

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District-West Fork II-LRH-2009-375-OHR, RR#14-St-D10-Ephemeral

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Ohio County/parish/borough: Noble/Washington City:
Center coordinates of site (lat/long in degree decimal format): Lat. 39.44217° N, Long. -81.44217° W.
Universal Transverse Mercator:

Name of nearest waterbody: West Fork Duck Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Ohio River

Name of watershed or Hydrologic Unit Code (HUC): Duck Creek; West Fork Duck Creek 050302010-120

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:

Field Determination. Date(s): May 20, 2009

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 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: 420 linear feet: 1.25 width (ft) and/or .009 acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: **Established by OHWM.**

Elevation of established OHWM (if known): 750 through 860 feet msl.

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: .

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

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

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. **TNW**

Identify TNW: .

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: 287.7 **square miles**

Drainage area: 2.2 **acres**

Average annual rainfall: 43.6 inches

Average annual snowfall: 26.8 inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **3** tributaries before entering TNW.

Project waters are **30 (or more)** river miles from TNW.

Project waters are **1 (or less)** river miles from RPW.

Project waters are **15-20** aerial (straight) miles from TNW.

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

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

Identify flow route to TNW⁵: Unnamed tributary, to unnamed tributary, to the West Fork Duck Creek, to Duck Creek, to the Ohio River. .

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 stream order, if known: First Order.

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain: .
 Manipulated (man-altered). Explain: The headwaters of this stream form as a gully at the toe of

the spoil ridge from the unreclaimed abandoned surface coal mine.

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

Average width: 1.0 feet
Average depth: .75 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain: Spoil and residuum composed of insitu native soils.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Highly erosive gully formed along the side of a large slip.

Presence of run/riffle/pool complexes. Explain: cascade morphology .

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 26.2 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: Ephemeral.

Other information on duration and volume: Discharge measured at seep zone SZ-16 during seasonal sampling was 0.5 gpm, seep zone forms the headwaters of this stream. Discharge was measured once at high flow and spring did not discharge during three consecutive visits. These was not discharge at the down stream segment of the channel.

Surface flow is: **Confined.** Characteristics: Gully with V-shaped channel.

Subsurface flow: **No.** Explain findings: Channel is ephemeral only seep zone associated with channel is SZ-16 .

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain: .

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

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

(iii) **Chemical Characteristics:**

⁶A 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.

⁷Ibid.

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

Explain: Seep zone SZ-16 samples for chemistry during high flow sampling event .

Identify specific pollutants, if known: Measured parameters include:

pH: 3.58 S.U.; Total Acidity 370.0 mg/l as of CaCO₃; Total Alkalinity 0.0 mg/l as of CaCO₃; Total Iron 0.457 mg/l; Total Manganese 7.76 mg/l; Total Aluminum 48.5 mg/l; Total Suspended Solids <1.0 mg/l; Total Hardness 394.69 mg/l as of CaCO₃; Total Sulfates 972.0 mg/l; Specific Conductivity 1448.0 unhos/cm at 25 degrees. .

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

- Riparian corridor. Characteristics (type, average width): Riparian composed of 2nd growth upland deciduous hardwoods .
- 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: RR#14-St-D10 is located 30 or more river miles from the nearest TNW and exhibits water flow only during precipitation events. It has been determined that it is likely that this stream contributes pollutants to the nearest TNW, as the stream forms as a gully at the toe of a slip ridge from an unreclaimed surface coal mine. The stream is situated in a highly erosive gully that has a substrate consisting of spoil and has the potential to carry pollutants and contaminated sediment to the nearest TNW. This determination was also based upon water chemistry data available for this stream. Seep Zone 16 is located at the head of RR# 14 St-D10 and was sampled on four separate days (04/12/2006, 05/54/2006, 06/15/2006 and 07/26/2006). Water from Seep Zone 16 was obtained only once on 04/12/2006 and the analysis of this water indicates that it has a pH of 3.58, Total Acidity of 370.0 mg/l as of CaCO₃, Total Alkalinity of 0.0 mg/l as of CaCO₃, Total Iron of 0.457 mg/l, Total Manganese of 7.76 mg/l, Total Aluminum of 48.5 mg/l, Total Suspended Solids <1.0 mg/l, Total Hardness of 394.69 mg/l as of CaCO₃, Total Sulfates 972.0 mg/l and a Specific Conductivity of 1448.0 unhos/cm. It has been determined that it is unlikely that this stream provides permanent aquatic habitat, or spawning habitat, for aquatic macroinvertebrates, amphibians and fish living near or within the nearest TNW. It has been determined that it is unlikely the transfer of stored nutrients and organic carbon in this stream during high water flow events helps to support food webs within the nearest TNW. In conclusion, based upon chemical and physical data available for this stream, it has been determined that RR#14-St-D10 does have the potential to contribute pollutants to the nearest TNW and therefore has a significant nexus to the nearest TNW, the Ohio River.
- 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

