

WATERS DELINEATION REPORT

**MAM14_U1 PIPELINE AND WATERLINE
BELL AND WASHINGTON TOWNSHIPS,
WESTMORELAND COUNTY, PENNSYLVANIA**

Prepared For:

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CEC Project 332-793

December 2023



Civil & Environmental Consultants, Inc.

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1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) conducted a waters delineation of the MAM14 U1 Pipeline and Waterline project located in Bell and Washington Townships, Westmoreland County, Pennsylvania (Figure 1; all figures referenced in this report are in Appendix A). The proposed project includes construction of a new pipeline in an existing pipeline right-of-way. This report includes the findings of a desktop data review and field delineations of current site conditions. The purpose of these investigations was to identify, characterize, and delineate wetlands, streams, and other waters located within the Project's study area. This report presents the methodology and findings of the study.

2.0 METHODS

2.1 PRELIMINARY ENVIRONMENTAL DATA REVIEW

Prior to the field study, the following data sources were consulted to aid in the identification of potential wetlands, streams, and other waters within the study area:

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps;
- Google Earth Pro aerial imagery;
- U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) Database;
- Federal Emergency Management Agency (FEMA) 100-year floodplain data;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI); and
- National Hydrography Dataset (NHD) stream and other waters data.

These publicly available data sources aided in overall habitat characterizations and facilitated identification of potential water resources within the study area; areas of topographic depressions, mapped hydric soils, mapped NHD streams, NWI wetlands, and FEMA floodplains have higher potential to contain wetlands, streams, and other surface water features.

The data gathered were used to produce field mapping of the study area established for this project, and a field sampling plan was developed based on the desktop data review to adequately cover the study area and to intersect all land cover types and areas of interest, including areas identified to have higher potential for supporting surface water features.

2.2 WETLAND DELINEATION

During the field study, CEC ecologists identified, characterized, and delineated wetlands in accordance with the routine, on-site determination methodology described in the U.S. Army Corps of Engineers' (USACE) *Corps of Engineers Wetlands Delineation Manual* (Environmental

Laboratory 1987; referred to hereafter as Corps Manual), supplemented by the following technical guidance documents:

- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)* (USACE 2012); (referred to hereafter as Regional Supplement);
- *National Wetland Plant List* (USACE 2020); and
- *Field Indicators of Hydric Soils in the United States Version 8.2* (USDA-NRCS 2018).

CEC ecologists walked the study area and collected data at representative locations within each plant community cover type and areas of interest. Data collected at each sampling point were recorded on USACE Wetland Determination Data Forms. The sampling plan was modified as necessary if additional plant community cover types or areas of interest (e.g., localized depressions, converging slopes, evident hydrology, etc.) were encountered.

At each sampling point, the following parameters were assessed: vegetation, soils, and hydrology. First, visual estimates of percent absolute cover of plant species were recorded for each of the following strata, when present: tree, sapling/shrub, herb, and woody vine. A determination of whether the plant community was dominated by hydrophytic (wetland) plants was then made using the Rapid Test or Dominance Test indicators. Next, soils were sampled to a depth of 16 inches unless infeasible due to refusal, and the soil profile was evaluated to determine if it met hydric soil indicators. Lastly, indicators of wetland hydrology (e.g., surface water, high water table, saturation, etc.) were recorded, if present. If a parameter was determined to be significantly disturbed or naturally problematic, procedures described in the Corps Manual and Regional Supplement for atypical and problematic situations were applied.

The on-site sampling point data were used to determine whether that point was located in a wetland or non-wetland (i.e., upland). If a wetland was identified, further sampling was performed to delineate the wetland/non-wetland boundary. Each wetland was also classified according to the system developed by Cowardin et al. (1979). If more than one Cowardin classification type was identified within a wetland, the boundary between the types was delineated. Wetland boundaries

were physically marked in the field with flagging tape and located using mapping-grade handheld Global Navigational Satellite System (GNSS) receivers rated with sub-meter accuracy under optimal conditions.

Upland habitats were also recorded on USACE Wetland Determination Data Forms. Upland sampling points were documented adjacent to wetland delineation boundaries, as well as at representative upland habitats throughout the study area.

2.3 STREAM AND OTHER WATERS DELINEATION

Concurrent with wetland delineations, CEC ecologists assessed the site for streams and other waters such as ponds, ditches, seeps, springs, vernal pools, etc. These waters were identified by the presence of an ordinary high water mark (OHWM) in accordance with USACE Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification (USACE 2005). As described in RGL05-05, physical characteristics typically used to evaluate the presence of an OHWM include defined bed and banks, destruction of terrestrial vegetation, sediment sorting, a natural line impressed upon the bank, shelving, and leaf litter that is disturbed or washed away. In addition, all watercourses, which include streams, are defined in Pennsylvania as a channel or conveyance of surface water having defined bed and banks, whether natural or artificial (25 Pa. Code §105.1). The federal and state guidance were applied to determine the extents of streams.

All streams were further assessed into three classifications of flow: ephemeral, intermittent, or perennial. These classifications are defined (following state and federal guidance) as follows:

- **Ephemeral** –surface water flows or pools only in direct response to precipitation (e.g., rain or snow fall);
- **Intermittent** –surface water flows continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts); and

- **Perennial** – surface water flows continuously year-round during normal rainfall. Ground water provides the primary hydrology.

The uppermost limit of an ephemeral stream was established where the stream loses its defined bed and bank or OHWM. Stream boundaries were marked in the field with flagging tape and located using GNSS receivers rated with sub-meter accuracy. The physical characteristics of the streams and field observations were summarized on field data forms.

3.0 RESULTS

3.1 ENVIRONMENTAL DATA REVIEW

A review of the USGS 7.5-minute topographic quadrangles and NHD stream layer identified three streams within the study area (Figures 1 and 2). These streams include Beaver Run, Trib 42938 to Beaver Run, and Trib 42945 to Beaver Run. A review of the NWI data also identified the same named stream resources within the study area (Figure 2). The NWI classifies Beaver Run and Trib 42938 to Beaver Run as riverine wetlands (R3UBH) and Trib 42945 to Beaver Run as a palustrine forested wetland (PFO1A). No FEMA 100-year floodplains occur within the study area. A review of the SSURGO data identified 12 soil mapping units within the study area (Table 1 and Figure 2).

Table 1. SSURGO Soil Mapping Units within the Study Area

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Rating
BeD	Bethesda very channery silt loam, 8 to 25 percent slopes	Well drained	Hydric inclusions
BeF	Bethesda very channery silt loam, 25 to 75 percent slopes	Well drained	Not listed
ErB	Ernest silt loam, 3 to 8 percent slopes	Moderately well drained	Hydric inclusions
ErC	Ernest silt loam, 8 to 15 percent slopes	Moderately well drained	Hydric inclusions
GcB	Gilpin channery silt loam, 3 to 8 percent slopes	Well drained	Not listed
GcC	Gilpin channery silt loam, 8 to 15 percent slopes	Well drained	Not listed
GcD	Gilpin channery silt loam, 15 to 25 percent slopes	Well drained	Not listed
Lo	Lobdell silt loam, 0 to 3 percent slopes, occasionally flooded	Moderately well drained	Hydric inclusions

Table 1. SSURGO Soil Mapping Units within the Study Area (Continued)

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Rating
ShF	Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes	Well drained	Not listed
SxF	Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes, very stony	Well drained	Not listed
WrB	Wharton silt loam, 3 to 8 percent slopes	Moderately well drained	Hydric inclusions
WrC	Wharton silt loam, 8 to 15 percent slopes	Moderately well drained	Not listed

3.2 FIELD STUDY

CEC staff conducted a field reconnaissance on November 3, 2021; November 1, 2022; November 11, 2022; July 31, 2023; August 1, 2023; September 28, 2023; and September 29, 2023 to determine the presence of wetlands, streams, and other waters within the study area. Locations of sampling points, wetlands, and streams are provided in Figures 3A through 3D. Photographs of the study area are included in Appendix B, and Wetland Determination Data Forms and Stream Data Forms are provided in Appendices C and D, respectively; the data forms provide details of the delineated wetlands and streams. The following sections provide general descriptions of the field investigation findings.

3.2.1 Wetland Delineation

Seventeen wetlands were identified within the study area. Fourteen wetlands were classified as Palustrine Emergent (PEM), one wetland was classified as Palustrine Scrub Shrub (PSS), one wetland was classified as Palustrine Forested (PFO), and one wetland was classified as Palustrine Unconsolidated Bottom (PUB). Refer to Table 2 for a summary of the wetlands identified within the study area.

In addition, 14 sampling points documented upland habitats within the study area. These uplands included forests, fields, and disturbed areas.

Table 2. Delineated Wetlands

Wetland Identifier	Area (acres)	Cowardin Classification ¹	Sampling Point
Wetland 1	0.010	PEM	SP-1
Wetland 2	0.050	PEM	SP-3
Wetland 3	0.222	PFO	SP-4
Wetland 4 (4A, 4B, and 4C)	0.057 (0.014, 0.034, and 0.009)	PEM	SP-6
Wetland 5 (5A, 5B, 5C, and 5D)	0.095 (0.012, 0.024, 0.057, and 0.002)	PEM	SP-7
Wetland 6	0.006	PEM	SP-9
Wetland 7 (7A, 7B, 7C, 7D, 7E, 7F, and 7G)	0.222 (0.034, 0.093, 0.039, 0.026, 0.023, 0.006, and 0.001)	PEM	SP-11
Wetland 8	0.009	PSS	SP-13
Wetland 9	0.005	PEM	SP-15
Wetland 10	0.014	PEM	SP-16
Wetland 11	0.021	PEM	SP-18
Wetland 12 (12A and 12B)	0.017 (0.011 and 0.006)	PEM	SP-20
Wetland 13 (13A, 13B, and 13C)	0.127 (0.007, 0.009, and 0.111)	PEM	SP-22
Wetland 14	0.003	PUB	SP-24
Wetland 15	0.024	PEM	SP-26

Table 2. Delineated Wetlands (Continued)

Wetland Identifier	Area (acres)	Cowardin Classification ¹	Sampling Point
Wetland 16	0.001	PEM	SP-29
Wetland 17	0.024	PEM	SP-30
Total	0.907 (0.673 PEM/ 0.009 PSS/ 0.222 PFO/ 0.003 PUB)		

¹ As interpreted from *USFWS Classification of Wetlands and Deepwater Habitats of the United States*. (1979). Palustrine Emergent (PEM), Palustrine Scrub Shrub (PSS), Palustrine Forested (PFO), and Palustrine Unconsolidated Bottom (PUB).

3.2.2 Stream and Other Waters Delineation

Nine streams were identified within the study area. Four were classified as perennial, two were classified as intermittent, two were classified as ephemeral, and one was classified as perennial/intermittent. Refer to Table 3 for a summary of the streams identified within the study area. One undefined drainage feature was also identified during the on-site field review.

Table 3. Delineated Streams

Stream Name	Study Area Length (feet)	Stream Classification	PA Chapter 93 Designation ¹
Beaver Run	393	Perennial	TSF
UNT 1 to Beaver Run	575	Perennial/Intermittent	TSF
UNT 2 to Beaver Run	262	Perennial	TSF
UNT 3 to Beaver Run	321	Perennial	TSF
UNT 4 to Beaver Run	130	Intermittent	TSF
Trib 42938 to Beaver Run	319	Perennial	TSF
UNT 1 to Trib 42938 to Beaver Run	88	Ephemeral	TSF

Table 3. Delineated Streams (Continued)

Stream Name	Study Area Length (feet)	Stream Classification	PA Chapter 93 Designation¹
UNT 2 to Trib 42938 to Beaver Run	144	Ephemeral	TSF
Trib 42945 to Beaver Run	325	Intermittent	TSF
Total	2,557		

¹ From Title 25, PA Code Chapter 93. Trout Stocking (TSF) – Maintenance of stocked trout from February 15 to July 31 and maintenance and propagation of fish species and additional flora and fauna which are indigenous to warm water habitat.

