Aquatic Resource Map
Storch's Run Aquatic Delineation
The Highlands Development
Triadelphia, WV

Legend
- AOI
- Streams
- Stormwater Conveyance Feature
- Wetlands
- Soil
- Stormwater Basin / AMD Pond
- Culvert
- Upland Soil Test Pit
- Wetland Sample Point

Source Data:
Streams and Wetlands, WallacePancher Group.

Projection: Lambert Conformal Conic
Datum: NAD 83
Coordinate System: NAD 1983 StatePlane West Virginia North FIPS 4701 Feet

Date: January 12, 2018

1 inch = 600 feet
0 600 Feet

Prepared For:
Ohio County Development Authority
1500 Chapline Street, Room 215
Wheeling, WV 26003

Project:
Aquatic Resource Map
Storch's Run Aquatic Delineation
The Highlands Development
Triadelphia, WV

Z:\Projects\21019 Storch's Run Aquatic Delineation\MXD\Aquatic Resource Map3.mxd 1/12/2018 bgalloway
This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRP, Pittsburgh District, LRP-2017-1759

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
   State: West Virginia
   County/parish/borough: Ohio County
   City: Tridelphia
   Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
   Universal Transverse Mercator:
   Name of nearest waterbody: Storch's Run
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
   Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
   Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
   ☑ 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: November 20, 2018
   ☑ Field Determination. Date(s): December 12, 2017

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
      ☑ 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.
      acres.

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Length (ft)</th>
<th>Width (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storch’s Run</td>
<td>3,617</td>
<td>15 (BFW)</td>
</tr>
</tbody>
</table>

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).
<table>
<thead>
<tr>
<th>Non-wetland waters (open water feature)</th>
<th>Feature Name</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Basin 12</td>
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<table>
<thead>
<tr>
<th>Wetlands</th>
<th>Feature Name</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
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<td>0.022</td>
<td></td>
</tr>
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<td>W02SHD9817</td>
<td>0.153</td>
<td></td>
</tr>
<tr>
<td>W01SHD91117</td>
<td>0.110</td>
<td></td>
</tr>
</tbody>
</table>

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): variable throughout reach.

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

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 waterbody 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: HUC 8 - 967,168.0 acres
      Drainage area: 394 acres
      Average annual rainfall: 40 inches
      Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         🇺 Tributary flows directly into TNW.
         🌟 Tributary flows through 5 tributaries before entering TNW.
         Project waters are 2-5 river miles from TNW.
         Project waters are 1 (or less) river miles from RPW.
         Project waters are 2-5 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 TNW: .

         Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

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: 2nd.

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

Tributary is:  
- Natural

Tributary properties with respect to top of bank (estimate):
- Average width: 15 feet
- Average depth: 4 feet
- Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Concrete
- Cobbles
- Gravel
- Muck
- Bedrock
- Vegetation. Type/% cover: Riparian/ 0-20% through reach of Storch’s Run
- Other. Explain: Woody debris .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable, no significant erosion.


Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): 5%

(c) Flow:

Tributary provides for: Seasonal flow

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

Describe flow regime: Perennial.

Other information on duration and volume: Channel was defined as having perennial flow and provides adequate flow throughout the year to support aquatic organisms and life cycle support.

Surface flow is: Confined  Characteristics: Flow stays within a tight valley bottom.

Subsurface flow: Unknown. Explain findings: .

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
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- Discontinuous OHWM.7 Explain: .

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

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

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

(iii) Chemical Characteristics:

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

Explain: The water is clear in some reaches and contaminated by AMD in other locations. There are a series of historic AMD ponds throughout the stretch of Storch’s Run. These features are jurisdictional as the AMD ponds are not actively maintained. Water quality is poor in portions of the reach due to the presence of AMD contamination.

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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.
Identify specific pollutants, if known: AMD drainage (iron), manganese, and aluminum
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): High-gradient; 50 ft.
- Wetland fringe. Characteristics: Wetlands along the reach of Storch’s Run (included in this reach AJD form).
- 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:

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Acreage</th>
<th>Type</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01BGG9617</td>
<td>0.033</td>
<td>PSS</td>
<td>Good</td>
</tr>
<tr>
<td>W02BGG9617</td>
<td>0.166</td>
<td>PEM/PSS</td>
<td>Fair (dominated by narrowleaf cattail)</td>
</tr>
<tr>
<td>W03BGG9617</td>
<td>0.292</td>
<td>PEM/PSS</td>
<td>Good</td>
</tr>
<tr>
<td>W04BGG9617</td>
<td>0.047</td>
<td>PEM/PSS</td>
<td>Fair (abutting AMD drainage, abundance of phragmites)</td>
</tr>
<tr>
<td>W01BGG9717</td>
<td>0.105</td>
<td>PEM</td>
<td>Fair/Good (abutting AMD drainage)</td>
</tr>
<tr>
<td>W02BGG9717</td>
<td>0.034</td>
<td>PSS</td>
<td>Good/Fair</td>
</tr>
<tr>
<td>W01BGG9817</td>
<td>0.010</td>
<td>PEM</td>
<td>Fair (dominated by narrowleaf cattail)</td>
</tr>
<tr>
<td>W01SHD9817</td>
<td>0.022</td>
<td>PEM</td>
<td>Fair</td>
</tr>
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<td>W02SHD9817</td>
<td>0.153</td>
<td>PEM/PSS</td>
<td>Good/Fair</td>
</tr>
<tr>
<td>W01SHD9117</td>
<td>0.110</td>
<td>PEM</td>
<td>Fair (dominated by narrowleaf cattail)</td>
</tr>
</tbody>
</table>

(b) General Flow Relationship with Non-TNW:
Flow is: **Perennial flow**. Explain: Some are from seeps and others are abutting ponds.

Surface flow is: **Confined**
Characteristics: Mainly abutting water features.

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

(d) Proximity (Relationship) to TNW
Project wetlands are 2-5 river miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters**.
Estimate approximate location of wetland as within the **2 years (or less)** 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: Wetlands are within AMD area and are likely treating AMD drainage in the watershed. Identify specific pollutants, if known: AMD drainage.
(iii) Biological Characteristics. Wetland supports (check all that apply):
- Riparian buffer. Characteristics (type, average width): High-gradient; 50 ft.
- Vegetation type/percent cover. Explain: PSS/PEM.
- Habitat for:
  - Federally Listed species. Explain findings:  .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: Wetlands provide good habitat. Supports organisms and chemical, physical, biological inputs to receiving waters.

3. Characteristics of all wetlands adjacent to the tributary (if any)
   All wetland(s) being considered in the cumulative analysis: 10
   Approximately (0.97) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Name</td>
<td>Acreage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W01BGG9617</td>
<td>0.033</td>
<td>N</td>
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<td>W01SHD91117</td>
<td>0.110</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

Summarize overall biological, chemical and physical functions being performed: Wetlands provide good habitat. Supports organisms and chemical, physical, biological inputs to receiving waters.

