



MAP LEGEND

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Water Features

Transportation

Background

Spoil Area

Stony Spot

Wet Spot

Other

Rails

US Routes

Major Roads

Local Roads

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot
Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wood County, Ohio Survey Area Data: Version 24, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

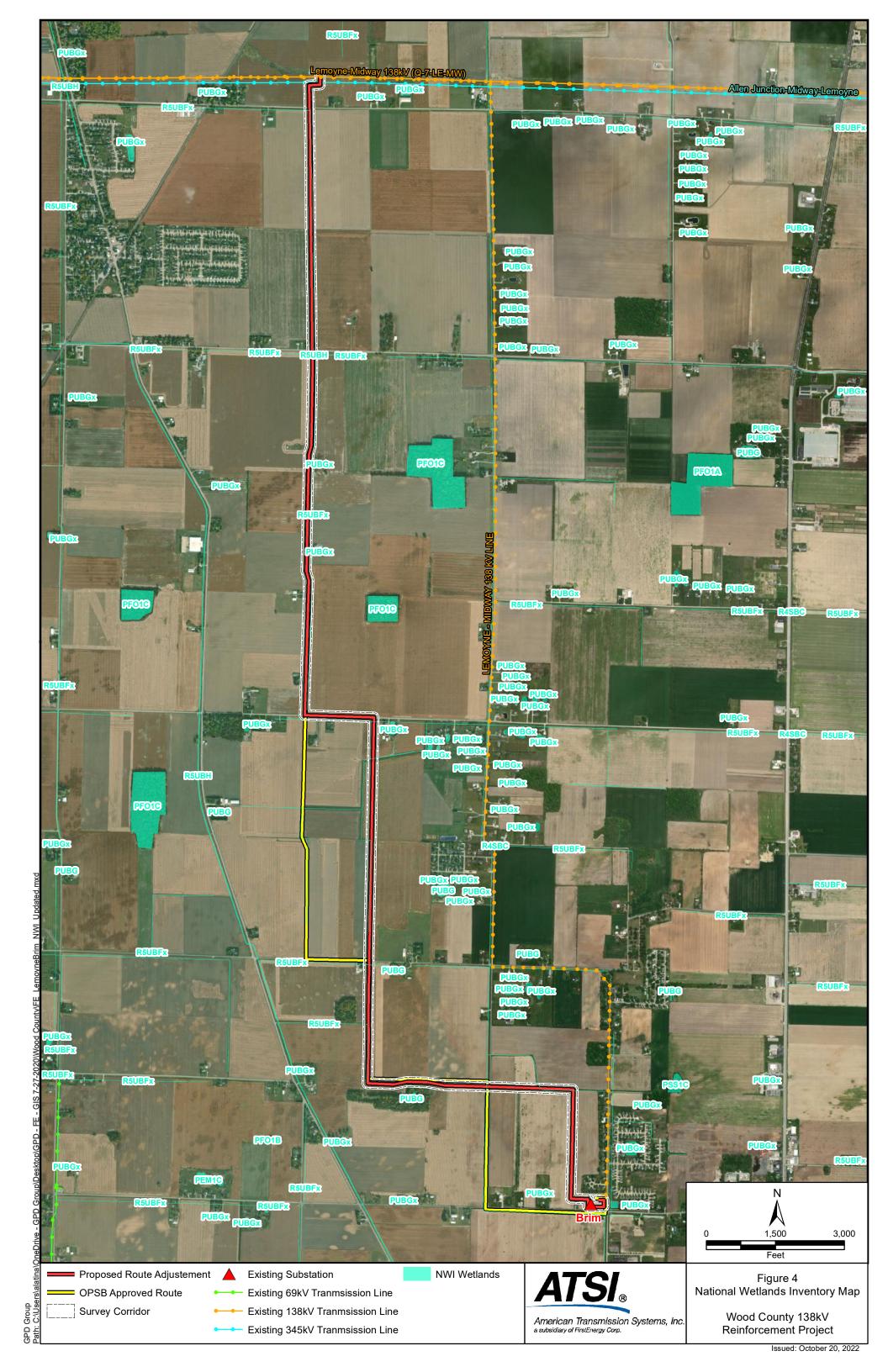
Date(s) aerial images were photographed: Jul 4, 2020—Jul 5, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Wood County, Ohio Figure 3