4.0 REGULATORY CONSIDERATIONS

4.1 REGULATORY OVERVIEW

The USACE has authority to permit the discharge of dredged or fill material into “waters of the U.S.” under Section 404 of the federal Clean Water Act, and to permit work and the placement of structures in navigable waters under Sections 9 and 10 of the Rivers and Harbors Act of 1899. Wetlands, streams, and other waters that meet the guidelines contained in the Corps Manual, Regional Supplement, and Regulatory Guidance Letter No. 05-05 are subject to regulation by USACE as waters of the U.S. as defined by 33 CFR 328.3(a). Additionally, Section 401 of the Clean Water Act requires state agencies to evaluate whether discharges to these waters comply with state water quality standards. A Section 401 Water Quality Certification is required for activities that require federal permits or authorizations but is typically integrated into the USACE Section 404 permitting process.

The Pennsylvania Department of Environmental Protection (PADEP) has coinciding jurisdiction over “waters of the Commonwealth” as established by the Dam Safety and Encroachments Act (P.L. 1375, No. 325) and the Clean Streams Law (P.L. 1987, No. 3941). The PA Code of State Regulations, in Title 25, Chapter 105 Dam Safety and Waterway Management, defines “*Regulated waters of the Commonwealth*” as “*watercourses, streams or bodies of water and their floodways wholly or partly within or forming part of the boundary of this Commonwealth*”. Like the USACE, the PADEP generally considers channels to be potentially jurisdictional if they exhibit defined bed and banks, whether natural or artificial, with perennial or intermittent flow. The PADEP regulates encroachments, defined as “*any structure or activity which changes, expands or diminishes the course, current or cross section of a watercourse, floodway, or body of water*” through the Chapter 105 permit process. The floodway is defined as extending 50 feet from the top of bank of watercourses if not delineated by a Federal Emergency Management Agency (FEMA) study.

In Pennsylvania, the USACE has delegated authority to the PADEP to authorize minor qualifying activities through the state-wide Section 404 permit titled PA State Programmatic General Permit 6 (PASPGP-6), with concurrent review by USACE for certain categories of impacts. A Joint Permit

Application to PADEP and USACE is typically required for activities with more significant impacts that exceed the thresholds of PA Chapter 105 General Permits and PASPGP-6. In addition to encroachments, permits for discharges to waters, including from construction stormwater runoff or erosion, may be required by National Pollutant Discharge Elimination System (NPDES) and PA Chapter 102 regulations.

All waters within the study areas were delineated using guidelines set forth by the PADEP and USACE, which have final regulatory authority on the jurisdiction and extents of wetlands, streams, and other waters.

4.2 EXCEPTIONAL VALUE (EV) WATERS EVALUATION

The receiving water for the on-site streams is Beaver Run. The Pennsylvania Fish & Boat Commission designates the section of Beaver Run downstream of the Beaver Run Reservoir as a naturally reproducing trout stream; therefore, Beaver Run is considered a wild trout stream by the PADEP. Wetlands located in or along the floodplain of the reach of a wild trout stream or its tributaries are considered EV wetlands. However, Beaver Run and its tributaries are not designated as EV streams.

CEC performed an evaluation of the EV status of the delineated wetlands. The evaluation assessed the connectivity of the wetlands to downstream wild trout streams. The evaluation was based on field data collected by CEC and U.S. Geological Survey mapping. The evaluation results are provided in Table 4.

Table 4. Wetland Regulatory Status Evaluation

Wetland Name	Watershed	Surface Water or Groundwater Connection? ⁽¹⁾	Within 50-Foot Assumed Floodway?	Regulatory Status ⁽²⁾
Wetland 1	Beaver Run	No	No	Other
Wetland 2	Beaver Run	No	No	Other
Wetland 3	Beaver Run	No	No	Other
Wetland 4A	Beaver Run	No	No	Other
Wetland 4B	Beaver Run	No	No	Other
Wetland 5A	Beaver Run	Yes	Yes	EV
Wetland 5B	Beaver Run	No	Yes	EV
Wetland 5C	Beaver Run	Yes	Yes	EV
Wetland 5D	Beaver Run	No	Yes	EV
Wetland 6	Beaver Run	Yes	Yes	EV
Wetland 7A	Beaver Run	No	No	Other
Wetland 7B	Beaver Run	No	Yes	EV
Wetland 7C	Beaver Run	No	No	Other
Wetland 7D	Beaver Run	No	No	Other
Wetland 7E	Beaver Run	No	No	Other
Wetland 7F	Beaver Run	No	No	Other
Wetland 7G	Beaver Run	No	No	Other
Wetland 8	Beaver Run	Yes	Yes	EV
Wetland 9	Beaver Run	Yes	Yes	EV
Wetland 10	Beaver Run	No	No	Other
Wetland 11	Beaver Run	No	No	Other
Wetland 12A	Beaver Run	Yes	Yes	EV
Wetland 12B	Beaver Run	No	No	Other
Wetland 13A	Beaver Run	No	No	Other
Wetland 13B	Beaver Run	No	No	Other
Wetland 13C	Beaver Run	No	No	Other

Table 4. Wetland Regulatory Status Evaluation (Continued)

Wetland Name	Watershed	Surface Water or Groundwater Connection?⁽¹⁾	Within 50-Foot Assumed Floodway?	Regulatory Status⁽²⁾
Wetland 14	Beaver Run	No	No	Other
Wetland 15	Beaver Run	No	No	Other
Wetland 16	Beaver Run	No	No	Other
Wetland 17	Beaver Run	No	No	Other

5.0 CONCLUSIONS

CEC conducted a wetland, stream, and other waters delineation within the project study area on November 3, 2021; November 1, 2022; November 11, 2022; July 31, 2023; August 1, 2023; September 28, 2023; and September 29, 2023. CEC identified the following at the Site:

- 17 wetlands (Wetlands 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, and 17), totaling approximately 0.907 acre:
 - 14 PEM wetlands (Wetlands 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, and 17), totaling approximately 0.673 acre.
 - 1 PSS wetland (Wetland 8), totaling approximately 0.009 acre.
 - 1 PFO wetland (Wetland 3), totaling approximately 0.222 acre.
 - 1 PUB wetland (Wetland 14), totaling approximately 0.003 acre.
- 10 streams, totaling approximately 2,557 linear feet (LF):
 - 2 ephemeral streams (UNTs 1 and 2 to Trib 42938 to Beaver Run), totaling approximately 232 LF.
 - 2 intermittent streams (UNT 4 to Beaver Run and Trib 42945 to Beaver Run), totaling approximately 455 LF.
 - 4 perennial streams (UNTs 2 and 3 to Beaver Run, Trib 42938 to Beaver Run, and Beaver Run), totaling approximately 1,295 LF.
 - 1 perennial/intermittent stream (UNT 1 to Beaver Run), totaling approximately 575 LF.

6.0 LEVEL OF CARE

This wetland and stream delineation has been prepared based on the best available information, interpreted in the light of the investigator's training, experience, and professional judgement in conformance with the USACE Manual, the applicable regional supplement, other applicable agency guidelines, and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the site. The wetland boundaries described in this report may change subsequent to CEC's delineation based on changes in the regulatory criteria, seasonal variations in hydrology, alterations to drainage patterns, and other human activities and/or land disturbances.

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December 20, 2023

Date

Report Reviewed By:



Natalie L. Shearer, MS, QEP, PWS
Project Manager
Civil & Environmental Consultants, Inc.

December 20, 2023

Date

7.0 REFERENCES

- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Publication No. FWS/OBS-79/31, Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.
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- . 2005. "Ordinary High Water Mark Identification." *Regulatory Guidance Letter No. 05-05*. Washington, DC: U.S. Army Corps of Engineers.
- . 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0*. Edited by J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar and C. V. Noble. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
- USDA-NRCS. 2018. *Field Indicators of Hydric Soils in the United States, Version 8.2*. Edited by L. M. Vasilas, G. W. Hurt and J. F. Berkowitz. Washington, D.C.: USDA-NRCS, in cooperation with the National Technical Committee for Hydric Soils.

APPENDIX A

FIGURES




SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
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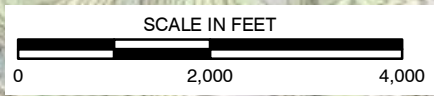


LEGEND

 DELINEATION BOUNDARY

REFERENCE

1. USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://goto.arcgisonline.com/maps/usa_topo_maps),
 ACCESSED 12/20/2023: VANDERGRIFT, PA QUAD.



P:\1330-000\1332-793\GIS\Maps\EC03 FIG 1 SITE LOC.mxd 12/19/2023 3:37 PM (kcolaizzi)



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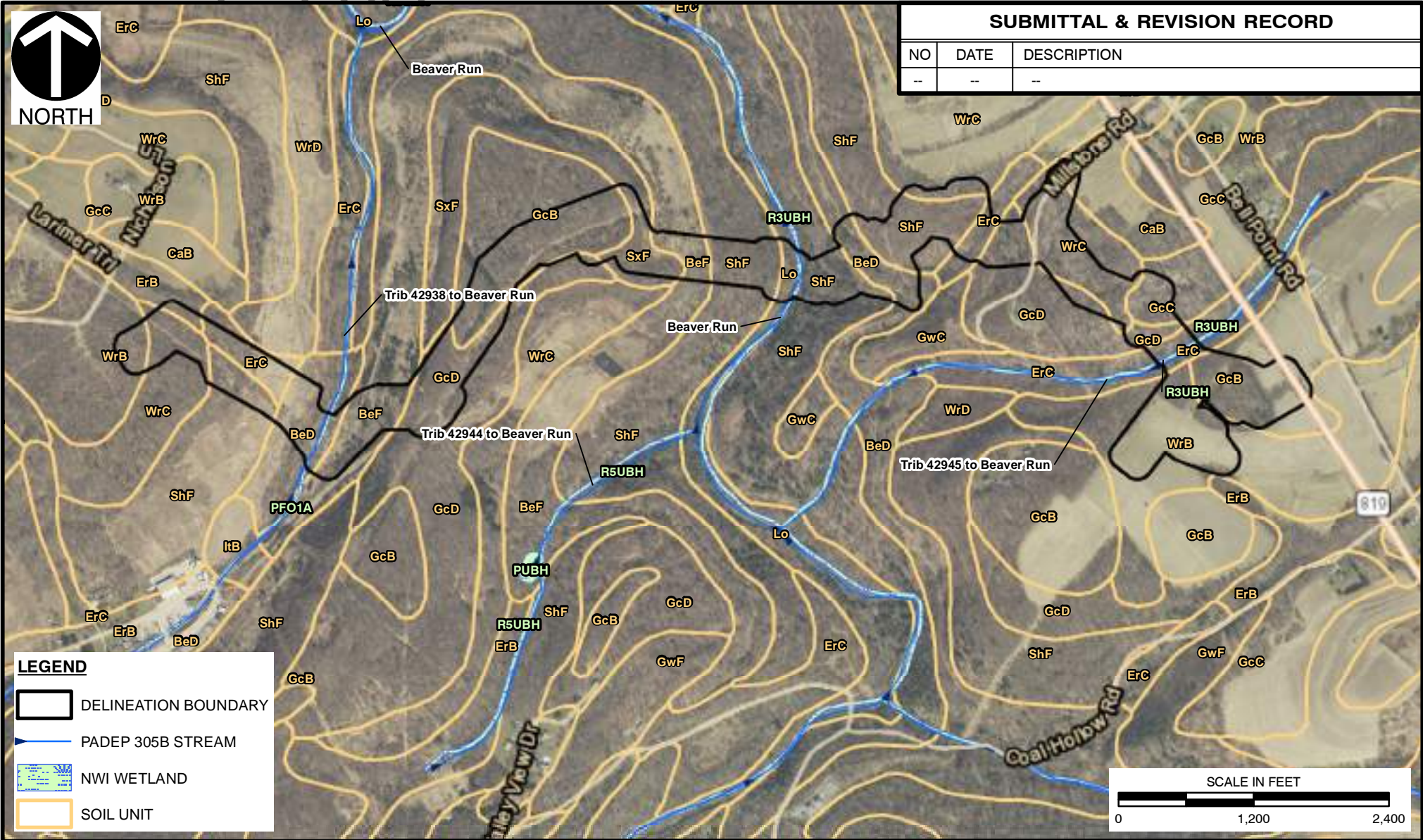
SITE LOCATION MAP

DRAWN BY:	JDM/KMC	CHECKED BY:	NLS	APPROVED BY:	PAK*	FIGURE NO:	1
DATE:	12/19/2023	SCALE:	1" = 2,000'	PROJECT NO:	332-793	* Hand signature on file	







SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
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LEGEND

-  DELINEATION BOUNDARY
-  PADEP 305B STREAM
-  NWI WETLAND
-  SOIL UNIT

REFERENCES

1. PA DEPARTMENT OF ENVIRONMENTAL PROTECTION 305B STREAM DATA, 2004.
2. U.S.D.A., N.R.C.S. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR WESTMORELAND COUNTY, PA, 2022.
3. U.S. FISH & WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY (NWI) MAP VANDERGRIFT AND SLICKVILLE, PA QUADS.
4. PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY (PEMA) IMAGERY WEB MAPPING SERVICE IMAGE DATE: 2018-2020, DOWNLOADED: 06/21/2023.