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:

Wetlands W01BGG9617 & W01SHD9817 are adjacent to the Stormwater Basin 12 (a jurisdictional feature). Stormwater ditch SCF01BGG9617 provides a surface connection to the W01SHD9817 to Stormwater Basin 12. W01BGG9617 is separated by 14 feet from Stormwater Basin 12 and within the topographic limits to be hydrologically connected to the jurisdictional water. Stormwater Basin 12 connects directly to Storch’s Run (RPW). Both W01BGG9617 & W01SHD9817 appear to be recharged by groundwater from seeps along the hillside where water features were historically present prior to previous grading.

Based on the Corps site visit and review of the supplied information it was found that: The wetlands do have the capacity to carry pollutants or flood waters to the TNW. The wetlands do provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The wetlands do have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The wetlands do have a relationship to the physical, chemical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: contribution of flow.

Given these details and assessment the Corps finds that the subject waters do have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the 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: Wallace Pancher Report 2018 flow data and field investigation.
   - 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: See below linear feet See below width (ft).
   - Other non-wetland waters: See below acres.

Identify type(s) of waters: See below.

<table>
<thead>
<tr>
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</tr>
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<tbody>
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</table>

Non-wetland waters (open water feature)

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<td>0.631</td>
</tr>
<tr>
<td>AMD Pond 7</td>
<td>0.208</td>
</tr>
</tbody>
</table>

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):

\(^8\)See Footnote # 3.
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: **Wallace Pancher Report 2018 data and field investigations.**
   - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.92 acres. See Section III.B.3**

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

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.05 acres. See Section III.B.3**

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. **Impoundments of jurisdictional waters.**
   - 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):**
   - 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.**

---

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.
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: Wallace Pancher January 2018 Report.

☒ 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: .


☒ USGS NHD data.

☒ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: GIS.

☐ USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.

☐ National wetlands inventory map(s). Cite name: GIS.

☐ State/Local wetland inventory map(s): .

☒ FEMA/FIRM maps: GIS.

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

☒ Photographs: ☒ Aerial (Name & Date): GIS 1995 - present.

☐ or ☐ Other (Name & Date): .

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

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher. The Corps has followed the JD guidance as enumerated within the “U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook” dated 5/30/2007 and other applicable guidance.

Stormwater Basin 12 was constructed on historic waters and is not tied to a previous Corps actions; therefore, Stormwater Basin 12 is a jurisdictional feature: Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land are not jurisdictional features. However, review of historic aerials identified that the Stormwater Basin 12 was constructed on jurisdictional waters of the United States.

Wetlands W01BGG9617 & W01SHD9817:

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the
seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The wetlands do have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The wetlands do have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The wetlands, alone or in combination with similarly situated waters in the region, have a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

- State: West Virginia
- County/parish/borough: Ohio County
- City: Tridelphia
- Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
- Universal Transverse Mercator:
  - Name of nearest waterbody: Storch's Run
  - Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
    - Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
  - Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
  - 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: November 20, 2018
- Field Determination. Date(s): December 12, 2017

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: 680 linear feet: 12 (BF WIDTH, NO OHWM) width (ft) and/or acres
      - Wetlands: 0 acres

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      - Elevation of established OHWM (if known): Unknown.

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: .

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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.
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 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: HUC 8 - 967.168.0 acres
      Drainage area: 9.2 acres
      Average annual rainfall: 39 inches
      Average annual snowfall: 19 inches
   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☑ Tributary flows directly into TNW.
         ✗ Tributary flows through 4 tributaries before entering TNW.
         Project waters are 2-5 river miles from TNW.
         Project waters are 1 (or less) river miles from RPW.
         Project waters are 2-5 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 TNW: UNT to Storch's Run (UNT 16) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

* 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: 1st.

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

Tributary is:
- [x] Natural

Tributary properties with respect to top of bank (estimate):
- Average width: 12 feet
- Average depth: 1 foot
- Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):
- [ ] Silts
- [x] Sands
- [ ] Concrete
- [x] Cobbles
- [ ] Gravel
- [ ] Muck
- [ ] Bedrock
- [ ] Vegetation. Type/% cover: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .


Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): 38%

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some

Surface flow is: Confined. Characteristics: .

Subsurface flow: Unknown. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):
- [x] Bed and banks
- [x] OHWM6 (check all indicators that apply):
  - clear, natural line impressed on the bank
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list): .

- [ ] 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
- fine shell or debris deposits (foreshore)
- physical markings/characteristics
- 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: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent

flow to Storch's Run.

Identify specific pollutants, if known: UNKN.

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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.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: .
- 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: .
  - 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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 a 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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- **Tributary waters:** 680 linear feet 12 width (ft).
- **Other non-wetland waters:** acres.

Identify type(s) of waters:.

3. **Non-RPWs** 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:.

   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.**

   - 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):**

   - 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.

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.
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: .
- 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: .
- USGS NHD data: .
- USGS 8 and 12 digit HUC maps: .
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: ☒ Aerial (Name & Date):GIS, 2018.
- or ☐ Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority
- The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia County/parish/borough: Ohio County City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☒ 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: November 20, 2018
☒ Field Determination. Date(s): December 12, 2017

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):  
   ☐ TNWs, including territorial seas  
   ☐ Wetlands adjacent to TNWs  
   ☐ Relatively permanent waters  
   ☑ (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: Pick List  
   Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if 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.
Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The subject tributary is a non-RPW and does not exhibit a significant nexus to the downstream TNW.
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 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: HUC 8 - 967,168.0 acres
- Drainage area: 4.7 acres
- Average annual rainfall: 39 inches
- Average annual snowfall: 19 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 2-5 river miles from TNW.
   Project waters are 1 (or less) river miles from RPW.
   Project waters are 2-5 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 TNW:  Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

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

- Tributary is: [X] Natural, [ ] Artificial (man-made). Explain: 
- Tributary is: [ ] Manipulated (man-altered). Explain: 

Tributary properties with respect to top of bank (estimate):
- Average width: 8 feet
- Average depth: 4 feet
- Average side slopes: 3:1

Primary tributary substrate composition (check all that apply):
- Silts
- [X] Sands
- [X] Cobble
- Gravel
- [ ] Muck
- Bedrock
- [ ] Vegetation. Type/% cover: 
- Other. Explain: 

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: 
- Presence of run/riffle/pool complexes. Explain: 
- Tributary geometry: Relatively straight

(c) Flow:
- Tributary provides for: Ephemeral flow
- Estimate average number of flow events in review area/year: 11-20
- Describe flow regime: 
- Other information on duration and volume: 

- Surface flow is: Discrete and confined. Characteristics: 
- Subsurface flow: Unknown. Explain findings: 
- [ ] Dye (or other) test performed: 

Tributary has (check all that apply):
- [X] Bed and banks
- [X] OHWM6 (check all indicators that apply):
  - clear, natural line impressed on the bank
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- [X] Discontinuous OHWM.7 Explain: 

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- [X] High Tide Line indicated by: 
- Mean High Water Mark indicated by: 
- [ ] oil or scum line along shore objects
- [ ] fine shell or debris deposits (foreshore)
- [X] physical markings/characteristics
- [ ] 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: Channel is a high gradient segment and provides ephemeral flow to receiving waters.
- Identify specific pollutants, if known: 

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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.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- 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: .
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: .
     - Separated by bern/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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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:

   Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel.

   Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW.

   Functions/Values provided by the subject tributary: contribution of flow

   Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW.