⁸See Footnote # 3.

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

- 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):

- 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: See Addendum of report: B&N Coal, Inc. West Fork II Surface Coal Mine ; Section 8 and 9 Jefferson Twp, Noble County and Section 16 and 17 Aurelius Twp, Washington County, Ohio U>S> Army Corps of Engineers Investigation of Waters of the U.S.; Dated: February 2009; Prepared by: Kleski Environmental Consulting, Racine Ohio.
 Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 Office concurs with data sheets/delineation report.
 Office does not concur with data sheets/delineation report.
 Data sheets prepared by the Corps: .
 Corps navigable waters' study: .
 U.S. Geological Survey Hydrologic Atlas: .
 USGS NHD data.

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.

- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Macksburg U.S.G.S. 7 1/2 Minute Quadrangle Maps .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Noble County/ Soil Survey Washington County.
- National wetlands inventory map(s). Cite name: Macksburg U.S.G.S. 7 1/2 Minute Quadrangle Maps .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
or Other (Name & Date): Photo #43, 44.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: Additional information can be obtained about the water quality of Duck Creek in the USEPA approved TMDL titled Total Maximum Daily Loads for Duck Creek, prepared by Ohio EPA Division of Surface Water, dated July 1, 2003.
- Other information (please specify): Precipitation Data obtained from the WETTS station supported by the USDA for Morgan and Gernsey Counties. The information from these sites were averaged to provide average annual precipitation for Noble County. The water quality data provided is a requirement of the Ohio Department of Natural Resources Division of Mines and Reclamation Surface Coal Mine Permit and is submitted to the state hydrologist as public record..

B. ADDITIONAL COMMENTS TO SUPPORT JD: RR#14-St-D10 is located 30 or more river miles from the nearest TNW and exhibits water flow only during precipitation events. It has been determined that it is likely that this stream contributes pollutants to the nearest TNW, as the stream forms as a gully at the toe of a slip ridge from an unreclaimed surface coal mine. The stream is situated in a highly erosive gully that has a substrate consisting of spoil and has the potential to carry pollutants and contaminated sediment to the nearest TNW. This determination was also based upon water chemistry data available for this stream. Seep Zone 16 is located at the head of RR# 14 St-D10 and was sampled on four separate days (04/12/2006, 05/54/2006, 06/15/2006 and 07/26/2006). Water from Seep Zone 16 was obtained only once on 04/12/2006 and the analysis of this water indicates that it has a pH of 3.58, Total Acidity of 370.0 mg/l as of CaCO₃, Total Alkalinity of 0.0 mg/l as of CaCO₃, Total Iron of 0.457 mg/l, Total Manganese of 7.76 mg/l, Total Aluminum of 48.5 mg/l, Total Suspended Solids <1.0 mg/l, Total Hardness of 394.69 mg/l as of CaCO₃, Total Sulfates 972.0 mg/l and a Specific Conductivity of 1448.0 unhos/cm. It has been determined that it is unlikely that this stream provides permanent aquatic habitat, or spawning habitat, for aquatic macroinvertebrates, amphibians and fish living near or within the nearest TNW. It has been determined that it is unlikely the transfer of stored nutrients and organic carbon in this stream during high water flow events helps to support food webs within the nearest TNW. In conclusion, based upon chemical and physical data available for this stream, it has been determined that RR#14-St-D10 does have the potential to contribute pollutants to the nearest TNW and therefore has a significant nexus to the nearest TNW, the Ohio River.