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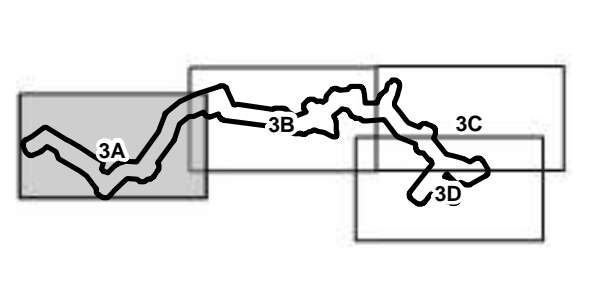
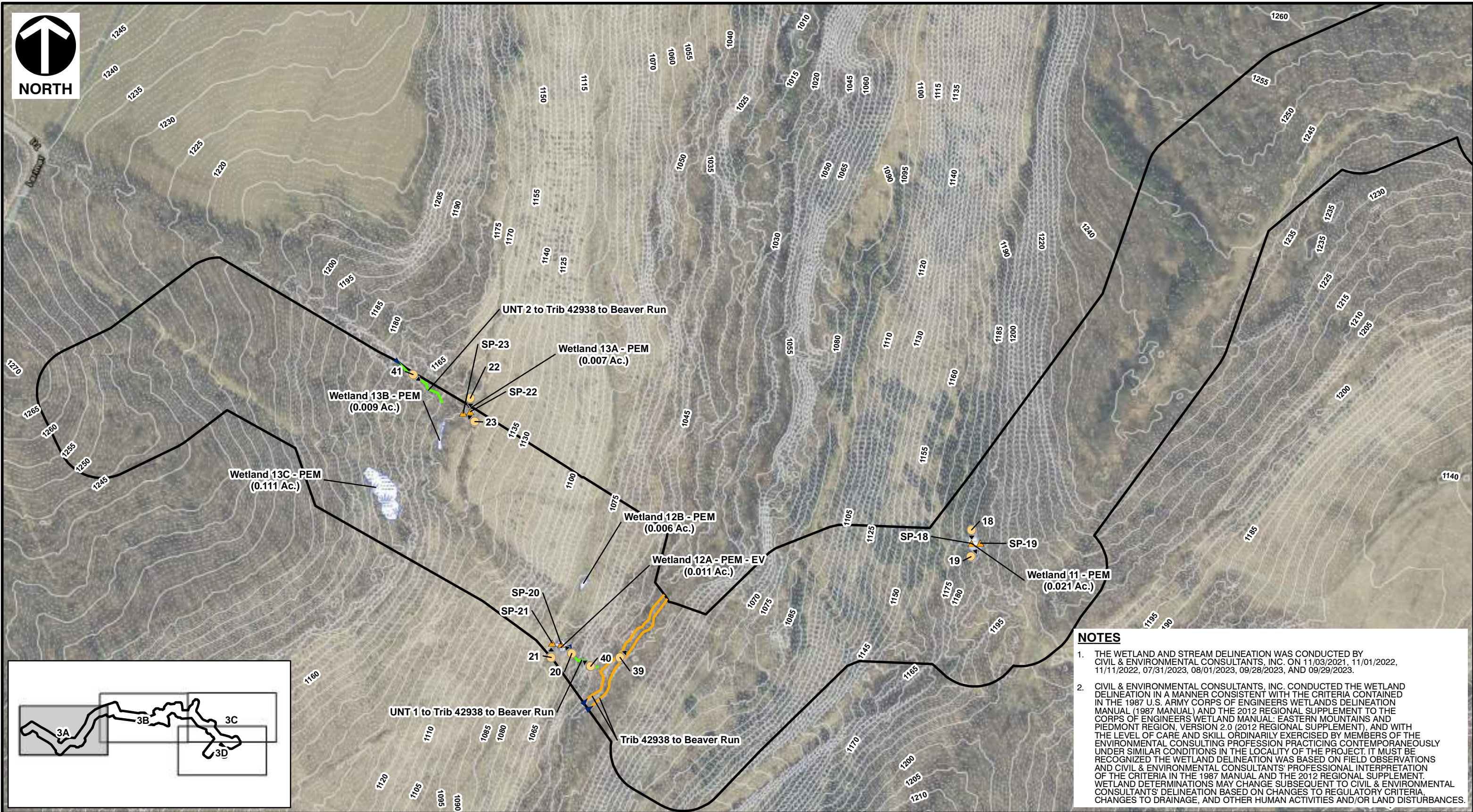
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 MAM14_U1 PIPELINE AND WATERLINE
 BELL AND WASHINGTON TOWNSHIPS,
 WESTMORELAND COUNTY, PENNSYLVANIA

DESKTOP ENVIRONMENTAL DATA MAP

DRAWN BY:	JDM/KMC	CHECKED BY:	NLS	APPROVED BY:	PAK*	FIGURE NO:	2
DATE:	12/19/2023	SCALE:	1" = 1,200'	PROJECT NO:	332-793		



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NOTES

1. THE WETLAND AND STREAM DELINEATION WAS CONDUCTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. ON 11/03/2021, 11/01/2022, 11/11/2022, 07/31/2023, 08/01/2023, 09/28/2023, AND 09/29/2023.
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LEGEND

PHOTO LOCATION & ORIENTATION	WETLAND - PEM
TEST SITE	WETLAND - PFO
EPHEMERAL STREAM	WETLAND - PSS
INTERMITTENT STREAM	WETLAND - PUB
PERENNIAL STREAM	DELINEATION BOUNDARY
UNDEFINED DRAINAGE FEATURE	INDEX CONTOUR
	INTERMEDIATE CONTOUR

REFERENCES

1. PA DEPARTMENT OF ENVIRONMENTAL PROTECTION 305B STREAM DATA, 2004.
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2020.
3. PEMA IMAGERY: 2018.

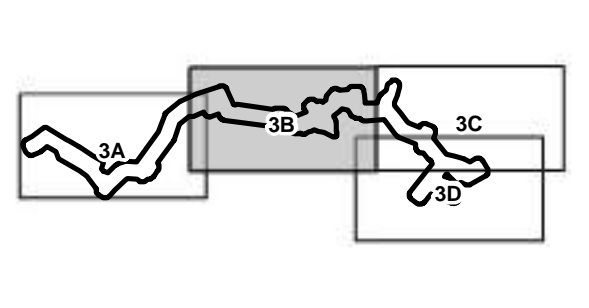
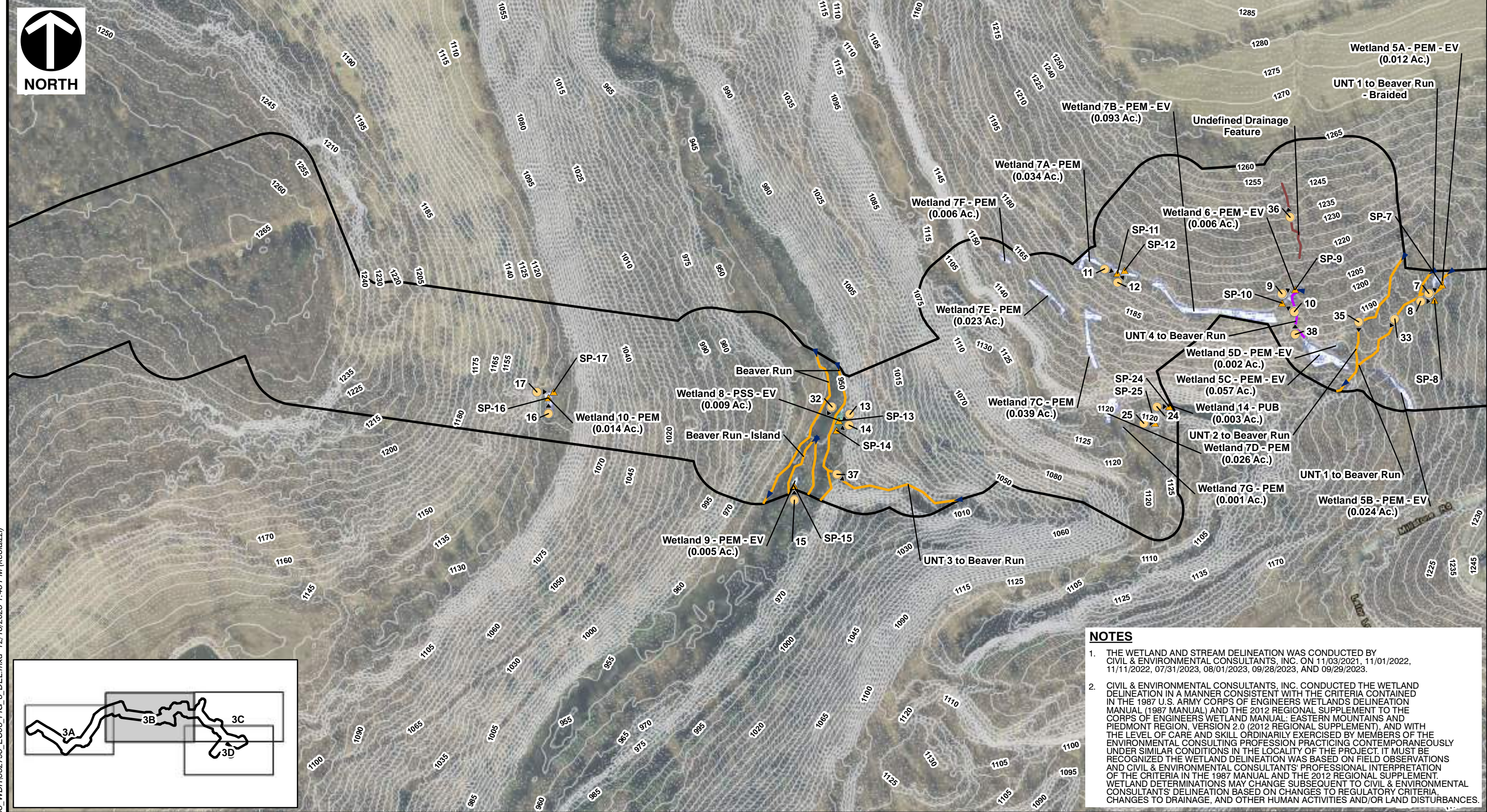
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CNX MIDSTREAM OPERATING COMPANY LLC
MAM14_U1 PIPELINE AND WATERLINE
BELL AND WASHINGTON TOWNSHIPS,
WESTMORELAND COUNTY, PENNSYLVANIA

