



**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

**I. ADMINISTRATIVE INFORMATION**

Completion Date of Approved Jurisdictional Determination (AJD): 1/27/2021

ORM Number: MVS-2021-36

Associated JDs: N/A

Review Area Location<sup>1</sup>: State/Territory: Missouri City: Centralia County/Parish/Borough: Audrain

Center Coordinates of Review Area: Latitude 39.2828 Longitude -92.1423

**II. FINDINGS**

**A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- There are “navigable waters of the United States” within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- There are “waters of the United States” within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

**B. Rivers and Harbors Act of 1899 Section 10 (§ 10)<sup>2</sup>**

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

**C. Clean Water Act Section 404**

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): <sup>3</sup>				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
Channel A.1	3,800	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Drainage that has intermittent flow.
Channel A. 2	6500	linear feet	(a)(2) Intermittent tributary contributes	Drainage that has intermittent flow.

<sup>1</sup> Map(s)/figure(s) are attached to the AJD provided to the requestor.

<sup>2</sup> If the navigable water is not subject to the ebb and flow of the tide or included on the District’s list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

<sup>3</sup> A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



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Tributaries ((a)(2) waters):			
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
		surface water flow directly or indirectly to an (a)(1) water in a typical year.	
Channel A. 3	700	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.
			Drainage that has intermittent flow.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):			
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):			
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
Surface Water C	0.40	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.
			associated with Channel A.1
Surface Water E	0.30	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.
			associated with Channel A.3
Surface Water F	0.30	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.
			associated with Channel A.2

**D. Excluded Waters or Features**

Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>			
Exclusion Name	Exclusion Size	Exclusion <sup>5</sup>	Rationale for Exclusion Determination
Surface Water A	0.10	acre(s)	(b)(1) Non-adjacent wetland.
			Depression on the northwest portion of the site. This wetland is isolated and no channel connection to other waters.
Surface Water B	2.0	acre(s)	(b)(1) Non-adjacent wetland.
			Depression on the north-central portion of the site. This suspect wetland is isolated and no channel connection to other waters.

<sup>4</sup> Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

<sup>5</sup> Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



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Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>				
Exclusion Name	Exclusion Size		Exclusion <sup>5</sup>	Rationale for Exclusion Determination
Surface Water D	0.20	acre(s)	(b)(1) Non-adjacent wetland.	Depression on the east-central portion of the site. This suspect wetland is isolated and no channel connection to other waters.

**III. SUPPORTING INFORMATION**

**A. Select/enter all resources** that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- Information submitted by, or on behalf of, the applicant/consultant: [Terracon Consultants, Inc.](#)  
This information is sufficient for purposes of this AJD.  
Rationale: [Provides field data, pictures, rainfall measurements, maps, etc.](#)
- Data sheets prepared by the Corps: [Title\(s\) and/or date\(s\).](#)
- Photographs: [Aerial and Other: Appendix A,B,C,D,E](#)
- Corps site visit(s) conducted on: [Date\(s\).](#)
- Previous Jurisdictional Determinations (AJDs or PJDs): [ORM Number\(s\) and date\(s\).](#)
- Antecedent Precipitation Tool: [provide detailed discussion in Section III.B.](#)
- USDA NRCS Soil Survey: [Appendix A,B,C,D,E](#)
- USFWS NWI maps: [Appendix A,B,C,D,E](#)
- USGS topographic maps: [Appendix A,B,C,D,E](#)

**Other data sources used to aid in this determination:**

Data Source (select)	Name and/or date and other relevant information
<a href="#">USGS Sources</a>	<a href="#">N/A.</a>
<a href="#">USDA Sources</a>	<a href="#">N/A.</a>
<a href="#">NOAA Sources</a>	<a href="#">N/A.</a>
<a href="#">USACE Sources</a>	<a href="#">N/A.</a>
<a href="#">State/Local/Tribal Sources</a>	<a href="#">N/A.</a>
<a href="#">Other Sources</a>	<a href="#">N/A.</a>

**B. Typical year assessment(s):** The consultant reviewed data from the USGS Stream Stats website and rainfall data from the National Oceanic and Atmospheric Administration (NOAA) website. The USGS stream data indicates Channel A.1, A.2 and A.3 drain approximately 1250 acres at the point where Channel A.2 flows off the site property. The NOAA data for a weather station in Centralia, Missouri (Centralia 1.5 N MO US US1MOBN0070) indicates a precipitation event on November 14, 2020 resulted in the accumulation of approximately 0.37 inches and a precipitation event on November 15, 2020 resulted in the accumulation of approximately 0.28 inches. The approximate accumulated precipitation in the site area was 0.65 inches within the three days of the field visit. Based on the limited data reviewed, it appears no significant rain event occurred within the 24 hours of field investigation.