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-RPWs** 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:

   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.**
   - 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

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8 See Footnote # 3.
9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
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: See supporting statements in III. C. above. The subject water is a NRPW and does not have a SN to TNWs. .
- 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): 312 linear feet, 1 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: .
- 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: .
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.

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.
B. ADDITIONAL COMMENTS TO SUPPORT JD: The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Group Report. The Corps has followed the JD guidance as enumerated within the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.
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): Wallace Pancher Group Acquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia  County/parish/borough: Ohio County  City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☒ Field Determination. Date(s): December 12, 2017

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: 594 linear feet: 8 (BF WIDTH, NO OHWM) width (ft) and/or _______ acres.
      Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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: _______.

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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.
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: HUC 8 - 967,168.0 acres
   Drainage area: 8.0 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

(ii) Physical Characteristics:
   (a) Relationship with TNW:
      ☑ Tributary flows directly into TNW.
      ☑ Tributary flows through 4 tributaries before entering TNW.

Project waters are 25 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 25 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: UNT to Storch's Run (UNT 12) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

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

- **Tributary is:**
  - [X] Natural
  - [ ] Artificial (man-made). Explain:
  - [ ] Manipulated (man-altered). Explain:

- **Tributary properties with respect to top of bank (estimate):**
  - Average width: 8 feet
  - Average depth: 3 feet
  - Average side slopes: 3:1.

- **Primary tributary substrate composition (check all that apply):**
  - [ ] Silts
  - [X] Sands
  - [ ] Concrete
  - [X] Cobble
  - [ ] Gravel
  - [ ] Muck
  - [ ] Bedrock
  - [ ] Vegetation. Type/% cover:
  - [ ] Other. Explain:

- **Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:**

- **Presence of run/riffle/pool complexes. Explain:**

- **Tributary geometry:** Relatively straight

- **Tributary gradient (approximate average slope):** 40%

(c) Flow:

- **Tributary provides for:** Seasonal flow

- **Estimate average number of flow events in review area/year:** 11-20

- **Describe flow regime:** Intermittent

- **Other information on duration and volume:** Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch's Run.

- **Surface flow is:** Confined

- **Subsurface flow:** Unknown. Explain findings:
  - [ ] Dye (or other) test performed:

- **Tributary has (check all that apply):**
  - [X] Bed and banks
  - [X] OHWM6 (check all indicators that apply):
    - [ ] clear, natural line impressed on the bank
    - [ ] changes in the character of soil
    - [X] shelving
    - [X] vegetation matted down, bent, or absent
    - [X] leaf litter disturbed or washed away
    - [X] sediment deposition
    - [X] water staining
    - [X] 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:
    - [ ] oil or scum line along shore objects
    - [ ] fine shell or debris deposits (foreshore)
    - [ ] physical markings/characteristics
    - [ ] tidal gauges
    - [ ] other (list):
  - [ ] Mean High Water Mark indicated by:
    - [ ] survey to available datum;
    - [ ] physical markings;
    - [ ] vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

- **Explain:** Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch’s Run.

- **Identify specific pollutants, if known:** UNKN.

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6 A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody’s flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

7 Ibid.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: .
  - 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:
    - Dye (or other) test performed: .
  - Subsurface flow: Pick List. Explain findings: .

(c) Wetland Adjacency Determination with Non-TNW:
  - Directly abutting
  - Not directly abutting
    - Discrete wetland hydrologic 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):  
- Tributary waters: 680 linear feet 12 width (ft).  
- Other non-wetland waters: acres.  
  Identify type(s) of waters: .

3. Non-RPWs<sup>3</sup> 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 abutting an 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.<sup>4</sup>  
- 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):<sup>5</sup>  
- 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: .

<sup>3</sup>See Footnote # 3.  
<sup>4</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.  
<sup>5</sup> 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.
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: .
- 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: .
- USGS NHD data: .
- USGS 8 and 12 digit HUC maps: .
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: X Aerial (Name & Date):GIS, 2018.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia
County/parish/borough: Ohio County
City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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: 680 linear feet: 12 (BF WIDTH, NO OHWM) width (ft) and/or acres.
      Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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 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: HUC 8 - 967,168.0 acres
   Drainage area: 9.2 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   - Tributary flows directly into TNW.
   - Tributary flows through 4 tributaries before entering TNW.
   Project waters are 25 river miles from TNW.
   Project waters are 1 (or less) river miles from RPW.
   Project waters are 25 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 TNW\(^5\): UNT to Storch’s Run (UNT 16) --> Storch’s Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

\(^4\) 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: 1st.

(b) General Tributary Characteristics (check all that apply):
- Tributary is: 
  - Natural

- Tributary properties with respect to top of bank (estimate):
  - Average width: 12 feet
  - Average depth: 1 foot
  - Average side slopes: 3:1.

- Primary tributary substrate composition (check all that apply):
  - Silts
  - Sands
  - Cobble
  - Gravel
  - Bedrock
  - Vegetation. Type/% cover:
  - Concrete
  - Muck
  - Other. Explain: .

- Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
- Tributary geometry: Relatively straight
- Tributary gradient (approximate average slope): 38 %

(c) Flow:
- Tributary provides for: Seasonal flow
- Estimate average number of flow events in review area/year: 11-20
- Describe flow regime: Intermittent.
- Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch's Run.

- Surface flow is: Confined. Characteristics:
- Subsurface flow: Unknown. Explain findings: .
  - 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
    - changes in the character of soil
    - shelving
    - vegetation matted down, bent, or absent
    - leaf litter disturbed or washed away
    - sediment deposition
    - water staining
    - other (list):
  - the presence of litter and debris
  - destruction of terrestrial vegetation
  - the presence of wrack line
  - sediment sorting
  - scour
  - multiple observed or predicted flow events
  - abrupt change in plant community
  - 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:
  - oil or scum line along shore objects
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - tidal gauges
  - other (list):
- Mean High Water Mark indicated by:
  - survey to available datum;
  - physical markings;
  - vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
- Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
  - Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch's Run.
- Identify specific pollutants, if known: UNKN.

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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.
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: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: 

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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: 

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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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 680 linear feet 12 width (ft).
- Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. Non-RPWs\(^9\) 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: .

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\(^8\)See Footnote # 3.

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

\(^10\) Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- 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:.
- 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:.
- USGS 8 and 12 digit HUC maps:.
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s):.
- FEMA/FIRM maps:.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):GIS, 2018.
- or Other (Name & Date):.
- Previous determination(s). File no. and date of response letter:.
- Applicable/supporting case law:.
- Applicable/supporting scientific literature:.
- Other information (please specify):.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia  County/parish/borough: Ohio County  City: Stroh's Run
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator: Stroh's Run
Name of nearest waterbody: Stroh's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Stroh's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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: 724 linear feet: 3.5 (BF WIDTH, NO OHWM) width (ft) and/or _______________ acres.
      Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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: .

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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.
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: HUC 8 - 967,168.0 acres
   - Drainage area: 2.9 acres
   - Average annual rainfall: 39 inches
   - Average annual snowfall: 19 inches

   (ii) **Physical Characteristics:**
   - **(a) Relationship with TNW:**
     - ☑ Tributary flows directly into TNW.
     - ☑ Tributary flows through 4 tributaries before entering TNW.