DRAWN BY:	JDM/KMC	CHECKED BY:	NLS	APPROVED BY:	PAK*	FIGURE NO:	3A
DATE:	12/19/2023	SCALE:	1" = 200'	PROJECT NO:	332-793		

FIELD RESULTS MAP



NOTES

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PERENNIAL STREAM	DELINEATION BOUNDARY
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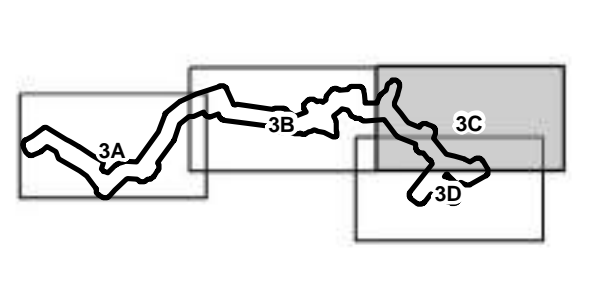
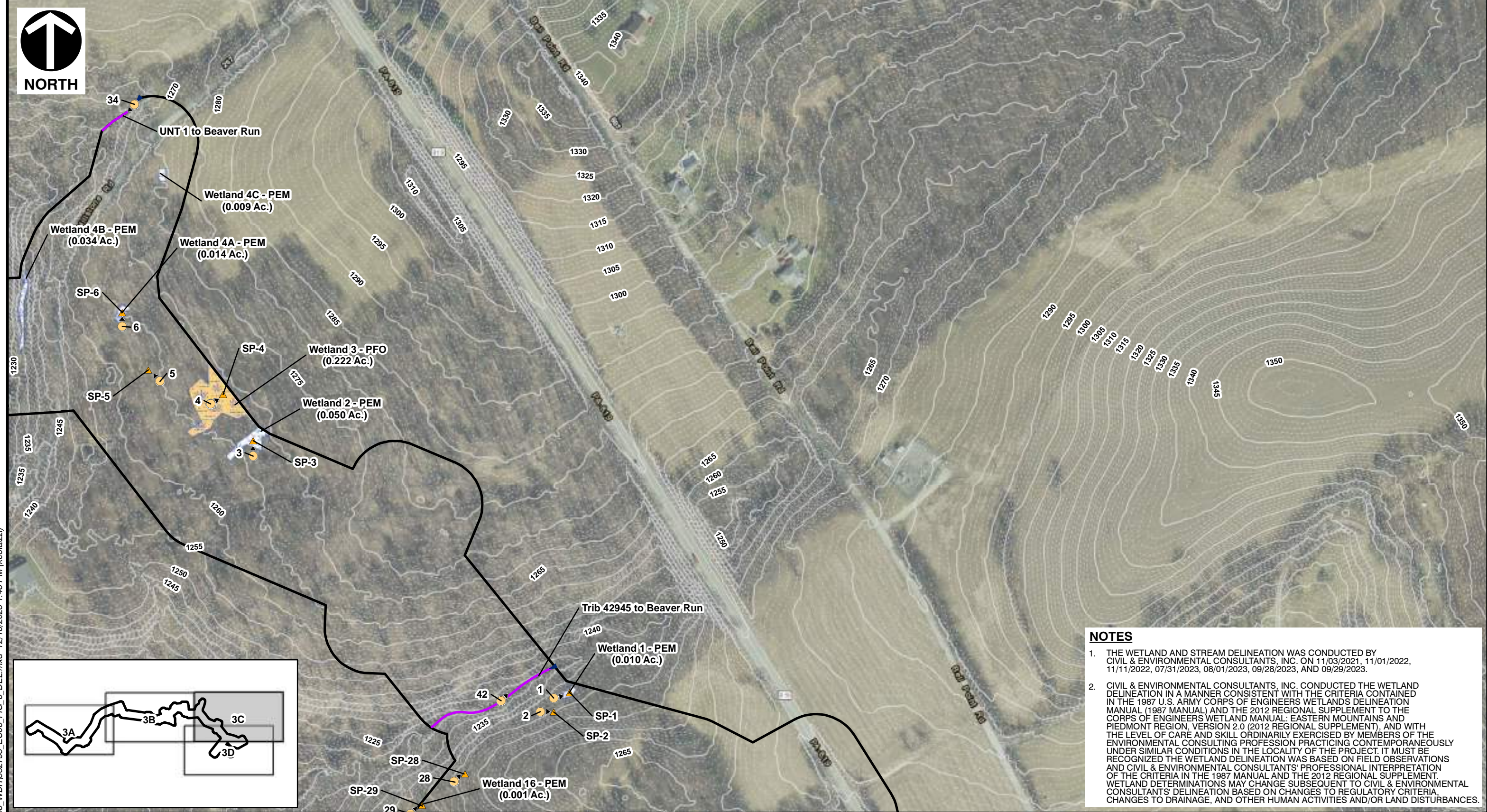
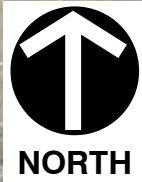
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DRAWN BY: JDM/KMC	CHECKED BY: NLS	APPROVED BY: PAK*	FIGURE NO: 3B
DATE: 12/19/2023	SCALE: 1" = 200'	PROJECT NO: 332-793	

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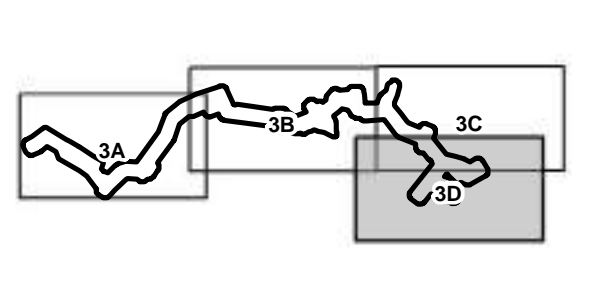
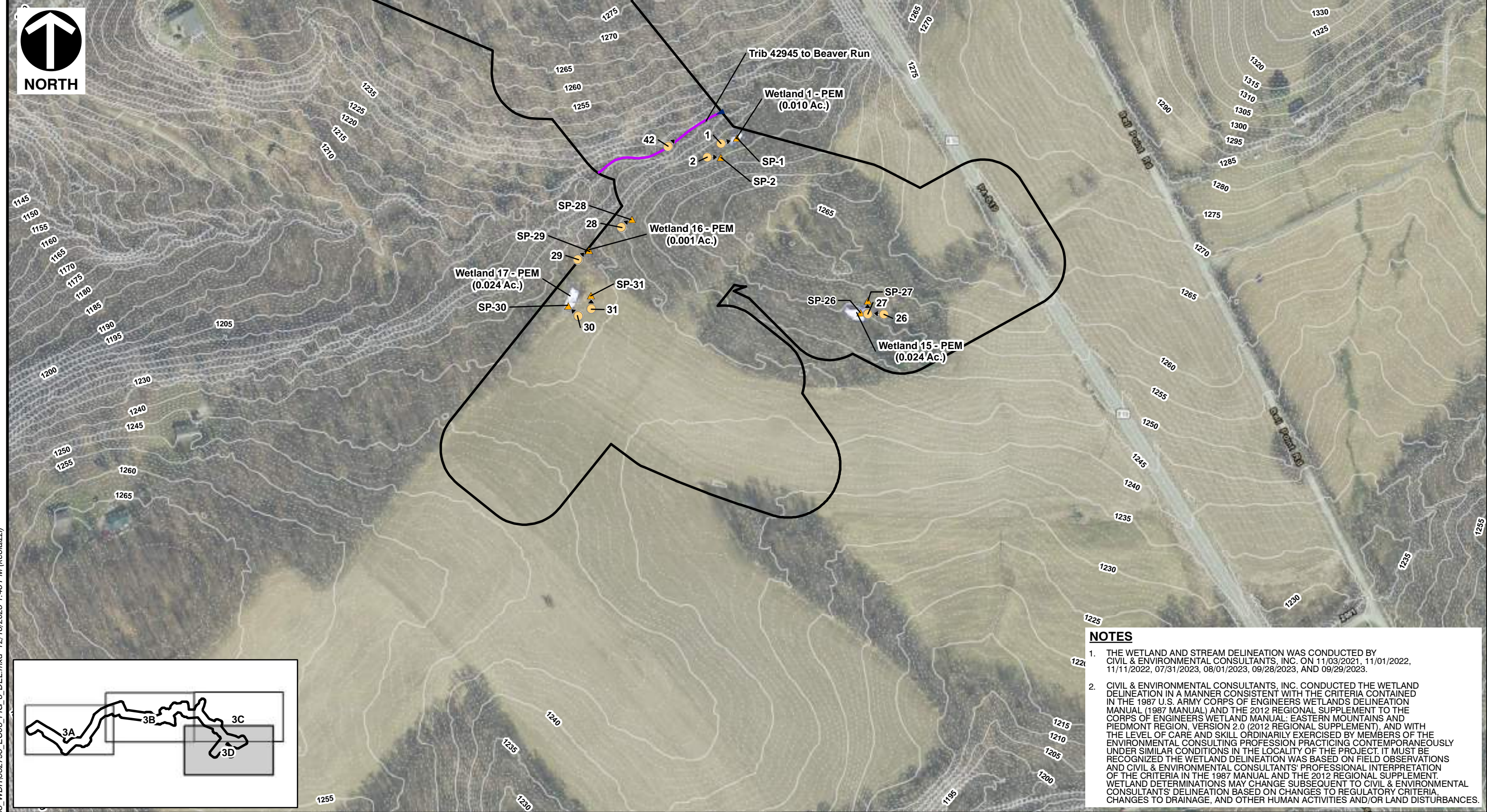
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 BELL AND WASHINGTON TOWNSHIPS,
 WESTMORELAND COUNTY, PENNSYLVANIA**

DRAWN BY: JDM/KMC	CHECKED BY: NLS	APPROVED BY: PAK*	FIGURE NO: 3C
DATE: 12/19/2023	SCALE: 1" = 200'	PROJECT NO: 332-793	

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APPENDIX B
PHOTOGRAPHS

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 1: Sampling Point 1, Wetland 1.
Facing northeast - July 31, 2023



Photo 2: Sampling Point 2, non-wetland.
Facing east - July 31, 2023



Photo 3: Sampling Point 3, Wetland 2.
Facing north - July 31, 2023



Photo 4: Sampling Point 4, Wetland 3.
Facing northeast - July 31, 2023



Photo 5: Sampling Point 5, non-wetland.
Facing northwest - July 31, 2023



Photo 6: Sampling Point 6, Wetland 4.
Facing north - July 31, 2023

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 7: Sampling Point 7, Wetland 5.
Facing northeast - July 31, 2023



Photo 8: Sampling Point 8, non-wetland.
Facing east - July 31, 2023



Photo 9: Sampling Point 9, Wetland 6.
Facing northeast - July 31, 2023



Photo 10: Sampling Point 10, non-wetland.
Facing northwest - July 31, 2023



Photo 11: Sampling Point 11, Wetland 7.
Facing southeast - July 31, 2023



Photo 12: Sampling Point 12, non-wetland.
Facing northeast - July 31, 2023

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 13: Sampling Point 13, Wetland 8.
Facing southwest - August 1, 2023



Photo 14: Sampling Point 14, non-wetland.
Facing southwest - August 1, 2023



Photo 15: Sampling Point 15, Wetland 9.
Facing north - August 1, 2023



Photo 16: Sampling Point 16, Wetland 10.
Facing north - August 1, 2023



Photo 17: Sampling Point 17, non-wetland.
Facing east - August 1, 2023



Photo 18: Sampling Point 18, Wetland 11.
Facing south - August 1, 2023

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 19: Sampling Point 19, non-wetland.
Facing northeast - August 1, 2023



Photo 20: Sampling Point 20, Wetland 12.
Facing northwest - August 1, 2023



Photo 21: Sampling Point 21, non-wetland.
Facing north - August 1, 2023



Photo 22: Sampling Point 22, Wetland 13.
Facing south - August 1, 2023



Photo 23: Sampling Point 23, non-wetland.
Facing northwest - August 1, 2023



Photo 24: Sampling Point 24, Wetland 14.
Facing east - September 28, 2023

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 25: Sampling Point 25, non-wetland.
Facing east - September 28, 2023



