

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): 18 Jan 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRE/Detroit, Gun Lake Tribe, LRE-2002-2030010-A21

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Michigan County/parish/borough: Allegan County City: Wayland
Center coordinates of site (lat/long in degree decimal format): Lat. 42.6388° N, Long. -85.6542° W.
Universal Transverse Mercator:

Name of nearest waterbody: Buskirk Creek

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

Name of watershed or Hydrologic Unit Code (HUC): Kalamazoo River: 04050003 Rabbit River (tributary): 0405000308

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s): 30 November 2021

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "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: 430 linear feet: 2-2.5width (ft) and/or acres.

Wetlands: 1.51 acres.

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

Elevation of established OHWM (if known): NA.

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: probably < 40 acres

Drainage area: probably < 40 acres

Average annual rainfall: 38.4 inches

Average annual snowfall: 77.3 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

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

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

Project waters are 20-25 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: intermittent drainage flows into Buskrk Creek, Buskrik Creek flows into Rabbit River, Rabbit River is a major tributary of the Kalamazoo River, which is a 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: .

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

Tributary is: Natural

Artificial (man-made). Explain: review of landscape, soil surveys, and topo maps suggest the drainageway was created many years ago to drain an area of muck soils higher on the landscape into nearby Buskirk Creek (entire drainageway is less than 500 feet long). Presume passage of time allowed side slopes to broaden, vegetate, and look relatively "natural"..
 Manipulated (man-altered). Explain: .

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

Average width: 2-2.5 feet

Average depth: 0-1 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: 40-80

Other. Explain: .

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

Presence of run/riffle/pool complexes. Explain: NA.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): less than 5 %

(c) Flow:

Tributary provides for: **Intermittent but not seasonal flow**

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

Describe flow regime: flow likely ceases during prolonged periods of precipitation lapses, regardless of season.

Other information on duration and volume: Consultants and Corps staff have witnessed flow/non-flow conditions on site since 2002. Soil suvey (1987) depicts the drainageway and labels it as a perennial watercourse.

Surface flow is: **Discrete and confined**. Characteristics: drainage flow has well defined channel.

Subsurface flow: **Unknown**. Explain findings: presume there is some subsurface flow.

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

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:**

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

⁷Ibid.

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

Explain: water was not laden with silt on day of inspection,.

Identify specific pollutants, if known: .

(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: 1.51 acres

Wetland type. Explain: scrub/shrub, reed canary grass/sensitive fern in herb stratum, cottonwoods, willows, buckthorn in shrub/tree stratum.

Wetland quality. Explain: nothing special floristically; wetland surely desynchronizes potential flood flows to Buskirk Creek/Rabbit River/Kalamazoo River and likewise traps nutrients from upstream farms/residential lots.

Project wetlands cross or serve as state boundaries. Explain: NA.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Both Corps staff and various consultants have found drainageway exhibiting robust flow on occasion and lacking surface water on other occasions.

Surface flow is: **Discrete and confined**

Characteristics: stream flow is contained by well-defined channel, channel is straight and was likely excavated many years ago to drain an area mapped in NRCS soil survey as muck soils.

Subsurface flow: **Unknown**. Explain findings: presumably some amount of 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 **30 (or more)** river miles from TNW.

Project waters are **20-25** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**.

Estimate approximate location of wetland as within the **2-year 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: .

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: **1**

Approximately (1.51) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland C	Y	1.51	

Summarize overall biological, chemical and physical functions being performed: Wetland C receives hydrology from areas of partially drained/excavated muck soils immediately up slope and abuts a drainageway (Drain 1) that flows directly into Buskirk Creek, which is a tributary of the Rabbit River, a tributary of the Kalamazoo River, a navigable water, which empties into Lake Michigan. Per its position in the landscape, Wetland C certainly filters sediment/other pollutants that would otherwise be in the water column in flow entering Buskirk Creek and into downstream waters. Wetland C desynchronizes flood flows into Buskirk Creek/downstream waters, reducing the overall "flashiness" of flows in the Rabbit River and Kalamazoo River and reducing impacts to the entire watershed associated with flood-flow precipitation events.

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: The Kalamazoo River has well-known issues with a variety of chemical pollutants; however, the sub-watershed including Wetland C--Buskirk Creek and the Rabbit River--is not beset with the same pollution problems facing the more upstream portions of the watershed. The introduction of the Kalamazoo Watershed Management Plan (KWMP) states, "While much progress has been made, significant challenges remain. Point sources of pollution have been brought under regulation, but now nonpoint source pollution contributes most of the total nutrient loading and remains an intransigent problem that demands fresh solutions." The KWMP also contemplated the impacts of climate change on the watershed, "...the general acceleration of the hydrological cycle may produce heavier precipitation events and thereby increase impacts of episodic storm runoff and river flooding." The Rabbit River Watershed Management Plan (RRWWMP) describes Buskirk Creek as, "Agriculture is still the dominant land use, however, Buskirk Creek does have the highest percentage of urban development of all twelve Rabbit River subwatersheds and includes the western half of the City of Wayland. The RRWWMP asserts, "the [Rabbit] river is experiencing instability, flashiness and has several reaches on the Total Maximum Daily Load (TMDL) list for biota." and also notes, "The primary goal of the project is to restore the designated uses of the Watershed by correcting causes of sedimentation, nutrient inputs, and high-flow occurrences. The sources of sediment include stream banks, cropland, construction sites, and road crossings/road ditches. Nutrients are entering the stream from agricultural production and residential area runoff. Damaging high flows are resulting from uncontrolled storm water runoff due to development and past drainage practices." The Upper Rabbit River Watershed Management Plan (URRWMP) notes, "Due to Allegan County's, and the Rabbit River Watershed's extensive network of drains, tiles, and other drainage, nearly every quarter section is adjacent to some form of surface water or