**C. Additional comments to support AJD:** The site consists of primarily of cropland with wooded areas adjacent to stream channels (Channels A.1, A.2 and the lower reach of A.3). Site characteristics are generally consistent with those observed in the preliminary data review. There are numerous ephemeral



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channels, waterways and/or erosional features (depicted on figures with hatched yellow lines) throughout the parcel. Isolated depressional areas are located on the site and were sampled to determine if potential wetland characteristics. Evidence of the two ponds depicted on the topographic map was not observed during the site reconnaissance (see wetland Sample Plots UP1 and UP2 for data from these areas).

Field observations identified three primary onsite drainages that are consistent with Channels A.1, A.2 and A.3 from the preliminary data review. The following is a general descriptions of the onsite drainage systems:

- Channel A.1 is a drainage originating on property west of the site. Channel A.1 has a well- defined bed and bank system and OHWM along its reach on the site (approximately 3,800 feet of channel). No apparent flow was noted but pooling in isolated locations was present. It converges with Channel A.2 on the east-central portion of the site.
- Channel A.2 is a drainage originating on properties south and southwest of the site. Channel A.2 has a defined bed/bank system and OHWM and the lower reach (approximately 5,000 feet of channel) with weak to no bed/bank system or OHWM on the upper reach (approximately 1,500 feet of channel). No apparent flow was noted but pooling in isolated locations was present. Channel A.2 flows offsite on the east-central portion of the site.
- Channel A.3 is a channel originating on the property adjacent west of the site. Channel A.3 has a defined bed/bank system and OHWM and the lower reach (approximately 450 feet of channel) with weak to no bed/bank system or OHWM on the upper reach (approximately 1,300 feet of channel). No apparent flow was noted but pooling in isolated locations was present. Channel A.3 converges with Channel A.2 on the eastern portion of the site.

The approximate locations of the above surface waters are depicted on Figures 2.1, and 2.2 in Appendix A. Cross Sectional characteristics of select locations were documented and they include:

- Channel A.1  Cross sections CS1, CS2 and CS3.
- Channel A.2  Cross sections CS4, CS5, CS6, CS7, CS8 and CS9
- Channel A.3  Cross sections CS11 and CS12

Data sheets with details on the physical characteristics of the 12 cross sections are included in Appendix E and approximate locations cross sections are depicted in Figure 2.3 and 2.4 in Appendix A.

#### Other Surface Water

Numerous other drainages were observed on the site. They appeared to be swales, agricultural waterways and erosional features and the remaining drainages appeared to be ephemeral in nature. These additional drainages are depicted as hatched yellow lines on Figures 2.1 and 2.2 in Appendix A. Data sheet CS10 provides details of a typical cross section characteristics of one of these drainages in Appendix E.

#### Wetland Observations:

Data collection consisted of 15 sample plots at 13 locations across the site. Hydrology, soils and vegetation data the sample plots were recorded on USACE Wetland Determination Data Forms (copies are provided in Appendix F). The sample plots included data collected in locations within and adjacent to the onsite



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REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
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channels that appeared as fringe and pooling areas:

- Channel A.1 - Wetland Sample Plot PL12.
- Channel A.2 - Wetland Sample Plot PL13.
- Channel A.3 - Wetland Sample Plots PL9, PL10 and PL11.

Wetland Sample were collected in depressional areas, erosional features or areas where the preliminary review indicated potential saturation. The following are the general descriptions of wetland samples in these areas:

- Wetland Sample Plots PL1, PL3 and PL3 - Ephemeral drainages/waterways on the northeast portion of the site.
- Wetland Sample Plots PL4 and PL5 - Depressional are on the east-central portion of the site (Surface Water D).
- Wetland Sample Plots PL6 and PL7 - Depressional are on the northwest portion of the site (Surface Water A).
- Wetland Sample Plot PL8 - Depressional are on the north-central portion of the site (Surface Water B).

Wetland Sample Plots UP1 and UP2 were collected in apparent upland areas where topographic map review indicated former ponds.