Photo 26: Sampling Point 26, Wetland 15.
Facing west - September 28, 2023



Photo 27: Sampling Point 27, non-wetland.
Facing north - September 29, 2023



Photo 28: Sampling Point 28, non-wetland.
Facing northeast - November 1, 2022



Photo 29: Sampling Point 29, Wetland 16.
Facing northeast - November 1, 2022



Photo 30: Sampling Point 30, Wetland 17.
Facing northwest - November 11, 2022

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 31: Sampling Point 31, non-wetland.
Facing northeast - November 11, 2022



Photo 32: Beaver Run.
Facing downstream - August 1, 2023



Photo 33: UNT 1 to Beaver Run (Perennial portion).
Facing downstream - July 31, 2023



Photo 34: UNT 1 to Beaver Run (Intermittent portion).
Facing upstream - September 28, 2023



Photo 35: UNT 2 to Beaver Run.
Facing downstream - July 31, 2023



Photo 36: Undefined drainage feature.
Facing upslope - July 31, 2023

PHOTOGRAPHS
MAM14_U1 PIPELINE AND WATERLINE
CNX MIDSTREAM OPERATING COMPANY LLC



Photo 37: UNT 3 to Beaver Run.
Facing upstream - August 1, 2023



Photo 38: UNT 4 to Beaver Run.
Facing upstream - July 31, 2023



Photo 39: Trib 42938 to Beaver Run.
Facing downstream - August 1, 2023



Photo 40: UNT 1 to Trib 42938 to Beaver Run.
Facing upstream - August 1, 2023



Photo 41: UNT 2 to Trib 42938 to Beaver Run.
Facing downstream - August 1, 2023



Photo 42: Trib 42945 to Beaver Run.
Facing upstream - November 3, 2021

APPENDIX C

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-1
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536775 Long: -79.546238 Datum: NAD83
 Soil Map Unit Name: Ernest silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 1 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located within a depresional wetland located adjacent to an existing pipeline ROW.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No _____
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____		
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____		
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-1

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Scirpus cyperinus</i>	20	Y	FACW
2. <i>Impatiens</i> sp.	10	N	FACW
3. <i>Solidago rugosa</i>	5	N	FAC
4. <i>Symphotrichum lateriflorum</i>	10	N	FACW
5. <i>Rubus allegheniensis</i>	5	N	FACU
6. <i>Microstegium vimineum</i>	20	Y	FAC
7. <i>Juncus tenuis</i>	10	N	FAC
8. <i>Parathelypteris noveboracensis</i>	15	Y	FAC
9. <i>Juncus effusus</i>	5	N	FACW
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-2
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536656 Long: -79.546362 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 3 to 8 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> <u>Upland</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Sampling point is located on an existing pipeline ROW, adjacent to Wetland 1		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Microtopographic Relief (D4)	
<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-2

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Liriodendron tulipifera</i>	10	Y	FACU
2. <i>Carya cordiformis</i>	15	Y	FACU
3. <i>Acer saccharum</i>	20	Y	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	45	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Rubus allegheniensis</i>	10	Y	FACU
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	10	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Rubus allegheniensis</i>	30	Y	FACU
2. <i>Rosa multiflora</i>	10	N	FACU
3. <i>Lolium perenne</i>	20	Y	FACU
4. <i>Parathelypteris noveboracensis</i>	25	Y	FAC
5. <i>Oxalis stricta</i>	15	N	FACU
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	100	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-3
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538255 Long: -79.548781 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 2 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located within a depresional wetland located in a clearing in a shrubland/forest.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-3

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Boehmeria cylindrica</i>	30	Y	FACW
2. <i>Microstegium vimineum</i>	35	Y	FAC
3. <i>Persicaria sagittata</i>	20	Y	OBL
4. <i>Teucrium canadense</i>	10	N	FACW
5. <i>Scirpus atrovirens</i>	5	N	OBL
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- _____ 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - _____ 3 - Prevalence Index is ≤3.0¹
 - _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - _____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-4
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Flat plain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538530 Long: -79.549026 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 3 - PFO</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located within a depression in a forest, adjacent to an existing pipeline ROW.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-4

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Acer rubrum</i></u>	60	Y	FAC
2. <u><i>Liriodendron tulipifera</i></u>	10	N	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	70	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Lindera benzoin</i></u>	20	Y	FAC
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	20	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Onoclea sensibilis</i></u>	20	Y	FACW
2. <u><i>Persicaria sagittata</i></u>	30	Y	OBL
3. <u><i>Microstegium vimineum</i></u>	30	Y	FAC
4. <u><i>Mimulus ringens</i></u>	5	N	OBL
5. <u><i>Impatiens</i> sp.</u>	15	N	FACW
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	100	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0	= Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	<u>5</u>	x 1 =	<u>5</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>5</u> (A)		<u>5</u> (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-5
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Flat plain Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538668 Long: -79.549619 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Sampling point is located in a forested flat plain, adjacent to Wetland 2, 3, and 4		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Microtopographic Relief (D4)	
<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-5

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juglans nigra</u>	10	Y	FACU
2. <u>Carya cordiformis</u>	30	Y	FACU
3. <u>Acer rubrum</u>	20	Y	FAC
4. _____			
5. _____			
6. _____			
7. _____			
	60	= Total Cover	

Sapling Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Shrub Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lindera benzoin</u>	20	Y	FAC
2. <u>Rosa multiflora</u>	30	Y	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	50	= Total Cover	

Herb Stratum: (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Microstegium vimineum</u>	50	Y	FAC
2. <u>Rosa multiflora</u>	20	Y	FACU
3. <u>Persicaria virginiana</u>	10	N	FAC
4. <u>Teucrium canadense</u>	5	N	FACW
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	85	= Total Cover	

Woody Vine Stratum: (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	
Prevalence Index = B/A = _____	

- Hydrophytic Vegetation Indicators:**
- ____ 1 - Rapid Test for Hydrophytic Vegetation
 - ____ 2 - Dominance Test is >50%
 - ____ 3 - Prevalence Index is ≤3.0¹
 - ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-6
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539011 Long: -79.549836 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 4 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located within a depresional wetland located on an old road in a forest. Wetland is comprised of two parts; 4A and 4B.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____		
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-6

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Scirpus cyperinus</i>	15	Y	FACW
2. <i>Microstegium vimineum</i>	40	Y	FAC
3. <i>Juncus effusus</i>	5	N	FACW
4. <i>Persicaria sagittata</i>	10	N	OBL
5. <i>Impatiens</i> sp.	5	N	FACW
6. <i>Persicaria virginiana</i>	10	N	FAC
7. <i>Persicaria maculosa</i>	15	Y	FACW
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-7
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539103 Long: -79.551105 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 15 to 25 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 5 - PEM</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks:			
Sampling point is located within a depressional wetland located along a perennial stream. Wetland is comprised of four parts; 5A, 5B, 5C and 5D.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-7

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Impatiens</i> sp.	30	Y	FACW
2. <i>Microstegium vimineum</i>	25	Y	FAC
3. <i>Leersia oryzoides</i>	20	Y	OBL
4. <i>Persicaria sagittata</i>	15	N	OBL
5. <i>Parathelypteris noveboracensis</i>	10	N	FAC
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-8
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539008 Long: -79.551163 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 15 to 25 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Sampling point is located on a forested hillslope adjacent to Wetland 5.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-8

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Tsuga canadensis</i></u>	20	Y	FACU
2. <u><i>Quercus alba</i></u>	10	N	FACU
3. <u><i>Acer platanoides</i></u>	30	Y	UPL
4. <u><i>Acer saccharum</i></u>	20	Y	FACU
5. _____			
6. _____			
7. _____			
	80	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Lindera benzoin</i></u>	20	Y	FAC
2. <u><i>Rosa multiflora</i></u>	25	Y	FACU
3. <u><i>Rubus allegheniensis</i></u>	10	N	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	55	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Microstegium vimineum</i></u>	40	Y	FAC
2. <u><i>Rosa multiflora</i></u>	10	N	FACU
3. <u><i>Persicaria virginiana</i></u>	5	N	FAC
4. <u><i>Polystichum acrostichoides</i></u>	10	N	FACU
5. <u><i>Alliaria petiolata</i></u>	5	N	FACU
6. <u><i>Impatiens</i> sp.</u>	10	N	FACW
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	80	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Vitis vulpina</i></u>	15	Y	FAC
2. _____			
3. _____			
4. _____			
5. _____			
	15	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- ____ 1 - Rapid Test for Hydrophytic Vegetation
 - ____ 2 - Dominance Test is >50%
 - ____ 3 - Prevalence Index is ≤3.0¹
 - ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-9
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539057 Long: -79.552265 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 6 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located in a seep-fed wetland on the floodplain of stream 2, on the hillslope of a shrub/forested land.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>10</u>	
Saturation Present? Yes <u>X</u> No _____ (includes capillary fringe)	Depth (inches): <u>9</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-9

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Sapling Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Shrub Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Herb Stratum: (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Impatiens</i> sp.	5	N	FACW
2. <i>Microstegium vimineum</i>	20	Y	FAC
3. <i>Leersia oryzoides</i>	20	Y	OBL
4. <i>Glyceria striata</i>	20	Y	OBL
5. <i>Persicaria virginiana</i>	5	N	FAC
6. <i>Juncus effusus</i>	10	N	FACW
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u>	= Total Cover	

Woody Vine Stratum: (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Some bare ground, due to year-round inundation.

SOIL

Sampling Point: SP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	95	10YR 6/6	5	C	PL	Clay Loam	
6-14	10YR 5/1	95	10YR 6/6	5	C	PL	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)		Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <u> X </u> No ____
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-10
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538972 Long: -79.552367 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> <u>Upland</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Sampling point is located on a forested hillslope adjacent to Wetland 6.		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Microtopographic Relief (D4)	
<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-10

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Liriodendron tulipifera</u>	40	Y	FACU
2. <u>Prunus serotina</u>	30	Y	FACU
3. <u>Fagus grandifolia</u>	10	N	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	80	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>Lindera benzoin</u>	15	Y	FAC
2. <u>Rosa multiflora</u>	20	Y	FACU
3. <u>Ailanthus altissima</u>	10	Y	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	45	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Microstegium vimineum</u>	20	Y	FAC
2. <u>Rosa multiflora</u>	10	N	FACU
3. <u>Toxicodendron radicans</u>	5	N	FAC
4. <u>Polystichum acrostichoides</u>	15	Y	FACU
5. <u>Danthonia spicata</u>	20	Y	UPL
6. <u>Galium aparine</u>	5	N	FACU
7. <u>Parthenocissus quinquefolia</u>	10	N	FACU
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	85	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. <u>Vitis vulpina</u>	15	Y	FAC
2. _____			
3. _____			
4. _____			
5. _____			
	15	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 8 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by:
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
 _____ 1 - Rapid Test for Hydrophytic Vegetation
 _____ 2 - Dominance Test is >50%
 _____ 3 - Prevalence Index is ≤3.0¹
 _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:
Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-11
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539132 Long: -79.553674 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 7 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located in a wetland on an old logging road in a forested hillslope. Wetland is comprised of multiple parts; 7A, 7B, 7C, 7D, 7E, and 7F.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-11

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Scirpus atrovirens</i>	25	Y	OBL
2. <i>Glyceria striata</i>	10	N	OBL
3. <i>Leersia oryzoides</i>	10	N	OBL
4. <i>Microstegium vimineum</i>	5	N	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>50</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

Herbaceous layer is sparse due to year-round inundation.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: July 31, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-12
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.539151 Long: -79.553616 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> <u>Upland</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Sampling point is located on a forested hillslope adjacent to Wetland 7.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <u>X</u>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-12

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Liriodendron tulipifera</i>	30	Y	FACU
2. <i>Prunus serotina</i>	10	N	FACU
3. <i>Fagus grandifolia</i>	20	Y	FACU
4. <i>Quercus alba</i>	20	Y	FACU
5. <i>Acer rubrum</i>	10	N	FAC
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	90	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	0	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lindera benzoin</i>	15	Y	FAC
2. <i>Rosa multiflora</i>	10	Y	FACU
3. <i>Smilax rotundifolia</i>	20	Y	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	45	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Rubus allegheniensis</i>	5	N	FACU
2. <i>Amphicarpaea bracteata</i>	10	Y	FAC
3. <i>Rosa multiflora</i>	10	Y	FACU
4. <i>Agrimonia parviflora</i>	15	Y	FACW
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	40	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- _____ 1 - Rapid Test for Hydrophytic Vegetation
 - _____ 2 - Dominance Test is >50%
 - _____ 3 - Prevalence Index is ≤3.0¹
 - _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - _____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					Silt loam	
2-6	10YR 5/3	100					Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: <u> </u> Rock</p> <p>Depth (inches): <u> </u> 6</p>	<p>Hydric Soil Present? Yes <u> </u> No <u> X </u></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-13
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538209 Long: -79.555849 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 8 - PSS</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Sampling point is located in a shrubby wetland located on the floodplain of a large perennial stream.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>0-0.25</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>10</u>	
Saturation Present? Yes <u>X</u> No _____ (includes capillary fringe)	Depth (inches): <u>3</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-13

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>Ulmus americana</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lindera benzoin</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>70</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Glyceria striata</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
2. <u>Microstegium vimineum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>30</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- _____ 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - _____ 3 - Prevalence Index is ≤3.0¹
 - _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - _____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Herbaceous layer is sparse due to year round inundation.