     - Project waters are 2-5 river miles from TNW.
     - Project waters are 1 (or less) river miles from RPW.
     - Project waters are 2-5 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:
       - .

2. **Identify flow route to TNW\(^5\):** UNT to Storch's Run (UNT 10) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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\(^4\) Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

\(^5\) Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

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

Tributary is:  
- [x] Natural
- [ ] Artificial (man-made). Explain:  
- [ ] Manipulated (man-altered). Explain:  

Tributary properties with respect to top of bank (estimate):
- Average width: 3.5 feet
- Average depth: 1 foot
- Average side slopes: 3:1.

Primary tributary substrate composition (check all that apply):
- [x] Silts
- [x] Sands
- [ ] Concrete
- [ ] Muck
- [ ] Bedrock
- [ ] Gravel
- [ ] Vegetation. Type/% cover:  
- [ ] Other. Explain:  

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  
Presence of run/riffle/pool complexes. Explain:  
Tributary geometry: Relatively straight  
Tributary gradient (approximate average slope): 38%

(c) Flow:

Tributary provides for: Seasonal flow  
Estimate average number of flow events in review area/year: 11-20
Describe flow regime: Intermittent.
Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch's Run.

Surface flow is: Confined. Characteristics:  
Subsurface flow: Unknown. Explain findings:  
- [ ] Dye (or other) test performed:  

Tributary has (check all that apply):
- [x] Bed and banks
- [x] OHWM6 (check all indicators that apply):
  - [ ] clear, natural line impressed on the bank  
  - [ ] changes in the character of soil  
  - [x] shelving  
  - [x] vegetation matted down, bent, or absent  
  - [ ] leaf litter disturbed or washed away  
  - [ ] sediment deposition  
  - [ ] water staining  
  - [ ] 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:  
  - [ ] oil or scum line along shore objects  
  - [ ] fine shell or debris deposits (foreshore)  
  - [ ] physical markings/characteristics  
  - [ ] tidal gauges  
  - [ ] other (list):  
- [ ] Mean High Water Mark indicated by:  
  - [ ] survey to available datum;  
  - [ ] physical markings;  
  - [ ] vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch's Run.
Identify specific pollutants, if known: UNKN.

---

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.
(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: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 680 linear feet 12 width (ft).
- Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. Non-RPWs\(^9\) 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: .

\(^9\)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.
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: 
- 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: 
- USGS 8 and 12 digit HUC maps: 
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): 
- FEMA/FIRM maps: 
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):GIS, 2018. or Other (Name & Date): 
- Previous determination(s). File no. and date of response letter: 
- Applicable/supporting case law: 
- Applicable/supporting scientific literature: 
- Other information (please specify): 

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia
County/parish/borough: Ohio County
City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
- Field Determination. Date(s): November 20, 2017
- Office (Desk) Determination. Date: November 20, 2018

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 waters (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: Pick List
      - Elevation of established OHWM (if known):

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

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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.
Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The subject tributary is a non-RPW and does not exhibit a significant nexus to the downstream TNW.
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 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: HUC 8 - 967,168.0 acres
   - Drainage area: 2.5 acres
   - Average annual rainfall: 39 inches
   - Average annual snowfall: 19 inches

(ii) Physical Characteristics:
   (a) Relationship with TNW:
      - [ ] Tributary flows directly into TNW.
      - [x] Tributary flows through 4 tributaries before entering TNW.

      Project waters are 2-5 river miles from TNW.
      Project waters are 1 (or less) river miles from RPW.
      Project waters are 2-5 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 TNW: UNT of Storch's Run (UNT 9) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
(b) **General Tributary Characteristics (check all that apply):**

- Tributary is: □ Natural  □ Artificial (man-made). Explain: 
- □ Manufactured (man-altered). Explain: 

**Tributary properties with respect to top of bank (estimate):**
- Average width: 1.8 feet
- Average depth: 1 feet
- Average side slopes: **2:1**.

**Primary tributary substrate composition (check all that apply):**
- □ Silts
- □ Sands  □ Concrete
- □ Cobble  □ Gravel  □ Bedrock  □ Muck
- □ Bedrock  □ Vegetation. Type/% cover: 
- □ Other. Explain: 

**Tributary condition/stability [e.g., highly eroding, sloughing banks].** Explain: .


**Tributary geometry:** Relatively straight

**Tributary gradient (approximate average slope):** 41%

(c) **Flow:**

- Tributary provides for: Ephemeral flow

**Estimate average number of flow events in review area/year:** **11-20**

- Describe flow regime: .

**Other information on duration and volume:** .

**Surface flow is:** Discrete and 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
  - □ changes in the character of soil
  - □ shelving
  - □ vegetation matted down, bent, or absent
  - □ leaf litter disturbed or washed away
  - □ sediment deposition
  - □ water staining
  - □ other (list): Discontinuous OHWM. 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
  - □ fine shell or debris deposits (foreshore)
  - □ physical markings/characteristics
  - □ tidal gauges
  - □ other (list):

**Chemical Characteristics:**

- Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
  - Explain: Channel is a high gradient segment and provides ephemeral flow to receiving waters.

**Identify specific pollutants, if known:** .

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\(^6\)A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody’s flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

\(^7\)Ibid.
(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.
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:

Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel.

Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: contribution of flow

Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW.

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-RPWs** 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.**
   - 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

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*See Footnote # 3.
* To 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: See supporting statements in III. C. above. The subject water is a NRPW and does not have a SN to TNWs. .
☐ 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): 286 linear feet, 1.8 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: .
☐ 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: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.

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.
U.S. Geological Survey map(s). Cite scale & quad name: GIS.
USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
National wetlands inventory map(s). Cite name: GIS.
State/Local wetland inventory map(s): .
FEMA/FIRM maps: GIS.
100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
or Other (Name & Date): Wallace Pancher Group Report, January 2018 .
Previous determination(s). File no. and date of response letter: .
Applicable/supporting case law: .
Applicable/supporting scientific literature: .
Other information (please specify): Hillshade/high resolution lidar.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Group Report. The Corps has followed the JD guidance as enumerated within the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia  County/parish/borough: Ohio County  City: Tridelphia  
Center coordinates of site (lat/long in degree decimal format): Lat.  40.048152° N, Long. -80.61152° W.  

Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)

Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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):  
      ☐ 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: 522 linear feet: 2 (BF WIDTH, NO OHWM) width (ft) and/or acres.  
      Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual  
      Elevation of established OHWM (if known): Unknown.

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:  

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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.
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 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: HUC 8 - 967,168.0 acres
   Drainage area: 0.9 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
       ☑ Tributary flows directly into TNW.
       ☑ Tributary flows through 4 tributaries before entering TNW.

       Project waters are 2-5 river miles from TNW.
       Project waters are 1 (or less) river miles from RPW.
       Project waters are 2-5 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 TNW: UNT to Storch's Run (UNT 7) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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4 Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

(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: 2 feet
Average depth: 1.5 feet
Average side slopes: 4:1 (or greater).

Primary tributary substrate composition (check all that apply):
☒ Silts
☒ Sands
☐ Cobble
☐ Gravel
☐ Bedrock
☐ Muck
☐ Vegetation. Type/% cover:
☒ Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: Relatively straight
Tributary gradient (approximate average slope): 21%

(c) Flow:
Tributary provides for: Seasonal flow
Estimate average number of flow events in review area/year: 11-20
Describe flow regime: Intermittent.
Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interation and provides intermittent contributions into Storch's Run.