Where wetlands were indicated by sampling, Terracon utilized elevation and vegetation changes between the wetland plots and upland plots to visually estimate the boundaries of the suspect wetland areas and collected GPS data to develop general mapping of these areas. Approximate locations of the sample plots are depicted on Figures 2.3 and 2.4 in Appendix A.

#### Wetland Hydrology Data

Terracon observed the presence of the three wetland indicators (hydrology, hydric soils, and dominant wetland vegetation) at sample plots PL4, PL6, PL8, PL9, PL11, PL12 and PL13. The remaining sample locations (PL1, PL2, PL3., PL5, PL7, PL10, UP1 and UP2) lacked one or more of indicators for wetland conditions.

#### Field Summary

Terracon collected data of channel structure and wetland characteristics to assist in determining the extent of jurisdictional waters on the site. The data is summarized below and locations of the data collection is included on Figures 2.3 and 2.4 in Appendix A.

#### Drainages

Channels A.1, A.2 and A.3 areas of pooling but no obvious indications of flow at the time of the site visit. The physical characteristics on portions of the channels for these three drainages show well developed bed/bank systems and OHWM. The upper reaches of Channel A.2 and Channel A.3 have no strong physical characteristics (bed/bank and OHWM); however, areas of pooling were observed on the upper reaches of these channels. The remaining channels and/or waterways on the site parcels do not exhibit OHWMs or bed/bank. These additional channels and waterways generally did not have flow or areas of pooling at the time of the site visit. Based on the limited observations at the time of the site visit and area of drainage identified during the preliminary review, Channels A.1, A.2 and A.3 may be considered



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intermittent streams. The remaining drainages and waterways appear to have ephemeral flow.

#### Wetlands

Based on USACE wetland criteria the following areas exhibited the three wetland characteristics at sample points collected during the site visit. Below is a brief description of each surface water and an estimation of area based on field data and review of aerial images.

- Surface Water A - An approximate 0.10-acre depression on the northwest portion of the site. This suspect wetland is isolated and no channel connection to other waters.
- Surface Water B - An approximate 2.0-acre depression on the north-central portion of the site. This suspect wetland is isolated and no channel connection to other waters.
- Surface Water C - An approximate 0.40-acre area of saturation in Channel A.1 on the northwest portion of the site. This suspect wetland is within the channel and fringe adjacent to the channel of the drainage.
- Surface Water D - An approximate 0.40-acre depression on the east-central portion of the site. This suspect wetland is isolated and no channel connection to other waters.
- Surface Water E - An approximate 0.30-acre area of saturation in Channel A.3 on the west-central portion of the site. This suspect wetland is within the channel and fringe adjacent to the channel of the drainage.
- Surface Water F - An approximate 0.30-acre area of saturation in Channel A.2 on the south-central portion of the site. This suspect wetland is within the channel and fringe adjacent to the channel of the drainage.

A Preliminary Waters of the U.S. Assessment was conducted for approximately 330 acres of generally undeveloped property consisting of a mixture of cropland and wooded areas located in Audrain County, Missouri and covering portions of Sections 21 and 28, Township 52 North, Range 11 West s. This PWOTUS involved a review of the site utilizing readily available information (e.g. USGS topographic map, aerial photographs, a USFWS NWI map, and NRCS Web Soil Survey data), and a site reconnaissance to evaluate and document the site for potential jurisdictional WOTUS. The site reconnaissance was conducted on November 18, 2020.

Terracon identified drainages that may have intermittent flow and would met criteria under the 2020 NWPR to be a jurisdictional water:

- Channel A.1 with approximate 3,800-foot channel onsite,
- Channel A.2 with approximately 6,500 feet of channel onsite; and
- Channel A.3 with approximately 700 feet of channel onsite.

Terracon identified three suspect wetland areas that exhibited the three wetland characteristics defined in USACE guidance documents and met criteria under the 2020 NWPR to be a jurisdictional water.

- Surface Water C - An approximate 0.40-acre wetland (associated with Channel A.1);
- Surface Water E - An approximate 0.30-acre wetland (associated with Channel A.3); and



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NAVIGABLE WATERS PROTECTION RULE**

Surface Water F - An approximate 0.30-acre wetland (associated with Channel A.2). Terracon identified three additional (Surface Water A, Surface Water B and Surface Water D) suspect wetlands that exhibit the three wetland characteristics but did not meet the criteria of jurisdictional waters under the 2020 NWPR guidelines.

A graphic representation of the extent of the surfaces waters that appear to be jurisdictional is included on Figures 2.5 and 2.6 in Appendix A.