drainage. Since many of the serious problems in the watershed come from very small tributaries, or from immediate field drainage, simply designating a buffer zone around surface water misses much of this source. Sediment and nutrients can come from nearly any field, construction site, or road in the watershed; therefore, we felt it unwise to exclude any areas from being "Critical." Any site that is contributing nonpoint source pollution is "critical," and should be treated as such." The URRWMP states, "sediment is the number one pollutant throughout the watershed, and agriculture is one of the major sources. One of the major causes of sediment from agriculture is field run-off. Thus, the prevention or reduction of this run-off is a priority for the project." The URRWMP further notes, "Portions of the Rabbit River Watershed are seriously impacted by non-point source pollution, and water quality is severely degraded. Streams in the Upper Rabbit River Watershed have suffered impairments due to human derived land based activities." The unnamed drainageway (Drain 1) subject to this AJD flows directly into Buskirk Creek, which, on the project site, has been excavated/dredged and straightened to facilitate more efficient farming and "improve" drainage of areas that otherwise would not be as productive for agricultural use. Pollutants and water flows in the subject section of Buskirk Creek are not impeded by bends, expanses of shallow areas, or wetlands waterward of the OHWM, where pollutants could drop out of the water column and waters flows could slow down. As noted above, there is universal consensus that preserving/"correcting" smaller drainages in the Rabbit River and Kalamazoo watersheds will be necessary to diminish detrimental impacts to the Rabbit River and Kalamazoo River watersheds from sedimentation, flood flows, and nutrient inputs. By virtue of its position in the landscape and its relationship with Drain 1, Wetland C desynchronizes flood flows and filters sediments/the usual farmland pollutants that would otherwise rapidly flow into the Rabbit River and on to the Kalamazoo River. The subject tributary and Wetland C, which is adjacent to the tributary, have more than a speculative/insubstantial effect on the chemical, physical, and/or biological integrity of the Kalamazoo River. .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

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

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

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

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

- Tributary waters: **430** linear feet **2-2.5** 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:

⁸See Footnote # 3.

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

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

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

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are 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: **1.51** acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain: .
 Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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

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

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in “*SWANCC*,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
 Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- 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: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Allegan County Soil Survey 1987.
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):Allegan County GIS 2018; Google Earth 2021.
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter:2002-2030010, same wetland and intermittent drainage identified as waters under Corps' jurisdiction in 21 July 2004 AJD letter. Subsequent PJDs also noted these two features as waters falling under the Corps jurisdiction. Wetland C and Drainage 1 identified as Wetland F and as drainage M in 2012 PJD and were mapped in ORM.
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

Kalamazoo River Watershed Council. 2011. Kalamazoo River Watershed Management Plan. Prepared for the Michigan Nonpoint Source Program (Michigan Department of Environmental Quality and the United States Environmental Protection Agency) https://www.michigan.gov/documents/deq/wrd-nps-kalamazoo-wmp_387193_7.pdf .

Allegan County Conservation District. 2005. Upper Rabbit River Watershed Management Plan.. http://kalamazooriver.org/wp-content/uploads/2013/01/ess-nps-wmp-upper-rabbit_209163_7.pdf.

Allegan County Drain Commission. 2009. Rabbit River Watershed Management Plan. https://www.alleganecd.org/_files/ugd/29a6a3_432475c670d14f17a17d7969896fb408.pdf.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetland C abuts the intermittent Drain 1. Drain 1 empties into Buskirk Creek. On the Gun Lakes Tribe's land, Buskirk Creek has been excavated/dredged and straightened to facilitate more efficient farming and "improve" drainage of areas that otherwise would not be as amenable to agricultural use. Drain 1 does not show up in USGS topo maps of the area. The Allegan County Survey (1987) depicts Drain 1 in the soil maps (sheet 49) as a perennial watercourse. Although the soil survey suggests the drainageway is a perennial stream, my several observations since 2002 and observations from multiple consulting firms lead me to conclude Drain 1 acts more as an intermittent watercourse than as a watercourse with perennial surface flow. Just upstream and off of the Gun Lakes Tribe's lands, the same drainageway runs through an area mapped by the soil survey as muck soils--it appears Drain 1 is a long-in-place man-made feature constructed to drain some 11 acres of muck soils. .

The Upper Rabbit River Watershed Management Plan estimates the size of Buskirk Creek's watershed is about 9,920 acres. Wetlands C and Drain 1 are located in the upper reaches of the Buskirk Creek watershed. .