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
☐ changes in the character of soil
☐ shelving
☐ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☐ water staining
☐ other (list):
☒ 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
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ 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: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch's Run.
Identify specific pollutants, if known: UNKN.

\(^6\)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.
(iv) **Biological Characteristics.** Channel supports (check all that apply):
- ☐ Riparian corridor. Characteristics (type, average width): .
- ☒ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
- ☒ Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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

(i) **Physical Characteristics:**

(a) **General Wetland Characteristics:**
- Wetland size: acres
- Wetland type. 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: .
  - 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 522 linear feet x 2 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs\(^9\) 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 x 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:

   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: .

---
\(^9\)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.
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: .
☒ 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: .
☒ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: GIS.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
☒ National wetlands inventory map(s). Cite name: GIS.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):GIS, 2018.
☐ or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia
County/parish/borough: Ohio County
City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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: 569 linear feet: 2 (BF WIDTH, NO OHWM) width (ft) and/or acres. Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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 waterbody 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: HUC 8 - 967,168.0 acres
   Drainage area: 11.8 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

(ii) Physical Characteristics:
   (a) Relationship with TNW:
       ☑ Tributary flows directly into TNW.
       ☑ Tributary flows through 4 tributaries before entering TNW.

       Project waters are 2-5 river miles from TNW.
       Project waters are 1 (or less) river miles from RPW.
       Project waters are 2-5 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 TNW*: UNT to Storch's Run (UNT 5) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

   * Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
   * 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: 1st.

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

<table>
<thead>
<tr>
<th>Tributary is:</th>
<th>Natural</th>
<th>Artificial (man-made). Explain:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Manipulated (man-altered). Explain:</td>
</tr>
</tbody>
</table>

Tributary properties with respect to top of bank (estimate):
- Average width: 2 feet
- Average depth: .6 feet
- Average side slopes: **4:1 (or greater)**

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobble
- Gravel
- Bedrock
- Concrete
- Muck
- Vegetation. Type/% cover:
- Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 21%

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch’s Run.

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

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- High Tide Line indicated by:
- Mean High Water Mark indicated by:
- oil or scum line along shore objects
- fine shell or debris deposits (foreshore)
- physical markings/characteristics
- tidal gauges
- other (list):

(ii) Chemical Characteristics:

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

Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch’s Run.

Identify specific pollutants, if known: UNKN.

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

- [ ] Riparian corridor. Characteristics (type, average width): .
- [X] Habitat for:
  - [ ] Federally Listed species. Explain findings: .
  - [ ] Fish/spawn areas. Explain findings: .
  - [ ] Other environmentally-sensitive species. Explain findings: .
- [X] Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: .

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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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 a non-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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 569 linear feet 2 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters: .

3. **Non-RPWs** 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,**
   - 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):**
   - 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: .

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8 See Footnote # 3.
9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
10 Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: _____ linear feet width (ft).
- Other non-wetland waters: _____ acres.
- Wetlands: _____ acres.

Identify type(s) of waters: _____.

Provide acreage estimates for non-jurisdictional waters in the review area (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.

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): _____.

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: _____.
- 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: _____.
- USGS 8 and 12 digit HUC maps: _____.
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): _____.
- FEMA/FIRM maps: _____.
- 100-year Floodplain Elevation is: _____ (National Geodectic Vertical Datum of 1929).
- Photographs: (check) Aerial (Name & Date): GIS, 2018.
  or (check) Other (Name & Date): _____.
- Previous determination(s). File no. and date of response letter: _____.
- Applicable/supporting case law: _____.
- Applicable/supporting scientific literature: _____.
- Other information (please specify): _____.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia County/parish/borough: Ohio County City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:

Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)

Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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 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:  linear feet:  width (ft) and/or acres.
      Wetlands:  acres.

   c. Limits (boundaries) of jurisdiction based on: Pick List
      Elevation of established OHWM (if known):  .

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

---

\(^1\) 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.
Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The subject tributary is a non-RPW and does not exhibit a significant nexus to the downstream TNW.
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: HUC 8 - 967,168.0 acres
      Drainage area: 0.8 acres
      Average annual rainfall: 39 inches
      Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☑ Tributary flows directly into TNW.
         ☑ Tributary flows through 5 tributaries before entering TNW.
         Project waters are 2-5 river miles from TNW.
         Project waters are 1 (or less) river miles from RPW.
         Project waters are 2-5 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 TNW\(^5\): UNT of Storch's Run (UNT 6) --> UNT of Storch's Run (UNT 5) Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

---

\(^4\) 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: 1st.

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

- **Tributary** is:  
  - [X] Natural  

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

- Average width: 5 feet
- Average depth: 1.2 feet
- Average side slopes: 3:1.

Primary tributary substrate composition (check all that apply):

- [ ] Silts  
- [X] Sands  
- [ ] Concrete  
- [X] Cobbles  
- [ ] Gravel  
- [ ] Muck  
- [ ] Bedrock  
- [ ] Vegetation. Type/% cover: .

- [ ] Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .


Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 45%

(c) **Flow:**

- **Tributary provides for:** Ephemeral flow

- Estimate average number of flow events in review area/year: **11-20**

- Describe flow regime: .

- Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: .

Subsurface flow: **Unknown.** Explain findings: .

- [ ] Dye (or other) test performed: .

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

- [ ] Discontinuous OHWM.** Explain: .

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

- [ ] High Tide Line indicated by:  
  - oil or scum line along shore objects  
  - fine shell or debris deposits (foreshore)  
  - physical markings/characteristics  
  - tidal gauges  
  - other (list):  

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

**Chemical Characteristics:**

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

- Explain: Channel is a high gradient segment and provides ephemeral flow to receiving waters.

Identify specific pollutants, if known: .

---

*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.

**Ibid.**
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- 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: .
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: .
  - 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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:

Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel.

Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: contribution of flow

Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW.

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-RPWs** 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:

   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.**
   - 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

---

8 See Footnote # 3.
9 To 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):†

- 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: See supporting statements in III. C. above. The subject water is a NRPW and does not have a SN to TNWs. .
- 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): 131 linear feet, 3 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: .
- 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: .
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

† 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.
B. ADDITIONAL COMMENTS TO SUPPORT JD: The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Group Report. The Corps has followed the JD guidance as enumerated within the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia  County/parish/borough: Ohio County  City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W

Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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: 373 linear feet: 4 (BF WIDTH, NO OHWM) width (ft) and/or acres.
      Wetlands: 0 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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 waterbody 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: HUC 8 - 967,168.0 acres
      Drainage area: 4.2 acres
      Average annual rainfall: 39 inches
      Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☑ Tributary flows directly into TNW.
         ☑ Tributary flows through 4 tributaries before entering TNW.
         Project waters are 2-5 river miles from TNW.
         Project waters are 1 (or less) river miles from RPW.
         Project waters are 2-5 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 TNW: UNT to Storch’s Run (UNT 3) --> Storch’s Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

---

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

* 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: 1st.

