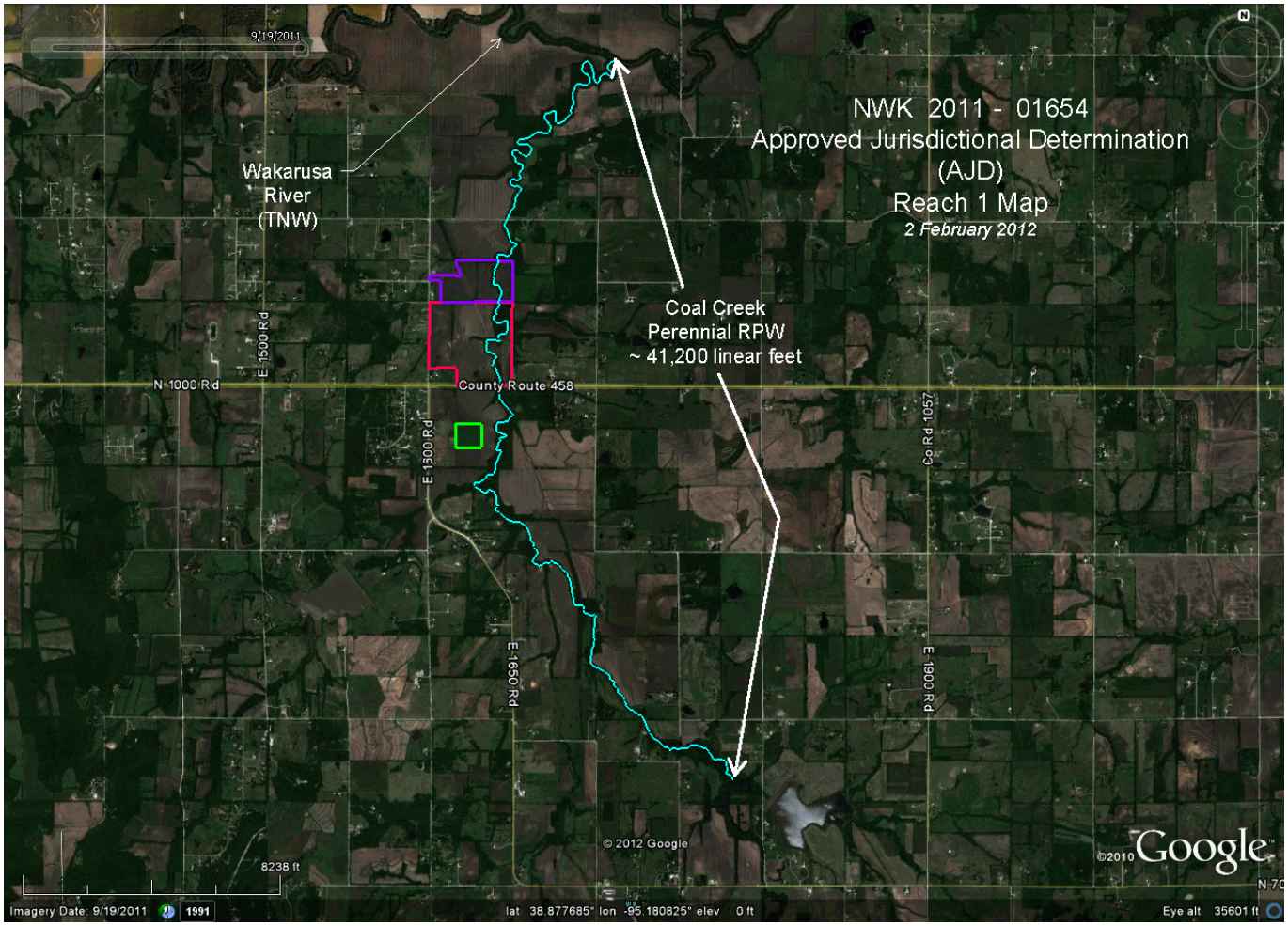
Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other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