SOIL

Sampling Point: SP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5N/1	100					Sandy loam	
6-16	10YR 3/2	85	7.5YR 15	15	C	PL/M	Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> (MLRA 147, 148)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> (MLRA 136, 147)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)	
<input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-14
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538152 Long: -79.555866 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Sampling point is located in a shrubby upland located on the floodplain of a large perennial stream, adjacent to Wetlands 8 and 9.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-14

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	10	N	FACU
2. <u>Tsuga canadensis</u>	30	Y	FACU
3. <u>Ulmus americana</u>	20	Y	FACW
4. <u>Fagus grandifolia</u>	30	Y	FACU
5. _____			
6. _____			
7. _____			
	<u>90</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>Ulmus americana</u>	30	Y	FACW
2. <u>Quercus alba</u>	20	Y	FACU
3. <u>Rosa multiflora</u>	20	Y	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	<u>70</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Rosa multiflora</u>	10	N	FACU
2. <u>Reynoutria japonica</u>	30	Y	FACU
3. <u>Mocrostegium vimineum</u>	10	N	FAC
4. <u>Rubus allegheniensis</u>	5	N	FACU
5. <u>Onoclea sensibilis</u>	5	N	FACW
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>60</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- ____ 1 - Rapid Test for Hydrophytic Vegetation
 - ____ 2 - Dominance Test is >50%
 - ____ 3 - Prevalence Index is ≤3.0¹
 - ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-15
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.537810 Long: -79.556194 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 9 - PEM</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks:			
Sampling point is located in a wetland on a vegetated island in the center of a large perennial stream.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-15

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Scirpus atrovirens</i>	30	Y	OBL
2. <i>Microstegium vimineum</i>	10	N	FAC
3. <i>Amphicarpaea bracteata</i>	20	Y	FAC
4. <i>Galium aparine</i>	5	N	FACU
5. <i>Leersia oryzoides</i>	10	N	OBL
6. <i>Viola sororia</i>	5	N	FAC
7. <i>Symphotrichum lateriflorum</i>	10	N	FACW
8. <i>Carex</i> sp.	10	N	-
9. _____			
10. _____			
11. _____			
12. _____			
	<u>100</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/1	80	7.5YR 5/6	20	C	PL/M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input checked="" type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-16
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538312 Long: -79.558147 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 10 - PEM</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks:			
Sampling point is located within a depressional wetland on an old logging road, surrounded by forested hillslopes.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>0-2</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-16

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Boehmeria cylindrica</i>	10	N	FACW
2. <i>Microstegium vimineum</i>	20	Y	FAC
3. <i>Rumex crispus</i>	5	N	FAC
4. <i>Scirpus atrovirens</i>	5	N	OBL
5. <i>Persicaria maculosa</i>	20	Y	FACW
6. <i>Pilea pumila</i>	10	N	FACW
7. <i>Leersia oryzoides</i>	10	N	OBL
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	75	7.5YR 4/6	25	C	PL/M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u> </u> Rock Depth (inches): <u> </u> 6	Hydric Soil Present? Yes <u> X </u> No <u> </u>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-17
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538348 Long: -79.558107 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Sampling point is located on a shrubby hillslope, adjacent to Wetland 10.		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Microtopographic Relief (D4)	
<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-17

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Lindera benzoin</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>35</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Reynoutria japonica</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Rosa multiflora</u>	<u>15</u>	<u>N</u>	<u>FACU</u>
3. <u>Danthonia spicata</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>
4. <u>Toxicodendron radicans</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
5. <u>Microstegium vimineum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>85</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- ____ 1 - Rapid Test for Hydrophytic Vegetation
 - ____ 2 - Dominance Test is >50%
 - ____ 3 - Prevalence Index is ≤3.0¹
 - ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-18
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536079 Long: -79.565260 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 15 to 25 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 11 - PEM</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks:			
Sampling point is located within a depressional wetland on an old logging road, surrounded by forested hillslopes.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>0-3</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-18

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Leersia oryzoides</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>
2. <u>Microstegium vimineum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Carex vulpinoidea</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
4. <u>Juncus tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
6. <u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
7. <u>Solidago gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 5/1	70	10YR 5/6	30	C	PL/M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: <u> </u> Rock</p> <p>Depth (inches): <u> </u> 6</p>	<p>Hydric Soil Present? Yes <u> X </u> No <u> </u></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-19
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536080 Long: -79.565191 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 15 to 25 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> <u>Upland</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Sampling point is located on a forested hillslope adjacent to Wetland 11.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-19

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	20	Y	FACU
2. <u>Quercus alba</u>	10	N	FACU
3. <u>Acer platanoides</u>	10	N	UPL
4. <u>Acer rubrum</u>	15	Y	FAC
5. <u>Acer saccharum</u>	15	Y	FACU
6. <u>Fagus grandifolia</u>	10	N	FACU
7. _____			
	<u>80</u>	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus alba</u>	10	Y	FACU
2. <u>Fagus grandifolia</u>	15	Y	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>25</u>	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Parthenocissus quinquefolia</u>	5	N	FACU
2. <u>Microstegium vimineum</u>	10	Y	FAC
3. <u>Dennstaedtia punctilobula</u>	15	Y	FACU
4. <u>Rubus allegheniensis</u>	5	N	FACU
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>35</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A) _____ (B)	

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- _____ 1 - Rapid Test for Hydrophytic Vegetation
 - _____ 2 - Dominance Test is >50%
 - _____ 3 - Prevalence Index is ≤3.0¹
 - _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - _____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Herbaceous layer is sparse due to thick leaf litter and canopy cover.

SOIL

Sampling Point: SP-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 4/3	100					Silt loam	
1-10	7.5YR 6/6	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147,148)**
- Thin Dark Surface (S9) **(MLRA147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148)**
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-20
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.535416 Long: -79.568504 Datum: NAD83
 Soil Map Unit Name: Bethesda very channery silt loam, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area Yes <input checked="" type="checkbox"/> No _____ within a Wetland? <u>Wetland 12 - PEM</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks: Sampling point is located within a depressional wetland on the hillslope of a meadow, adjacent to an existing farm road. Wetland is comprised of two parts; 12A and 12B.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-20

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Sapling Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Shrub Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Herb Stratum: (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Persicaria sagittata</i>	25	Y	OBL
2. <i>Scirpus cyperinus</i>	15	Y	FACW
3. <i>Persicaria maculosa</i>	15	Y	FACW
4. <i>Solidago gigantea</i>	10	N	FACW
5. <i>Microstegium vimineum</i>	10	N	FAC
6. <i>Agrostis gigantea</i>	15	Y	FACW
7. <i>Carex frankii</i>	10	N	OBL
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	

Woody Vine Stratum: (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	90	10YR 5/8	10	C	PL/M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: <u> </u> Rock</p> <p>Depth (inches): <u> </u> 12</p>	<p>Hydric Soil Present? Yes <u> X </u> No <u> </u></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-21
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.535422 Long: -79.568578 Datum: NAD83
 Soil Map Unit Name: Bethesda very channery silt loam, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Sampling point is located on the hillslope of a meadow, adjacent to Wetland 12 and an existing farm road.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-21

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>20</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Lotus tenuis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Daucus carota</u>	<u>15</u>	<u>N</u>	<u>UPL</u>
3. <u>Erigeron annuus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6. <u>Dactylis glomerata</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
7. <u>Clinopodium vulgare</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-22
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536815 Long: -79.569266 Datum: NAD83
 Soil Map Unit Name: Ernest silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Hydric Soil Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 13 - PEM</u>
Wetland Hydrology Present? Yes <u>X</u> No _____				
Remarks: Sampling point is located within a seep-fed wetland on the hillslope of a meadow. Wetland is comprised of 3 parts; 13A, 13B and 13C.				

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-22

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Scirpus cyperinus</i>	10	N	FACW
2. <i>Solidago gigantea</i>	30	Y	FACW
3. <i>Microstegium vimineum</i>	20	Y	FAC
4. <i>Impatiens</i> sp.	5	N	FACW
5. <i>Leersia oryzoides</i>	15	N	OBL
6. <i>Phleum pratense</i>	5	N	FACU
7. <i>Agrostis gigantea</i>	20	Y	FACW
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>105</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	<u>3</u>	x 1 =	<u>3</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>3</u> (A)		<u>3</u> (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 6/4	100					Sandy silt loam	
3-16	10YR 4/1	95	10YR 5/8	5	C	PL/M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: August 1, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-23
 Investigator(s): ARS, APB Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.536805 Long: -79.569321 Datum: NAD83
 Soil Map Unit Name: Ernest silt loam, 8 to 15 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> _____ Upland
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Sampling point is located on a forested hillslope, adjacent to Wetland 13.		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Microtopographic Relief (D4)	
<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-23

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Acer rubrum</i></u>	20	Y	FAC
2. <u><i>Liriodendron tulipifera</i></u>	20	Y	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	40	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u><i>Elaeagnus umbellata</i></u>	20	Y	UPL
2. <u><i>Aralia spinosa</i></u>	5	N	FAC
3. <u><i>Rubus allegheniensis</i></u>	20	Y	FACU
4. <u><i>Prunus serotina</i></u>	30	Y	FACU
5. _____			
6. _____			
7. _____			
	75	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u><i>Rubus flagellaris</i></u>	20	Y	FACU
2. <u><i>Festuca rubra</i></u>	30	Y	FACU
3. <u><i>Lotus tenuis</i></u>	5	N	FACU
4. <u><i>Microstegium vimineum</i></u>	10	N	FAC
5. <u><i>Echinochloa crus-galli</i></u>	20	Y	FAC
6. <u><i>Amphicarpaea bracteata</i></u>	15	N	FAC
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	100	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- ____ 1 - Rapid Test for Hydrophytic Vegetation
 - ____ 2 - Dominance Test is >50%
 - ____ 3 - Prevalence Index is ≤3.0¹
 - ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ____ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: September 28, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-24
 Investigator(s): DWL, ARS Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538335 Long: -79.553241 Datum: NAD83
 Soil Map Unit Name: Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 14 - PUB</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Wetland 14 is a PUB wetland that is located in a wide depression in a forested area.		

