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): 6/14/2021
ORM Number: LRN-2020-01224
Associated JDs: N/A
Review Area Location[1]: State/Territory: TN City: Murfreesboro County/Parish/Borough: Rutherford
Center Coordinates of Review Area: Latitude 35.8301 Longitude -86.4206

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 or describe rationale.
- ☐ 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)[2]

§ 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):[3]				
(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
STR 1 Double Springs Branch	2,389	linear feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	STR 1 had flowing water during all site visits conducted by the consultant and Corps. Amphibians, macroinvertebrates, algae, hydrophytic vegetation, hydric soils and water stained leaves were observed. STR 1 is a tributary to the ((a)(2) water) Bushman Creek, a tributary of the ((a)(1) water) East Fork Stones River. For more information on STR 1, please see Section III.C of this document.
STR 2	2,137	linear feet	(a)(2) Perennial tributary contributes	STR 2 had flowing water during all site visits conducted by the consultant and during the Corps site visit on April 13, 2021. Amphibians,

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] 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.
[3] 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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(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.	macroinvertebrates, algae, hydrophytic vegetation, hydric soils and water stained leaves were observed. STR 2 is a tributary of the ((a)(2) water) STR 1.
STR 3	1,111	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	STR 3 was observed to have weak flow and pools of water by the consultant. Amphibians, crayfish, water stained leaves and algae were documented. STR 3 is a tributary of the ((a)(2) water) STR 1.
STR 4	494	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	STR 4 was observed to have weak flow, pools of water and hydric soils by the consultant. Strong flow, algae, water stained leaves and hydrophytic vegetation were observed by the Corps. STR 4 is a tributary of the ((a)(2) water) STR 2.
STR 5	1,606	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	STR 5 was not flowing at the time of the consultant's site visit, but pools of water, hydric soils and hydrophytic vegetation were observed. STR5 was actively flowing at the time of the Corps' first site visit. Water stained leaves, matted vegetation and hydrophytic vegetation were observed. STR 5 is a tributary of the ((a)(2) water) STR 1.
STR 6	650	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	At the time of the consultant's site visit, pools of water with areas of saturation within the channel were observed. STR 6 was actively flowing at the time of the Corps' first site visit. STR 6 is a tributary of the ((a)(2) water) STR 1.
STR 7	313	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	At the time of the consultant's site visit, pools of water with areas of saturation within the channel were observed. STR 7 was actively flowing at the time of the Corps' first site visit. Iron and manganese stained rock, hydric soils, hydrophytic vegetation, crayfish burrows, water stained leaves, algal mats and moss covered rock and banks were observed. STR 7 is a tributary of the ((a)(2) water) STR 1.
STR 8	461	linear feet	(a)(2) Intermittent tributary contributes	STR 8 was actively flowing during both of the Corps' site visits. Water stained leaves and matted

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(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.	vegetation were observed. STR 8 flows into the (a)(4) Wetland Area E.
STR 9	264	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	STR 9 was actively flowing during both of the Corps' site visits. Water stained leaves, iron reducing bacteria and mineral stained rock were observed. STR 9 is a tributary of the ((a)(2) water) STR 2.

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.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
Wetland Area B	10.07	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area B was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area B directly abuts STR 7.
Wetland Area C	1.06	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area C was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area C directly abuts STR 1, STR 2 and STR 9.
Wetland Area D	0.50	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area D was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area D directly abuts STR 2.
Wetland Area E	0.98	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area E was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area E directly abuts STR 1.
Wetland Area F	14.83	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area F was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area F directly abuts STR 8.
Wetland Area G	0.08	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area G was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area G directly abuts STR 8.
Wetland Area H	1.6	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area H was observed by the Corps to exhibit surface water, a high water table, hydric soils

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Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
				and hydrophytic vegetation. Wetland Area H directly abuts STR 5.
Wetland Area M	0.19	acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	Wetland Area M was observed by the Corps to exhibit surface water, a high water table, hydric soils and hydrophytic vegetation. Wetland Area M directly abuts STR 6.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
Wetland Area A	0.02	acre(s)	(b)(1) Non-adjacent wetland.	Wetland Area A is a non-adjacent wetland that does not abut an (a)(1)-(3) jurisdictional water; is not inundated by flooding from an (a)(1)-(3) water in a typical year; is not physically separated from an (a)(1)-(3) water solely by a natural berm, bank, dune, or similar natural feature; nor by an artificial dike, barrier, or similar artificial structure. Wetland Area A does not have perennial or intermittent flow and does not meet the definition of an (a)(1)-(3) water.
Wetland Area I	0.14	acre(s)	(b)(1) Non-adjacent wetland.	Wetland Area I is a non-adjacent wetland that does not abut an (a)(1)-(3) jurisdictional water; is not inundated by flooding from an (a)(1)-(3) water in a typical year; is not physically separated from an (a)(1)-(3) water solely by a natural berm, bank, dune, or similar natural feature; nor by an artificial dike, barrier, or similar artificial structure. Wetland Area I does not have perennial or intermittent flow and does not meet the definition of an (a)(1)-(3) water.
Wetland Area J	0.04	acre(s)	(b)(1) Non-adjacent wetland.	Wetland Area J is a non-adjacent wetland that does not abut an (a)(1)-(3) jurisdictional water; is not inundated by flooding from an (a)(1)-(3) water in a typical year; is not physically separated from an (a)(1)-(3) water solely by a natural berm, bank, dune, or similar natural feature; nor by an artificial dike, barrier, or similar artificial structure. Wetland Area J does not have perennial or intermittent flow and does not meet the definition of an (a)(1)-(3) water.
Wetland Area K	0.24	acre(s)	(b)(1) Non-adjacent wetland.	Wetland Area K is a non-adjacent wetland that does not abut an (a)(1)-(3) jurisdictional