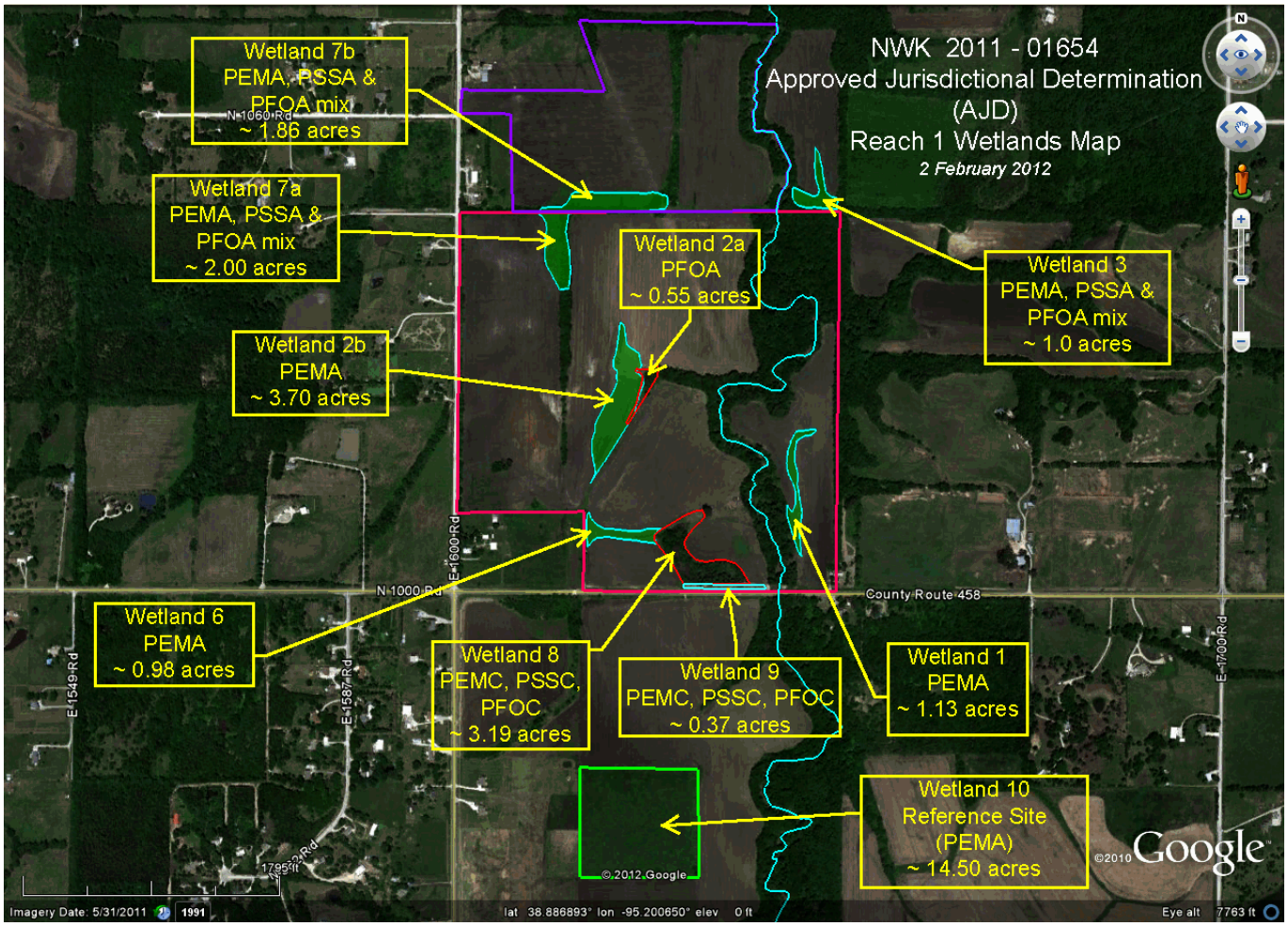
SECTION IV: DATA SOURCES.

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: **Charles Whittaker, landowner**.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant: **Larry Sabata, Soil Scientist, USDA-NRCS**
☐ Office concurs with data sheets/delineation report.
☒ Office does not concur with data sheets/delineation report.
☒ Data sheets prepared by the Corps: **Wetland delineation worksheets (current), wetland reference site documentation (USDA-NRCS and Kansas Biological Survey), and remote sensing analysis for hydrology.**
☐ 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: **Lawrence East, Kans. 1:24K**.
☒ USDA Natural Resources Conservation Service Soil Survey. **Citation: Web Soil Survey (WSS) and Google Earth Pro.**
☒ National wetlands inventory map(s). Cite name: **Google Earth Pro data layer.**
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Google Earth Pro, historical imagery, various dates.**
or ☒ Other (Name & Date): **Photos taken on-site by USACE on 9 January 2012.**
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature: **NRCS Off-Site Wetland Conventions, dated 5 June 2007, Kansas**.
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: See the following pages for the Approved JD Location Map, Reach 1 Map (stream reach), Reach 1 Map (wetlands) .


NWK 2011 - 01654
Approved Jurisdictional Determination
(AJD)
Location Map
2 February 2012
Wakarusa River
(TNW)
Whittaker
Project Site
Phase 2
Whittaker
Project Site
Phase 1
Wetland
Reference
Site
Location
Coal Creek
(RPW)
County Route 458
E 1500 Rd
E 1600 Rd
E 1650 Rd
Co Rd 1057
E 1900 Rd
6937 ft
© 2012 Google
©2010 Google
Imagery Date: 9/19/2011
1991
lat 38.882147° lon -95.197402° elev 0 ft
Eye alt 29984 ft


NWK 2011 - 01654
Approved Jurisdictional Determination
(AJD)
Reach 1 Map
2 February 2012
Wakarusa
River
(TNW)
Coal Creek
Perennial RPW
~ 41,200 linear feet
N 1000 Rd
E 1500 Rd
County Route 458
E 1600 Rd
E 1650 Rd
Co Rd 1057
E 1900 Rd
© 2012 Google
©2010 Google
8238 ft
Imagery Date: 9/19/2011
1991
lat 38.877685° lon -95.180825° elev 0 ft
Eye alt 35601 ft


NWK 2011 - 01654
Approved Jurisdictional Determination
(AJD)
Reach 1 Wetlands Map
2 February 2012
Wetland 7b
PEMA, PSSA &
PFOA mix
~ 1.86 acres
Wetland 7a
PEMA, PSSA &
PFOA mix
~ 2.00 acres
Wetland 2a
PFOA
~ 0.55 acres
Wetland 3
PEMA, PSSA &
PFOA mix
~ 1.0 acres
Wetland 2b
PEMA
~ 3.70 acres
Wetland 6
PEMA
~ 0.98 acres
Wetland 8
PEMC, PSSC,
PFOC
~ 3.19 acres
Wetland 9
PEMC, PSSC, PFOC
~ 0.37 acres
Wetland 1
PEMA
~ 1.13 acres
Wetland 10
Reference Site
(PEMA)
~ 14.50 acres
N 1060 Rd
N 1000 Rd
E 1600 Rd
County Route 458
E 1549 Rd
E 1587 Rd
E 1700 Rd
©2012 Google
©2010 Google
Imagery Date: 5/31/2011
1991
lat 38.886893° lon -95.200650° elev 0 ft
Eye alt 7763 ft