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The sample point was taken along the edge of the wetland in an area where ponding was not present at the time of survey. The ponded portion of the wetland was located outside of the delineation boundary.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-24

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Ludwigia palustris</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>10</u>	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

The herbaceous layer at the sampling point location is very sparsely vegetated due to frequent periods of ponding.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: September 28, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-25
 Investigator(s): DWL, ARS Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Mound Local Relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.538235 Long: 79.553351 Datum: NAD83
 Soil Map Unit Name: Bethesda very channery silt loam, 8 to 25 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? <u>Upland</u> Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Upland sampling point adjacent to Wetland 14, located on a mound in a forested area.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-25

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Liriodendron tulipifera</i>	20	Y	FACU
2. <i>Acer rubrum</i>	60	Y	FAC
3. <i>Betula lenta</i>	20	Y	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	100	= Total Cover	
Sapling Stratum: (Plot Size: <u>15</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	0	= Total Cover	
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <i>Cornus florida</i>	15	Y	FACU
2. <i>Rosa multiflora</i>	10	Y	FACU
3. <i>Lindera benzoin</i>	15	Y	FAC
4. <i>Elaeagnus umbellata</i>	5	N	UPL
5. <i>Sassafras albidum</i>	5	N	FACU
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	50	= Total Cover	
Herb Stratum: (Plot size: <u>5</u>)			
1. <i>Danthonia spicata</i>	10	Y	UPL
2. <i>Eurybia divaricata</i>	10	Y	UPL
3. <i>Panicum virginianum</i>	5	N	FAC
4. <i>Microstegium vimineum</i>	10	Y	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	35	= Total Cover	
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. <i>Vitis vulpina</i>	5	Y	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- ___ 1 - Rapid Test for Hydrophytic Vegetation
 - ___ 2 - Dominance Test is >50%
 - ___ 3 - Prevalence Index is ≤3.0¹
 - ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ___ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: September 28, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-26
 Investigator(s): DWL, ARS Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.535737 Long: -79.545234 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 3 to 8 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <u>Wetland 15 - PEM</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		
Wetland 15 is a PEM wetland that is located in a fenced off depression adjacent to a recently constructed well pad.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-26

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Sapling Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Shrub Stratum: (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Herb Stratum: (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
2. <u>Scirpus polyphyllus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
3. <u>Microstegium vimineum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
4. <u>Eleocharis obtusa</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
5. <u>Juncus tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
6. <u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
7. <u>Carex vulpinoidea</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
8. <u>Persicaria sagittata</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>100</u>	= Total Cover	

Woody Vine Stratum: (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	95	7.5YR 4/6	5	C	PL/M	Clay Loam	
3-16	10YR 5/6	70	10YR 4/2	20	D	M	Clay	
			7.5YR 5/8	10	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

Soils at SP-26 are disturbed.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 332-793 MAM14 U1 Pipeline and Waterline City/County: Westmoreland County Sampling Date: September 28, 2023
 Applicant/Owner: CNX Midstream Operating Company LLC State: PA Sampling Point: SP-27
 Investigator(s): DWL, ARS Section, Township, Range: Washington Township
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR or MLRA): LRR N Lat: 40.535808 Long: -79.545178 Datum: NAD83
 Soil Map Unit Name: Gilpin channery silt loam, 3 to 8 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> Upland
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		
Upland sampling point adjacent to Wetland 15, located in a recently seeded area next to a recently constructed well pad.		

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-27

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Sapling Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Shrub Stratum (Plot Size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lolium perenne</i>	10	N	FACU
2. <i>Microstegium vimineum</i>	25	Y	FAC
3. <i>Trifolium pratense</i>	25	Y	FACU
4. <i>Persicaria longisetata</i>	10	N	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>70</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

There is some bare ground and wood chips present at the sampling point location due to the recent seeding of the area.

Project/Site: 323-134 MAM Well Site City/County: Orchard Hills, Armstrong Sampling Date: 11/01/2022
 Applicant/Owner: CNX Gas Company, LLC State: PA Sampling Point: SP-28
 Investigator(s): DAS, ZAF Section, Township, Range: Bell Township
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2-5
 Subregion (LRR or MLRA): LRR N Lat: 40.536272 Long: -79.547054 Datum: NAD83
 Soil Map Unit Name: WrB: Wharton silt loam, 3 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: General Comments: Sampling point located in upland area nearby Wetland 16 forested area	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: SP-28

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Quercus alba</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Quercus rubra</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
4. <u>Fagus grandifolia</u>	<u>8</u>	<u>No</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>53</u> =Total Cover			
50% of total cover: <u>27</u>		20% of total cover: <u>11</u>	

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Rubus allegheniensis</u>	<u>4</u>	<u>No</u>	<u>FACU</u>
4. <u>Quercus rubra</u>	<u>4</u>	<u>No</u>	<u>FACU</u>
5. <u>Fagus grandifolia</u>	<u>4</u>	<u>No</u>	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
<u>32</u> =Total Cover			
50% of total cover: <u>16</u>		20% of total cover: <u>7</u>	

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Microstegium</u>	<u>35</u>	<u>Yes</u>	_____
2. <u>Arthraxon hispidus</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Solidago canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
<u>50</u> =Total Cover			
50% of total cover: <u>25</u>		20% of total cover: <u>10</u>	

Woody Vine Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>355</u> (B)
Prevalence Index = B/A = <u>3.55</u>	

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes	___	No	<u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)

Project/Site: 323-134 MAM Well Site City/County: Orchard Hills, Armstrong Sampling Date: 11/01/2022

Applicant/Owner: CNX Gas Company, LLC State: PA Sampling Point: SP-29

Investigator(s): DAS, ZAF Section, Township, Range: Bell Township

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-5

Subregion (LRR or MLRA): LRR N Lat: 40.536079 Long: -79.547387 Datum: NAD83

Soil Map Unit Name: WrB: Wharton silt loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 General Comments: Sampling point located in depression area on edge between agricultural field and forest. Corresponds to Wetland 16

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Standing water in one pooled area

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: SP-29

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>none</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>none</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Scirpus atrovirens</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Microstegium vimineum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Carex lurida</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>
4. <u>Juncus effusus</u>	<u>12</u>	<u>No</u>	<u>FACW</u>
5. <u>Arthraxon hispidus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>
6. <u>Epilobium leptophyllum</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
7. <u>Poa palustris</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
8. _____			
9. _____			
10. _____			
11. _____			
_____ = Total Cover			
50% of total cover: <u>46</u> 20% of total cover: <u>19</u>			

Woody Vine Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	90	5Y 4/4	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (MLRA 136)	<input type="checkbox"/> (MLRA 147, 148)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> (MLRA 136, 147)	
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> (outside MLRA 127, 147, 148)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N,	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> MLRA 136)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 122, 136)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)		
<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147, 148)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: <u>rock</u></p> <p>Depth (inches): <u>6</u></p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

Soil Texture:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 323-134 Proposed Mamont 15 AST Pad City/County: Westmoreland County Sampling Date: November 11, 2022
 Applicant/Owner: CNX Resources Corporation, LLC State: PA Sampling Point: SP-30
 Investigator(s): ARS, APB Section, Township, Range: Bell Township
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR N Lat: 40.535744 Long: 79.547544 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 3 to 8 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> <u>Wetland 17 - PEM</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks:			
Sampling point is located in a PEM wetland located at the edge of an agricultural field.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0-3</u>	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Water Table Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0</u>	
Saturation Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-30

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Sapling Stratum: (Plot Size: <u>15</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Poa palustris</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
2. <u>Epilobium coloratum</u>	<u>7</u>	<u>N</u>	<u>FACW</u>
3. <u>Lycopus americanus</u>	<u>3</u>	<u>N</u>	<u>OBL</u>
4. <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
5. <u>Agrostis gigantea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
6. <u>Microstegium vimineum</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
7. <u>Carex vulpinoidea</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
8. <u>Euthamia graminifolia</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
9. _____			
10. _____			
11. _____			
12. _____			
			<u>115</u> = Total Cover
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
			<u>0</u> = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species _____ x 2 = _____	
FAC species _____ x 3 = _____	
FACU species _____ x 4 = _____	
UPL species _____ x 5 = _____	
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 323-134 Proposed Mamont 15 AST Pad City/County: Westmoreland County Sampling Date: November 11, 2022
 Applicant/Owner: CNX Resources Corporation, LLC State: PA Sampling Point: SP-31
 Investigator(s): ARS, APB Section, Township, Range: Bell Township
 Landform (hillslope, terrace, etc.): Agricultural field edge Local Relief (concave, convex, none): Concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR N Lat: 40.535808 Long: 79.547367 Datum: NAD83
 Soil Map Unit Name: Wharton silt loam, 3 to 8 percent slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> <u>Upland</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:			
Upland sampling point adjacent to Wetland 17, located at the edge of an agricultural field.			

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present?	Yes _____ No <u>X</u> Depth (inches): _____	
Water Table Present?	Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <u>X</u> Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: SP-31

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Sapling Stratum: (Plot Size: <u>15</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Shrub Stratum: (Plot Size: <u>15</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
			<u>0</u> = Total Cover
Herb Stratum: (Plot size: <u>5</u>)			
1. <u>Trifolium repens</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
2. <u>Trifolium pratense</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
3. <u>Rubus allegheniensis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. <u>Daucus carota</u>	<u>10</u>	<u>N</u>	<u>UPL</u>
5. <u>Achillea millefolium</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6. <u>Phleum pratense</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
7. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
8. <u>Symphotrichum lateriflorum</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
9. <u>Taraxacum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
10. _____			
11. _____			
12. _____			
			<u>105</u> = Total Cover
Woody Vine Stratum: (Plot size: <u>30</u>)			
1. <u>None</u>			
2. _____			
3. _____			
4. _____			
5. _____			
			<u>0</u> = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/1						Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147,148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	--	---

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:

APPENDIX D

STREAM DATA FORMS

STREAM SURVEY DATA COLLECTION FORM

MAM 14 U1 Pipeline and Waterline

PROJECT 332-793
 DATE 9/28/23
 STREAM FIELD ID Stream 1
 STREAM NAME UNT 1 to Beaver Run
 REVIEWER(S) DWL, ARS

Weather Conditions: Sunny Partly Cloudy Cloudy Rain
 Any precipitation in the last 5 days? Yes No

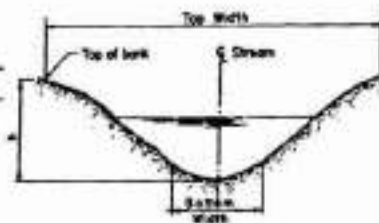
Stream Type: Perennial
 Intermittent
 Ephemeral

Photographs taken Photograph numbers: 16 upstream 17 downstream crossing
 Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
 GPS coordinates collected Yes No Crossing length feet
 Road crossing and type:
 Bridge Ford crossing Culvert (Diameter:)

Hydrological Characteristics:

Tributary is: Natural.
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
 Average top of bank width (feet): 6-9' At centerline:
 Average top of bank depth (feet): 1.5-3' At centerline:
 Wetted width (feet): 0-2' At centerline:
 Wetted depth (feet): 0-2" At centerline:
 Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
 Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

<input checked="" type="checkbox"/> Silt	<input checked="" type="checkbox"/> Gravel (0.25" to 2")	<input type="checkbox"/> Bedrock
<input checked="" type="checkbox"/> Sand	<input checked="" type="checkbox"/> Cobble (2" to 10")	<input type="checkbox"/> Vegetation (<u> </u> %)
<input type="checkbox"/> Clay	<input checked="" type="checkbox"/> Boulder (>10')	<input type="checkbox"/> Other. Explain:

Flow Characteristics:

Water present: No water, streambed dry Streambed moist Standing water Flowing water
 If flow present, estimate stage at time of survey: High Normal Low
 Bank erosion: Extensive Moderate Little / None
 Tributary has (check all that apply): Defined bed and banks Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
 forested open field farmland wetland mixed use industrial mining residential
 Stream Shading: 75 - 100% 50 - 74% 25 - 49% 0 - 24%
 Wetland fringe: Yes (Abutting or Adjacent) No
 Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? Yes No Describe: Mayflies, Chironomids
 Fish or wildlife observed? Yes No Describe:

Other Observations and Comments:

Stream starts just inside the tree line along the edge of a field, and flows down a forested hillside before exiting the delineation boundary.