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

**Tributary is:**
- X Natural

**Tributary properties with respect to top of bank (estimate):**
- Average width: 4 feet
- Average depth: 0.8 feet
- Average side slopes: **4:1 (or greater).**

Primary tributary substrate composition (check all that apply):
- X Silts
- □ Sands
- □ Concrete
- X Cobble
- □ Gravel
- □ Muck
- □ Bedrock
- □ Vegetation. Type/% cover:
- □ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .


Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 24%

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch’s Run.

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

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

Tributary has (check all that apply):
- X Bed and banks
- X OHWM6 (check all indicators that apply):
  - □ clear, natural line impressed on the bank
  - □ changes in the character of soil
  - □ shelving
  - □ vegetation matted down, bent, or absent
  - □ leaf litter disturbed or washed away
  - □ sediment deposition
  - □ water staining
  - □ other (list):
- □ Discontinuous OHWM.7 Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- □ High Tide Line indicated by:
  - □ oil or scum line along shore objects
  - □ fine shell or debris deposits (foreshore)
  - □ physical markings/characteristics
  - □ tidal gauges
  - □ other (list):
- □ Mean High Water Mark indicated by:
  - □ survey to available datum:
  - □ physical markings:
  - □ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch’s Run.

Identify specific pollutants, if known: UNKN.

---

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.
(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: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: 373 linear feet 4 width (ft).
- Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. **Non-RPWs** 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.
   3. Identify type(s) of waters: .

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

   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 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 and 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.**
   - 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):**

- 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: .

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8See 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.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Wetlands: acres.
- Identify type(s) of waters.

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.
- 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.
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):GIS, 2018.
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable
guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is
partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual
precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and
overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide
habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity
to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated
waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the
chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia    County/parish/borough: Ohio County    City: Tridelphia  
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N. Long. -80.61152° W.  
Universal Transverse Mercator:

- Name of nearest waterbody: Storch's Run  
- Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)

- Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
- 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: November 20, 2018  
- Field Determination. Date(s): December 12, 2017

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):  
      - TNWs, including territorial seas
      - Wetlands adjacent to TNWs
      - Relatively permanent waters (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
      - Wetlands

   b. Identify (estimate) size of waters of the U.S. in review area:
      - Non-wetland waters: linear feet: width (ft) and/or acres.
      - Wetlands: acres.

   c. Limits (boundaries) of jurisdiction based on: Pick List
      - Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if 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.
Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The subject tributary is a non-RPW and does not exhibit a significant nexus to the downstream TNW.
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 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**
   - General Area Conditions:
     - **Watershed size**: HUC 8 - 967,168.0 acres
     - **Drainage area**: 2.2 acres
     - **Average annual rainfall**: 39 inches
     - **Average annual snowfall**: 19 inches
   - Physical Characteristics:
     - **Relationship with TNW**:
       - ✔ Tributary flows directly into TNW.
       - ☑ Tributary flows through 3 tributaries before entering TNW.
       - Project waters are 2.5 river miles from TNW.
       - Project waters are 1 (or less) river miles from RPW.
       - Project waters are 2.5 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 TNW: 
   - UNT of Storch's Run (UNT 4) Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

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

Tributary is: ☒ Natural

Tributary properties with respect to top of bank (estimate):
- Average width: 1.5 feet
- Average depth: 1.2 feet
- Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):
- ☒ Silts
- ☒ Sands
- ☒ Concrete
- ☒ Cobble
- ☒ Gravel
- ☒ Muck
- ☒ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): 45%

(c) Flow:

Tributary provides for: Ephemeral flow

Estimate average number of flow events in review area/year: 11-20
Describe flow regime: .

Other information on duration and volume: .

Surface flow is: Discrete and 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
☐ changes in the character of soil shelving
☒ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☒ water staining
☐ other (list): .

☐ Discontinuous OHWM.\(^7\) Explain: .

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

☒ High Tide Line indicated by:
☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list): .

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

(iii) Chemical Characteristics:

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

Explain: Channel is a high gradient segment and provides ephemeral flow to receiving waters.

Identify specific pollutants, if known: .

\(^6\)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.
(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: __________

Surface flow is: __________

Subsurface flow: __________

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 __________ river miles from TNW.
Project waters are __________ aerial (straight) miles from TNW.

Flow is from: __________

Estimate approximate location of wetland as within the __________ 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: __________

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:

Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel.

Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: contribution of flow

Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW.

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-RPWs 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

\(^8\)See Footnote # 3.
\(^9\)To 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 COMMERCCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 
- 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: See supporting statements in III. C. above. The subject water is a NRPW and does not have a SN to TNWs. .
- 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): 127 linear feet, 1.5 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: .
- 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: .
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

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.
B. ADDITIONAL COMMENTS TO SUPPORT JD: The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Group Report. The Corps has followed the JD guidance as enumerated within the “U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook” dated 5/30/2007 and other applicable guidance.
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):** Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. **DISTRICT OFFICE, FILE NAME, AND NUMBER:** Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. **PROJECT LOCATION AND BACKGROUND INFORMATION:**
   State: West Virginia  County/parish/borough: Ohio County  City: Tridelphia
   Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
   Universal Transverse Mercator:
   Name of nearest waterbody: Storch's Run
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
   Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
   Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
   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.

**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):  
      - TNWs, including territorial seas
      - Wetlands adjacent to TNWs
      - Relatively permanent waters (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: 678 linear feet: 12 (BF WIDTH, NO OHWM) width (ft) and/or acres.
      - Wetlands: 0 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): Unknown.

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

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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.
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: HUC 8 - 967,168.0 acres
      Drainage area: 15.1 acres
      Average annual rainfall: 39 inches
      Average annual snowfall: 19 inches
   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☑ Tributary flows directly into TNW.
         ☑ Tributary flows through 4 tributaries before entering TNW.
      Project waters are 2-5 river miles from TNW.
      Project waters are 1 (or less) river miles from RPW.
      Project waters are 2-5 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 TNW\(^5\): UNT to Storch's Run (UNT 1) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

\(^4\) 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: 1st.

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

Tributary is: ☒ Natural  ☐ Artificial (man-made). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 12 feet
Average depth: 4 feet
Average side slopes: 4:1 (or greater).

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: .
Tributary geometry: Relatively straight
Tributary gradient (approximate average slope): 18 %

(c) Flow:
Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20
Describe flow regime: Intermittent.
Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch's Run.

Surface flow is: Confined. Characteristics: .

Subsurface flow: Unknown. Explain findings: .
☐ 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:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch's Run.
Identify specific pollutants, if known: UNKN.

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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.
(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: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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. Explain findings:
- 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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 a non-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: Wallace Pancher report dated January 2018.
   - Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs\(^9\) 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 abutting an 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: .

---

\(^8\)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.
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: .
- 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: .
- USGS NHD data: .
- USGS 8 and 12 digit HUC maps: .
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):GIS, 2018.
  - or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia        County/parish/borough: Ohio County        City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N. Long. -80.61152° W.
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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. [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 ☐ “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: 201 linear feet: 2 (BF WIDTH, NO OHWM) width (ft) and/or acres.
      Wetlands: 0 acres.
   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
      Elevation of established OHWM (if known): Unknown.

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 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: HUC 8 - 967,168.0 acres
   Drainage area: 3.1 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

(ii) Physical Characteristics:
   (a) Relationship with TNW:
      ☑ Tributary flows directly into TNW.
      ☑ Tributary flows through 4 tributaries before entering TNW.