[4] 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.
[5] 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)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
				water; is not inundated by flooding from an (a)(1)-(3) water in a typical year; is not physically separated from an (a)(1)-(3) water solely by a natural berm, bank, dune, or similar natural feature; nor by an artificial dike, barrier, or similar artificial structure. Wetland Area K does not have perennial or intermittent flow and does not meet the definition of an (a)(1)-(3) water.
Wetland Area L	0.04	acre(s)	(b)(1) Non-adjacent wetland.	Wetland Area L is a non-adjacent wetland that does not abut an (a)(1)-(3) jurisdictional water; is not inundated by flooding from an (a)(1)-(3) water in a typical year; is not physically separated from an (a)(1)-(3) water solely by a natural berm, bank, dune, or similar natural feature; nor by an artificial dike, barrier, or similar artificial structure. Wetland Area L does not have perennial or intermittent flow and does not meet the definition of an (a)(1)-(3) water.
Pond 1	0.16	acre(s)	(b)(1) Lake/pond or impoundment that does not contribute surface water flow directly or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	Pond 1 is a man-made feature that does not contribute surface flow directly, or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year, and was not built in an (a)(1)-(a)(3) water.
Pond 2	0.009	acre(s)	(b)(8) Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water that meets (c)(6).	Pond 2 is a man-made feature dug in uplands and is not an impoundment of a jurisdictional water that meets (c)(6).
ES 1	322	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 1 was dry at the time of the Corps' site visits. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 1.

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Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
ES 2	983	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 2 was dry at the time of the Corps' site visits and lacked bed & bank. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 2.
ES 3	200	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 3 was dry at the time of the Corps' site visits and lacked bed & bank. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 3.
ES 4	59	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 4 was dry at the time of the consultant's site visit and lacked bed & bank. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 4.
ES 5	110	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 5 was dry at the time of the Corps' site visits and lacked bed & bank. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 5.
ES 7	158	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 7 was dry at the time of the Corps' site visits and lost channelization. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 7.
ES 8	150	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 7 was dry at the time of the Corps' site visits and lost channelization. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 7.
ES 11	816	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	ES 8 was dry at the time of the Corps' site visits and lost channelization. Hydric soils, hydrophytic vegetation, macroinvertebrates and mineral stained rock were absent throughout ES 8.

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: "Jurisdictional Waters Determination, Double Springs Road Property, Murfreesboro, Rutherford County, Tennessee", dated January 7, 2021.

This information is not sufficient for purposes of this AJD.

Rationale: Consultant's delineation mischaracterized several stream feature's hydrologic regime and did not include several features identified by the Corps while in the field. Two site visits and two updated JD requests were required to complete request.

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☐ Data sheets prepared by the Corps: N/A
☒ Photographs: Aerial and Other: "Jurisdictional Waters Determination, Double Springs Road Property, Murfreesboro, Rutherford County, Tennessee", dated January 7, 2021 and pictures taken during Corps' site visits on February 4, 2021 and April 13, 2021..
☒ Corps site visit(s) conducted on: February 4, 2021 and April 13, 2021.
☐ Previous Jurisdictional Determinations (AJDs or PJDs): N/A
☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
☒ USDA NRCS Soil Survey: "Jurisdictional Waters Determination, Double Springs Road Property, Murfreesboro, Rutherford County, Tennessee", dated January 7, 2021.
☒ USFWS NWI maps: "Jurisdictional Waters Determination, Double Springs Road Property, Murfreesboro, Rutherford County, Tennessee", dated January 7, 2021.
☒ USGS topographic maps: "Jurisdictional Waters Determination, Double Springs Road Property, Murfreesboro, Rutherford County, Tennessee", dated January 7, 2021.

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
Other state/local data (specify)	The City of Murfreesboro Dye Trace and Springs GIS Webviewer, accessed June 16, 2021, available at "https://murfreesborotn.maps.arcgis.com/apps/webappviewer/index.html?id=85d22fc4161c4969bcf09a5207903035"
Applicable/supporting scientific literature	Ogden, A. E. (2011). (rep.). Ground Water (Dye) Tracing in Murfreesboro for Planning Best Management Practices for Stormwater Runoff, Predicting Sinkhole Flooding Problems, and to Aid in Chemical Spill Response. City of Murfreesboro Water and Sewer Department. Retrieved from https://www.murfreesborotn.gov/ArchiveCenter/ViewFile/Item/134 on June 16, 2021 Ogden, A. E. (2012). (rep.). Ground Water (Dye) Tracing in Murfreesboro for Planning Best Management Practices for Stormwater Runoff, Predicting Sinkhole Flooding Problems, and to Aid in Chemical Spill Response: Results of Year Two of the Investigation. Murfreesboro, Tennessee: City of Murfreesboro Water and Sewer Department. Retrieved from https://www.murfreesborotn.gov/ArchiveCenter/ViewFile/Item/132 on June 16, 2021

B. Typical year assessment(s): According to the APT, the consultant's site visit on June 21, 2020 was conducted in normal conditions during the dry season. The Corps' first site visit on February 4, 2021 was conducted in drier than normal conditions during the wet season, and the Corps' second site visit on April 13, 2021 was conducted in wetter than normal conditions during the wet season.

C. Additional comments to support AJD: The ((a)(2) water) STR 1 Double Springs Branch enters a sinkhole outside of the review area at approximately Lat. 35.84736, Long. -86.34205 and temporarily becomes a subterranean river. This subterranean river has been documented to contribute flow to Bushman Creek in two ground water dye tracing studies conducted by Dr. Albert E. Ogden for the City of

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Murfreesboro Water and Sewer Department. The flow path of the subterranean river is mapped and available on the City of Murfreesboro's Dye Trace and Springs GIS webviewer.