STREAM SURVEY DATA COLLECTION FORM

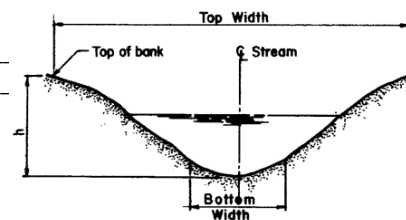
PROJECT 332-793 _____ Weather Conditions: Sunny Partly Cloudy Cloudy Rain
 DATE 7/31/23 _____ Any precipitation in the last 5 days? Yes No
 STREAM FIELD ID Stream 2 _____
 STREAM NAME UNT 2 to Beaver Run _____ Stream Type: Perennial
 REVIEWER(S) ARS, APB _____ Intermittent
 Ephemeral

Photographs taken Photograph numbers: 34 upstream 35 downstream _____ crossing
 Flagged (_____ total flags) Stream crossed/encroached by centerline or limit of disturbance:
 GPS coordinates collected Yes No Crossing length _____ feet
 Road crossing and type:
 Bridge Ford crossing Culvert (Diameter: _____)

Hydrological Characteristics:

Tributary is: Natural.
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
 Average top of bank width (feet): 2-8 _____ At centerline: 5 _____
 Average top of bank depth (feet): 0.5-1.5 _____ At centerline: 1 _____
 Wetted width (feet): 2-7 _____ At centerline: 4 _____
 Wetted depth (feet): 0.5-3" _____ At centerline: 0.5 _____
 Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
 Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):
 _____ Silt Gravel (0.25" to 2") _____ Bedrock
 Sand Cobble (2" to 10") _____ Vegetation (_____ %)
 _____ Clay Boulder (>10") _____ Other. Explain:

Flow Characteristics:

Water present: No water, streambed dry Streambed moist Standing water Flowing water
 If flow present, estimate stage at time of survey: High Normal Low
 Bank erosion: Extensive Moderate Little / None
 Tributary has (check all that apply): Defined bed and banks Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
 forested open field farmland wetland mixed use industrial mining residential
 Stream Shading: 75 - 100% 50 - 74% 25 - 49% 0 - 24%
 Wetland fringe: Yes (Abutting or Adjacent) No
 Wetland ID: Wetland 5

Biological Characteristics:

Macroinvertebrates observed? Yes No Describe: Stonefly, isopod, caddisfly
 Fish or wildlife observed? Yes No Describe:

Other Observations and Comments:

Stream starts upstream of the delineation boundary, down a forested hillslope and crosses an existing utility line right-of-way before confluencing with Stream 1.

STREAM SURVEY DATA COLLECTION FORM

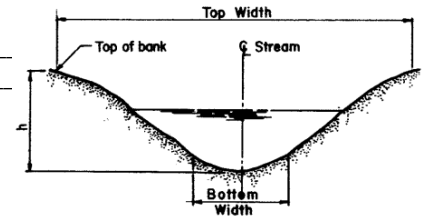
PROJECT 332-793 Weather Conditions: [X] Sunny [] Partly Cloudy [] Cloudy [] Rain
DATE 8/1/23 Any precipitation in the last 5 days? [X] Yes [] No
STREAM FIELD ID Stream 6
STREAM NAME UNT 3 to Beaver Run Stream Type: [X] Perennial [] Intermittent [] Ephemeral
REVIEWER(S) ARS, APB

[X] Photographs taken Photograph numbers: 14 upstream 15 downstream crossing
[X] Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
[X] GPS coordinates collected [X] Yes [] No Crossing length feet
Road crossing and type:
[] Bridge [] Ford crossing [] Culvert (Diameter:)

Hydrological Characteristics:

Tributary is: [X] Natural.
[] Artificial (man-made). Explain:
[] Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 4-7 At centerline:
Average top of bank depth (feet): 0.25-1 At centerline:
Wetted width (feet): 2-5 At centerline:
Wetted depth (feet): 1-6" At centerline:
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):
[X] Silt [X] Gravel (0.25" to 2") [X] Bedrock
[] Sand [X] Cobble (2" to 10") [] Vegetation (%)
[] Clay [X] Boulder (>10") [] Other. Explain:

Flow Characteristics:

Water present: [] No water, streambed dry [] Streambed moist [] Standing water [X] Flowing water
If flow present, estimate stage at time of survey: [] High [X] Normal [] Low
Bank erosion: [] Extensive [] Moderate [X] Little / None
Tributary has (check all that apply): [X] Defined bed and banks [] Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
[X] forested [] open field [] farmland [] wetland [] mixed use [] industrial [] mining [] residential
Stream Shading: [X] 75 - 100% [] 50 - 74% [] 25 - 49% [] 0 - 24%
Wetland fringe: [] Yes ([] Abutting or [] Adjacent) [X] No
Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? [] Yes [X] No Describe:
Fish or wildlife observed? [] Yes [X] No Describe:

Other Observations and Comments:

Stream starts upstream of the delineation boundary, down a forested hillslope until it confluences with Stream 5 (Beaver Run). Stream displayed signs of heavy iron content which could be why no macros were observed.

STREAM SURVEY DATA COLLECTION FORM

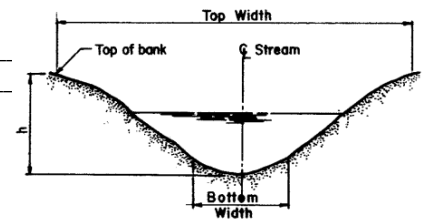
PROJECT 332-793 Weather Conditions: Sunny Partly Cloudy Cloudy Rain
DATE 8/1/23 Any precipitation in the last 5 days? Yes No
STREAM FIELD ID Stream 7
STREAM NAME Trib 42938 to Beaver Run Stream Type: Perennial
REVIEWER(S) ARS, APB Intermittent
 Ephemeral

Photographs taken Photograph numbers: 58 upstream 59 downstream crossing
 Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
 GPS coordinates collected Yes No Crossing length feet
Road crossing and type:
 Bridge Ford crossing Culvert (Diameter:)

Hydrological Characteristics:

Tributary is: Natural.
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 14-23 At centerline: 17
Average top of bank depth (feet): 3-5 At centerline: 3
Wetted width (feet): 12-22 At centerline: 12
Wetted depth (feet): 1"-2.5' At centerline: 2"
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):
 Silt Gravel (0.25" to 2") Bedrock
 Sand Cobble (2" to 10") Vegetation (%)
 Clay Boulder (>10") Other. Explain: Algae

Flow Characteristics:

Water present: No water, streambed dry Streambed moist Standing water Flowing water
If flow present, estimate stage at time of survey: High Normal Low
Bank erosion: Extensive Moderate Little / None
Tributary has (check all that apply): Defined bed and banks Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
 forested open field farmland wetland mixed use industrial mining residential
Stream Shading: 75 - 100% 50 - 74% 25 - 49% 0 - 24%
Wetland fringe: Yes (Abutting or Adjacent) No
Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? Yes No Describe: Caddisfly
Fish or wildlife observed? Yes No Describe:

Other Observations and Comments:

Stream starts upstream of the delineation boundary, through a forested valley and flows downstream of the delineation boundary.

STREAM SURVEY DATA COLLECTION FORM

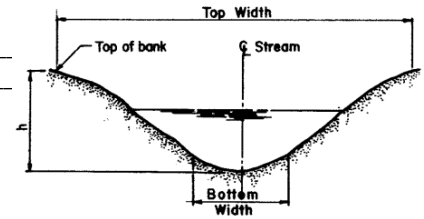
PROJECT 332-793 Weather Conditions: [X] Sunny [] Partly Cloudy [] Cloudy [] Rain
DATE 8/1/23 Any precipitation in the last 5 days? [X] Yes [] No
STREAM FIELD ID Stream 8
STREAM NAME UNT 1 to Trib 42938 to Beaver Run Stream Type: [] Perennial [] Intermittent [X] Ephemeral
REVIEWER(S) ARS, APB

[X] Photographs taken Photograph numbers: 66 upstream 67 downstream crossing
[X] Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
[X] GPS coordinates collected [] Yes [X] No Crossing length feet
Road crossing and type:
[] Bridge [] Ford crossing [] Culvert (Diameter:)

Hydrological Characteristics:

Tributary is: [X] Natural.
[] Artificial (man-made). Explain:
[] Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 3-6 At centerline:
Average top of bank depth (feet): 1-4 At centerline:
Wetted width (feet): At centerline:
Wetted depth (feet): At centerline:
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):
[X] Silt [X] Gravel (0.25" to 2") [] Bedrock
[] Sand [X] Cobble (2" to 10") [] Vegetation (%)
[] Clay [X] Boulder (>10") [] Other. Explain:

Flow Characteristics:

Water present: [X] No water, streambed dry [] Streambed moist [] Standing water [] Flowing water
If flow present, estimate stage at time of survey: [] High [] Normal [] Low
Bank erosion: [X] Extensive [] Moderate [] Little / None
Tributary has (check all that apply): [X] Defined bed and banks [] Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
[X] forested [] open field [] farmland [] wetland [] mixed use [] industrial [] mining [] residential
Stream Shading: [X] 75 - 100% [] 50 - 74% [] 25 - 49% [] 0 - 24%
Wetland fringe: [] Yes ([] Abutting or [] Adjacent) [X] No
Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? [] Yes [X] No Describe:
Fish or wildlife observed? [] Yes [X] No Describe:

Other Observations and Comments:

Stream starts at a head-cut on a forested hillslope and continues downstream before losing bed and bank on the upland floodplain of Stream 7.

STREAM SURVEY DATA COLLECTION FORM

BP6 U2 Waterline Extension

PROJECT 195-472

DATE 11/3/21

STREAM FIELD ID Stream 9

STREAM NAME Trib 42945 to Beaver Run (at crossing location)

REVIEWER(S) DWL, ARS

Weather Conditions: Sunny Partly Cloudy Cloudy Rain
Any precipitation in the last 5 days? Yes No

Stream Type: Perennial
 Intermittent
 Ephemeral

Photographs taken Photograph numbers: 15 upstream 16 downstream crossing

Flagged (total flags)

GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:

Yes No Crossing length feet

Road crossing and type:

Bridge Ford crossing Culvert (Diameter:)

Hydrological Characteristics:

Tributary is: Natural

Artificial (man-made). Explain:

Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):

Average top of bank width (feet): 6-8' At centerline: 6.5'

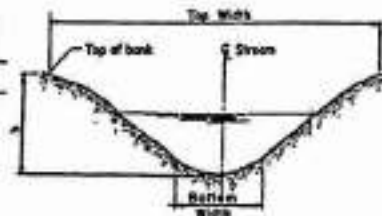
Average top of bank depth (feet): 1-2' At centerline: 1.5'

Wetted width (feet): 0-3' At centerline: 0

Wetted depth (feet): 0-2" At centerline: 0

Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more

Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

Silt
 Sand
 Clay

Gravel (0.25" to 2")
 Cobble (2" to 10")
 Boulder (>10")

Bedrock
 Vegetation (50 %)
 Other. Explain:

Flow Characteristics:

Water present: No water, streambed dry Streambed moist Standing water Flowing water

If flow present, estimate stage at time of survey: High Normal Low

Bank erosion: Extensive Moderate Little / None

Tributary has (check all that apply): Defined bed and banks Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:

forested open field farmland wetland mixed use industrial mining residential

Stream Shading: 75 - 100% 50 - 74% 25 - 49% 0 - 24%

Wetland fringe: Yes (Abutting or Adjacent) No

Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? Yes No Describe:

Fish or wildlife observed? Yes No Describe:

Other Observations and Comments:

Stream flows through a forested valley that has been recently logged. The channel is heavily overgrown with Japanese silt grass for the majority of the studied reach. It continues both upstream and downstream of the delineation boundary.