      Project waters are 25 river miles from TNW.
      Project waters are 1 (or less) river miles from RPW.
      Project waters are 25 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 TNW\(^5\): UNT to Storch's Run (UNT 2) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

\(^4\) 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: 1st.

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

Tributary is: ☒ Natural  ☐ Artificial (man-made). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 2 feet
Average depth: 1 feet
Average side slopes: **4:1 (or greater)**.

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: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): **22 %**

(c) Flow:

Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch’s Run.

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* (check all indicators that apply):
☐ clear, natural line impressed on the bank
☐ changes in the character of soil
☐ shelving
☒ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☐ water staining
☐ other (list):
☐ Discontinuous OHWM.?

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:

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

Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch’s Run.
Identify specific pollutants, if known: UNKN.

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* 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.

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

- Riparian corridor. Characteristics (type, average width): .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: .
- 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. Explain findings: .
  - 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: .
  - 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: 201 linear feet 2 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters:

3. Non-RPWs\(^9\) 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:

\(^9\)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.
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:

☒ 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: 


☒ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: GIS.

☒ USDA Natural Resources Conservation Service Soil Survey. Cite name: GIS.

☒ National wetlands inventory map(s). Cite name: GIS.

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: 

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

☒ Photographs: ☒ Aerial (Name & Date):GIS, 2018.

☐ or ☒ Other (Name & Date): 

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

☐ Applicable/supporting case law: 

☐ Applicable/supporting scientific literature: 

□ Other information (please specify): 

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia   County/parish/borough: Ohio County   City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N. Long. -80.61152 ° W.
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☐ 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: November 20, 2018
☐ Field Determination. Date(s): December 12, 2017

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):  
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters (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: Pick List
      Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if 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.
Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The subject tributary is a non-RPW and does not exhibit a significant nexus to the downstream TNW.
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 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: HUC 8 - 967,168.0 acres
   Drainage area: 11.8 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

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

   [ ] Tributary flows directly into TNW.
   [X] Tributary flows through 4 tributaries before entering TNW.

   Project waters are 2-5 river miles from TNW.
   Project waters are 1 (or less) river miles from RPW.
   Project waters are 2-5 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 TNW: UNT of Storch's Run (UNT 8) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

   **Note:**
   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: 1st.

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

Tributary is:  
- [x] Natural  
- [ ] Artificial (man-made). Explain:  
- [ ] Manipulated (man-altered). Explain:  

Tributary properties with respect to top of bank (estimate):
- Average width: 4 feet  
- Average depth: 2 feet  
- Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):
- [x] Silts  
- [x] Sands  
- [x] Cobble  
- [x] Gravel  
- [ ] Concrete  
- [ ] Muck  
- [ ] Bedrock  
- [ ] Vegetation. Type/% cover:  
- [ ] Other. Explain:  

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  
Presence of run/riffle/pool complexes. Explain:  
Tributary geometry: Relevant for straight  
Tributary gradient (approximate average slope): 41%.

(c) Flow:

Tributary provides for: Ephemeral flow  
Estimate average number of flow events in review area/year: 11-20  
Describe flow regime:  
Other information on duration and volume:  
Surface flow is: Discrete and confined. Characteristics:  
Subsurface flow: Unknown. Explain findings:  
- [ ] Dye (or other) test performed:  

Tributary has (check all that apply):
- [x] Bed and banks  
- [x] OHWM6 (check all indicators that apply):
  - [ ] clear, natural line impressed on the bank  
  - [ ] changes in the character of soil shelving  
  - [ ] vegetation matted down, bent, or absent  
  - [x] leaf litter disturbed or washed away  
  - [ ] sediment deposition  
  - [ ] water staining  
  - [ ] other (list):  
- [x] Discontinuous OHWM.7 Explain:  

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- [ ] High Tide Line indicated by:  
  - [ ] oil or scum line along shore objects  
  - [ ] fine shell or debris deposits (foreshore)  
  - [ ] physical markings/characteristics  
  - [ ] tidal gauges  
  - [ ] other (list):  
- [ ] Mean High Water Mark indicated by:  
  - [ ] survey to available datum;  
  - [ ] physical markings;  
  - [ ] vegetation lines/changes in vegetation types.

(ii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Channel is a high gradient segment and provides ephemeral flow to receiving waters. Identify specific pollutants, if known:  

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.
(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:
- 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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:

Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel.

Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: contribution of flow

Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW.

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 TNWs where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
   - Provide estimates for jurisdictional waters in the review area (check all that apply):
     - Tributary waters: linear feet width (ft).
     - Other non-wetland waters: acres.
     - Identify type(s) of waters:

3. **Non-RPWs** 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:

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:

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:

7. **Impoundments of jurisdictional waters.**
   - 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.
9 To 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: See supporting statements in III. C. above. The subject water is a NRPW and does not have a SN to TNWs. .
☐ 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): 311 linear feet, 4 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: .
☒ 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: .
☒ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.

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.
B. ADDITIONAL COMMENTS TO SUPPORT JD: The Corps conducted a site visit in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Group Report. The Corps has followed the JD guidance as enumerated within the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: West Virginia Country/parish/borough: Ohio County City: Tridelphia
Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W
Universal Transverse Mercator:
Name of nearest waterbody: Storch's Run
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region
☒ 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: November 20, 2018
☒ Field Determination. Date(s): December 12, 2017

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 (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: 138 linear feet: 6 (BF WIDTH, NO OHWM) width (ft) and/or acres.
      Wetlands: 0.14 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
   Elevation of established OHWM (if known): Unknown.

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: HUC 8 - 967,168.0 acres
      Drainage area: 7.9 acres
      Average annual rainfall: 39 inches
      Average annual snowfall: 19 inches

   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☑ Tributary flows directly into TNW.
         ☒ Tributary flows through 4 tributaries before entering TNW.

         Project waters are 2-5 river miles from TNW.
         Project waters are 1 (or less) river miles from RPW.
         Project waters are 2-5 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: UNT to Storch's Run (UNT 14) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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

5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

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

Tributary is:  
- Natural
- Artificial (man-made). Explain: 
- Manipulated (man-altered). Explain: Stormwater Basin 10 is upstream resulting in past disturbance.

Tributary properties with respect to top of bank (estimate):
- Average width: 6 feet
- Average depth: 2 feet
- Average side slopes: 4:1 (or greater).

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobbles
- Gravel
- Bedrock
- Vegetation. Type/% cover:
- Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: 

Presence of run/riffle/pool complexes. Explain: 

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): 22 %

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interation and provides intermittent contributions into Storch's Run.

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
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- Discontinuous OHWM.\(^7\) Explain: 

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- High Tide Line indicated by: 
  - oil or scum line along shore objects
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - tidal gauges
  - other (list):
- Mean High Water Mark indicated by: 
  - survey to available datum;
  - physical markings;
  - vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: Channel is located downstream from Stormwater Basin 10 and provides intermittent flow to Storch's Run.

Identify specific pollutants, if known: UNKN.