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
НоА	Hoytville clay loam, 0 to 1 percent slopes	27.2	82.2%
MfA	Mermill-Aurand complex, 0 to 1 percent slopes	2.9	8.9%
NmA	Nappanee sandy loam, 0 to 2 percent slopes	0.1	0.4%
RfA	Rimer and Tedrow, till substratum, loamy fine sands, 0 to 2 percent slopes	1.1	3.2%
SdA	Seward and Ottokee, till substratum, loamy fine sands, 0 to 2 percent slopes	1.7	5.2%
SdB	Seward and Ottokee, till substratum, loamy fine sands, 2 to 6 percent slopes	0.0	0.1%
Totals for Area of Interest		33.2	100.0%



Appendices

Appendix A Field Data Forms

Appendix B Representative Photographs

Appendix C List of Preparers



Appendix AField Data Forms

HHEI Forms



Field Methods for Evaluating Primary Headwater Streams in Ohio Ohio EPA, Division of Surface Water

Perennial
Small Drainage
Warmwooder Stream
Ictober 2010

11

October 2018

Primary Headwater Habitat Field Evaluation Form	
HHEI Score (sum of metrics 1+2+3)	52
SITE NAMELOCATION STREAM 3 LANGE COUNTY 138 KVB2 inforcement Project SITE NUMBER 0721-02 RIVER BASIN MOLIMBE GIVE RIVER CODE DRAMAGE AREA (m²) 1. LENGTH OF STREAM REACH (n) 5563 LAT 41.4154 LONG -83.6742 RIVER MLE DATE 07-21-21 SCORER EN, LS COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instance of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams"	tructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO	RECOVERY
BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bidr Slabs, Bouder, Cobble, Bedrock (A) LEAF PACKWOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts]	HHEI Metric Points Substrate Max = 40
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES:	
time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (centimeters): [8]	Construction
3. BANK FULL WIDTH (Measuredas the average of 3 - 4 measurements) {Check ONLY one box}: > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS	P
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	t) -
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None	o ny
To the second se	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score ______ (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) # WWH Name: Tontogany Creek CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: Bouling (reen North NRCS Soil Map Page: _____ NRCS Soil Map Stream Order.____ Township Chy. Plain Township MISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation: 07-20-21 Quantity: 60-1 Photo-documentation Notes: Elevated Turbidity?(Y/N): N Canopy (% open): 100 /. Were samples collected for water chemistry? (Y/N): ______ Lab Sample # or ID (attach results): _____ Field Measures: Temp (°C) NA Dissolved Oxygen (mg/l) N/A pH (S.U.) 7.45 Conductivity (umhos/cm) N/A is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____ Additional comments/description of pollution impacts: **BIOLOGICAL OBSERVATIONS** (Record all observations below) Fish Observed? (Y/N) Species observed (if known): Frogs or Tadpoles Observed? (Y/N) _____ Species observed (if known):_____ Salamanders Observed? (Y/N) N Species observed (if known); Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed) Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location Corn Field TOP of Bank Muck Top of Bank Bishop Road

Perennial
Small Orathage
Wormwater
Version 4.0
October 2018

Field Methods for Evaluating Primary Headwater Streams in Ohio Ohio EPA, Division of Surface Water

HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HHEI Score (sum of metrics 1+2+3) HIE Score (sum of metrics 1+2+3)	Primary Headwater Habitat Field Evaluation Form	0.0				
EINGTH OF STREAM REACH (II) 945 LAT 11-11-13 LONG -83 (GO R) RIVER MLE DATE 07-21-21 SCORER EAN LS COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL MODIFICATIONS: NONE/NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY 1. SUBSTRATE (Estimate percent of every type present) Check ONLY Iway predominant substrate TYPE boxes. HHEI	HHEI Score (sum of metrics 1+2+3)	44				
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score as unor boxes A & B PERCEIT TYPE BLDR SLABS [16 pts] BDRLDER (×256 mm) [16 pts] BERROCK [16 pts] CBERROCK [16 pts] CBERROCK [16 pts] CAY or HARDPAN [0 pt] MUCK [0 pts] SAID (<2 mm) [6 pts] SAID (<2 mm) [6 pts] SAID (<2 mm) [6 pts] Total of Percentages of Bith Slabs, Bouter, Coobbe, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth [Measure the maximum pool depthwithin the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid phanpe pools from road culver's or storm water poes) COMMENTS AVERAGE BANKFULL WIDTH (Measureds the average of 3-4 measurements) AVERAGE BANKFULL WIDTH (Measureds the average of 3-4 measurements) AVERAGE BANKFULL WIDTH (Meters) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L.) and Right (R) as boking downstreams. REABLAN WIDTH RECENT SUBSTRATE TYPES NOTE: This information must also be completed RIPARIAN ZONE AND THE WIDTH WIDTH (Most Predominant per Ban	LENGTH OF STREAM REACH (R) 945 LAT 41.415 2 LONG -83 (6689 RIVER MLE DATE 07-21-21 SCORER EBN, LS COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions					
Max = 30 So centimeters [20 pts] So ce	(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (+256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] GRAVEL (2-64 mm) [9 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B PERCENT TYPE PERCENT TYPE LEAF PACKWOODLY DEBRIS [3 pts] LEAF PACKWOODLY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] SO ARTIFICIAL [3 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:	Metric Points Substrate Max = 40				
3. BANK FULL WIDTH (Measuredas the average of 3-4 measurements) (Check ONLY one box): 3.0 m eters (> 13) [30 pts]	time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Max = 30				
RIPARIAN ZONE AND FLOODPLAIN QUALITY & NOTE: River Left (L) and Right (R) as looking downstreams RIPARIAN WIDTH	3. BANK FULL WIDTH (Measuredas theaverage of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤1.0 m (≤ 3' 3")[5 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7")[20 pts]	Width				
RIPARIAN WIDTH (Per Bank) REPARIAN WIDTH (Per Bank) RESIDENCY STREAM GRADIENT ESTIMATE FLOODPLAN QUALITY (Most Predominant per Bank) L R L R L R L R L R L R L R L						
Stream Flowing Moist Channel, isolated pools, no flow (intermittent) Dry channel, no water (ephemeral) COMMENTS Slow is moving very slow SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE	RPARIAN WIDTH L R (Per Bank) L R Wide > 10m Mature Forest, Wetland Moderate 5-10m Marrow < 5m None Residential, Park, New Field Comments Mining or Construction Mining or Construction Mining or Construction					

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) Distance from Evaluated Stream 2.0 miles D WITH Name: Jon Logary Creek CWH Name: ☐ EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER SHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: Bowling Green North NRCS Soil Map Page: ______ NRCS Soil Map Stream Order:_____ County: Wood Township/City Plain Township MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 07-20-21 Quantity: 40.1 Photo-documentation Notes: Elevated Turbidity?(Y/N): N Canopy (% open): 100 /-Were samples collected for water chemistry? (Y/N): Lab Sample # or ID (attach results): Field Measures:Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) 6.5 Conductivity (umhos/cm) N/A is the sampling reach representative of the stream (Y/N) If not, explain: Additional comments/description of pollution impacts: **BIOLOGICAL OBSERVATIONS** (Record all observations below) Fish Observed? (Y/N) _____ Species observed (if known);____ Frogs or Tadpoles Observed? (Y/N) Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known); Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed) Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location Clay / Muck Hillstope Soy Field FLOW day / Muck

Soy field

This foregoing document was electronically filed with the Public Utilities Commission of Ohio Docketing Information System on

9/26/2023 11:30:50 AM

in

Case No(s). 18-1335-EL-BTX, 23-0844-EL-BTA

Summary: Application Application to Amend the Certificate of Environmental Compatibility and Public Need Issued for the Wood County 138kV Reinforcement Project (Part IV of V) electronically filed by Mr. Lawrence B. Hughes on behalf of American Transmission Systems, Inc..