\(^6\)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.
(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width): .
☒ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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: 0.14 acres
- Wetland type. Explain: PEM.
- Wetland quality. Explain: Low quality as the wetlands is off of a manmade drainage ditch.
- Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

- Surface flow is: Confined
- Characteristics: .
- 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: .
- Ecological connection. Explain: Wetlands W01BGG91117 & W02BGG91117 are hydrologically connected to UNT 14 through the following path (UPL01BGG91117 --> Stormwater Basin 10 --> UNT 14 (intermittent and jurisdictional) .
- Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are 2-5 river miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from TNW.
Flow is from: Wetland to navigable waters.
Estimate approximate location of wetland as within the 500-year or greater 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: The site was previously disturbed. No evidence of water quality issues. Wetlands receive hydrology from hillside seep.
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: 100% cover; dominant vegetation is the narrowleaf cattail, additional vegetation includes sedges and rushes.
- Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: Wetlands provide food and habitat for wildlife.

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: 2
Approximately (0.14) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W02BGG91117 N</td>
<td>0.023</td>
<td>W01BGG91117 N</td>
<td>0.117</td>
</tr>
</tbody>
</table>

Summarize overall biological, chemical and physical functions being performed: Wetlands provide habitat for wildlife, nutrient cycling, and sediment trapping.

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: Volume, Duration, frequency of flow: Based on the information available for the subject water it is noted that the flow within the channel is stormwater driven in minimal amounts. The duration of such flows are directly related to rainfall and snowmelt. Frequency of such events are directly correlated with weather events and no known groundwater source is noted for this channel. Based on the Corps site visit and review of the supplied information it was found that: The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does not provide habitat and lifecycle support functions for fish and other species that are present with the TNW. The tributary does not have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary does not have a relationship to the physical, chemical, and/or biological integrity of the TNW. Functions/Values provided by the subject tributary: contribution of flow. Given these details and assessment the Corps finds that the subject water does not have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the 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.
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: Wallace Pancher report dated January 2018.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - Tributary waters: 138 linear feet 2.0 width (ft).
   - Other non-wetland waters: acres.
   - Identify type(s) of waters: .

3. **Non-RPWs** 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: 0.14 acres.

7. **Impoundments of jurisdictional waters.**
   - 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).

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8 See Footnote # 3.
9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
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): 

☐ 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: .
☐ 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: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name: GIS.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
☐ National wetlands inventory map(s). Cite name: GIS.
☐ State/Local wetland inventory map(s): .

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.
FEMA/FIRM maps:  
Photographs:  
Photographs:  
[ ] Other (Name & Date):  
[ ] Previous determination(s). File no. and date of response letter:  
[ ] Applicable/supporting case law:  
Applicable/supporting scientific literature:  
[ ] Other information (please specify):  

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).
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): Wallace Pancher Group Aquatic Delineation Report Dated January 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Pittsburgh District, LRP-2017-1756, Ohio County Development Authority - The Highlands Development - Ohio County, WV

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

   State: West Virginia  County/parish/borough: Ohio County  City: Tridelphia
   Center coordinates of site (lat/long in degree decimal format): Lat. 40.048152° N, Long. -80.61152° W.

   Name of nearest waterbody: Storch's Run
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

   Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW)
   Name of watershed or Hydrologic Unit Code (HUC): 05030106, Ohio Region

   ☒ 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: November 20, 2018
   ☒ Field Determination. Date(s): December 12, 2017

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):  
      ☒ 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: 204 linear feet: 2.5 (BF WIDTH, NO OHWM) width (ft) and/or 0 acres.
   Wetlands: 0 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
   Elevation of established OHWM (if known): Unknown.

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:  

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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.
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: HUC 8 - 967,168.0 acres
   Drainage area: 1.7 acres
   Average annual rainfall: 39 inches
   Average annual snowfall: 19 inches

   (ii) Physical Characteristics:

      (a) Relationship with TNW:

      ☐ Tributary flows directly into TNW.
      √ Tributary flows through 4 tributaries before entering TNW.

      Project waters are 2-5 river miles from TNW.
      Project waters are 1 (or less) river miles from RPW.
      Project waters are 2-5 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 TNW\(^5\): UNT to Storch's Run (UNT 15) --> Storch's Run --> Middle Wheeling Creek --> Little Wheeling Creek --> Wheeling Creek --> Ohio River (TNW).

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\(^4\) Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

\(^5\) Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
Tributary stream order, if known: 1st.

(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: 2 feet
- Average depth: 1 feet
- Average side slopes: **4:1 (or greater)**.

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobbles
- Gravel
- Bedrock
- Vegetation. Type/% cover: 
- Other. Explain: 

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: 

Presence of run/riffle/pool complexes. Explain: 

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 21%

(c) Flow:

- Tributary provides for: **Seasonal flow**
- Estimate average number of flow events in review area/year: **11-20**
- Describe flow regime: Intermittent.

Other information on duration and volume: Channel was defined as having seasonal/intermittent flow. Channel has some groundwater interaction and provides intermittent contributions into Storch's Run.

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

- Discontinuous OHWM.° 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
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - tidal gauges
  - other (list): 
  - survey to available datum;
  - physical markings;
  - vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: Channel is located within a wooded portion of the property in a high gradient segment and provides intermittent flow to Storch's Run.

Identify specific pollutants, if known: **UNKN**.

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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.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: Channel provides enough intermittent flow to support instream organisms and chemical, physical, biological inputs to receiving waters.

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

(i) Physical Characteristics:
- General Wetland Characteristics:
  Properties:
  - Wetland size: acres
  - Wetland type. Explain: .
  Project wetlands cross or serve as state boundaries. Explain: .
- 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: .
- Wetland Adjacency Determination with Non-TNW:
  - Directly abutting
  - Not directly abutting
    - Discrete wetland hydrologic connection. Explain: .
    - Separated by berm/barrier. Explain: .
- 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:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

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: Wallace Pancher report dated January 2018.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: 204 linear feet 2.5 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters: .

3. **Non-RPWs** 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: .

   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.**
   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).

8. **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):**
   - 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: .

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8See 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.
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: .
- 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: .
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: GIS.
- USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
- National wetlands inventory map(s). Cite name: GIS.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): GIS, 2018.
  - Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

The Corps conducted a site visit along with the consultant (Wallace Pancher) in December 2017 to inspect portions of the site and to conduct an inspection/verification of findings regarding the Wallace Pancher Report. The Corps has followed the JD guidance as enumerated within
the "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" dated 5/30/2007 and other applicable guidance.

Volume, Duration, frequency of flow: Based on the information available for the subject water, it is noted that the flow within the channel is partially driven by groundwater influence and also by stormwater flows. The duration of such flows are related to the seasonal/annual precipitation cycles (i.e. rainfall and snow melts). Frequency of such events are seasonal and driven by both groundwater supplies and overland sheet flows. The tributary does not have the capacity to carry pollutants or flood waters to the TNW. The tributary does provide habitat and lifecycle support functions for fish and/or macroinvertebrates that are present with the TNW. The tributary does have the capacity to transfer nutrients and organic carbon that supports downstream foodwebs. The tributary, alone or in combination with similarly situated waters in the region, has a relationship and the ability to affect the chemical, physical, and/or biological integrity of the TNW.

Functions/Values provided by the subject tributary: sediment trapping, contribution of flow, habitat for life cycle dependent organisms.

Given these details and assessment the Corps finds that the subject water does have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the TNW (Ohio River).